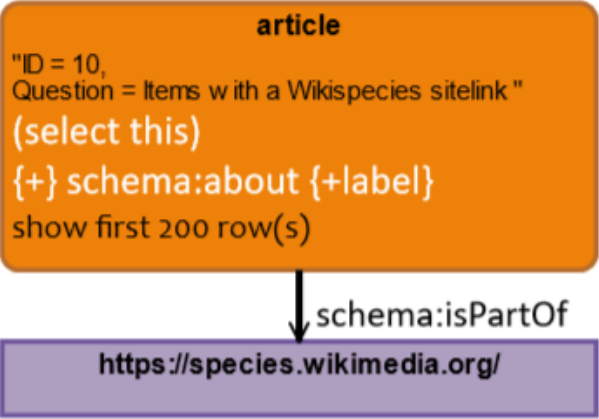
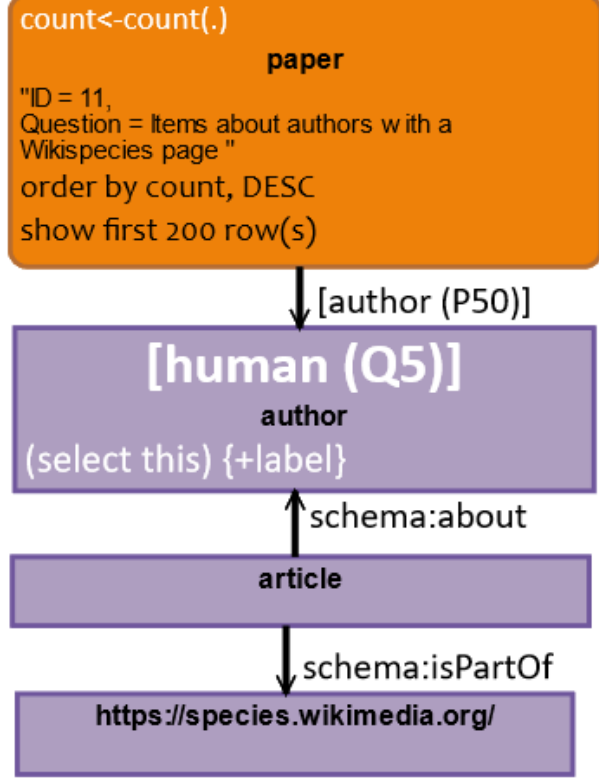


Simple queries

Nr	SPARQL Query	ViziQuer to SPARQL	ViziQuer	Comment
1.	<pre>SELECT ?item ?itemLabel WHERE { ?item wdt:P31 wd:Q146. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } }</pre>	<pre># ID = 1, # Question = Cats PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?itemLabel WHERE{ ?item wdt:P31 wd:Q146. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} }</pre>	house cat (Q146)] item "ID = 1, Question = Cats" (select this) {+label}	OK
2.	<pre>SELECT ?item ?itemLabel WHERE { ?item wdt:P31 wd:Q2934. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } }</pre>	<pre># ID = 2, # Question = Goats PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?itemLabel WHERE{ ?item wdt:P31 wd:Q2934. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} }</pre>	goat (Q2934)] item "ID = 2, Question = Goats" (select this) {+label}	OK
3.	<pre>SELECT DISTINCT ?horse ?horseLabel ?mother ?father (year(?birthdate) as ?birthyear) (year(?deathdate) as ?deathyear) ?genderLabel WHERE { ?horse wdt:P31/wdt:P279* wd:Q726 . OPTIONAL{?horse wdt:P25 ?mother .} OPTIONAL{?horse wdt:P22 ?father .} OPTIONAL{?horse wdt:P569 ?birthdate .} OPTIONAL{?horse wdt:P570 ?deathdate .} OPTIONAL{?horse wdt:P21 ?gender .} SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],fr,ar,be,bg,bn,ca,cs,da,de,el,e n,es,et,fa,fi,he,hi,hu,hy,id,it,ja,jv,ko,nb,nl,e o,pa,pl,pt,ro,ru,sh,sk,sr,sv,sw,te,th,tr,uk,yue, vec,vi,zh" } } ORDER BY ?horse</pre>	<pre># ID = 3, # Question = Horses (showing some info about them) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX xsd: <http://www.w3.org/2001/XMLSchema#> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?horse ?mother ?father ?birthyear ?deathyear ?horseLabel ?sex_or_genderLabel WHERE{ ?horse wdt:P31/wdt:P279* wd:Q726. OPTIONAL{?horse wdt:P25 ?mother .} OPTIONAL{?horse wdt:P22 ?father .} OPTIONAL{?horse wdt:P21 ?sex_or_gender .} OPTIONAL{?horse wdt:P569 ?date_of_birth .} OPTIONAL{?horse wdt:P570 ?date_of_death .} BIND(YEAR(xsd:dateTime(?date_of_birth)) AS ?birthyear) BIND(YEAR(xsd:dateTime(?date_of_death)) AS ?deathyear) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],fr,ar,be,bg,bn,ca,cs,da,de,el,en,e s,et,fa,fi,he,hi,hu,hy,id,it,ja,jv,ko,nb,nl,eo,pa,p l,pt,ro,ru,sh,sk,sr,sv,sw,te,th,tr,uk,yue,vec,vi,zh " .} } ORDER BY ?horse</pre>	.. [horse (Q726)] horse "ID = 3, Question = Horses (showing some info about them)" (select this) {+label} [mother (P25)] [father (P22)] {h} [sex or gender (P21)] {+label} birthyear<-year([date of birth (P569)]) deathyear<-year([date of death (P570)]) select distinct order by horse Languages: [AUTO_LANGUAGE],fr,ar,be,bg,bn,ca,cs,da,de,el, en,es,et,fa,fi,he,hi,hu,hy,id,it,ja,jv,ko,nb,nl,eo,pa, pl,pt,ro,ru,sh,sk,sr,sv,sw,te,th,tr,uk,yue,vec,vi,zh	OK

4.	<pre>SELECT ?item ?itemLabel ?pic WHERE { ?item wdt:P31 wd:Q146 . ?item wdt:P18 ?pic SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } }</pre>	<pre># ID = 4, # Question = Cats, with pictures PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?image ?itemLabel WHERE{ ?item wdt:P31 wd:Q146. ?item wdt:P18 ?image. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} }</pre>	[house cat (Q146)] item "ID = 4, Question = Cats, with pictures" (select this) {+label} {+} [image (P18)]	OK
5.	<pre>SELECT distinct * WHERE { ?item wdt:P31/wdt:P279* wd:Q16917; wdt:P625 ?geo . }</pre>	<pre># ID = 5, # Question = Map of hospitals PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?item ?coordinate_location WHERE{ ?item wdt:P31/wdt:P279* wd:Q16917. ?item wdt:P625 ?coordinate_location. }</pre>	.. [hospital (Q16917)] item "ID = 5, Question = Map of hospitals" (select this) {+} [coordinate location (P625)] select distinct	OK
6.	<pre>SELECT distinct * WHERE { ?item wdt:P31 wd:Q1032372; wdt:P625 ?geo . }</pre>	<pre># ID = 6, # Question = Map of hackerspaces PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?item ?coordinate_location WHERE{ ?item wdt:P31 wd:Q1032372. ?item wdt:P625 ?coordinate_location. }</pre>	[hackerspace (Q1032372)] item "ID = 6, Question = Map of hackerspaces" (select this) {+} [coordinate location (P625)] select distinct	OK
7.	<pre>SELECT (COUNT(*) AS ?count) WHERE { ?item wdt:P31 wd:Q5 . }</pre>	<pre># ID = 7, # Question = Number of humans in Wikidata PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT (COUNT(*) AS ?count) WHERE{ ?item wdt:P31 wd:Q5. }</pre>	count<-count(*) [human (Q5)] item "ID = 7, Question = Number of humans in Wikidata"	OK

8.	<pre> SELECT ?human ?humanLabel WHERE { ?human wdt:P31 wd:Q5 . ?human rdf:type wdn:P40 . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } </pre>	<pre> # ID = 8, # Question = Humans without children PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX wdn: <http://www.wikidata.org/prop/novalue/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?human ?humanLabel WHERE{ ?human wdt:P31 wd:Q5. ?human rdf:type wdn:P40. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	[human (Q5)] human "ID = 8, Question = Humans without children" (select this) {+label} ↓ rdf:type wdno:P40	OK
8 a	<pre> SELECT ?human ?humanLabel WHERE { ?human wdt:P31 wd:Q5 . ?human p:P40 ?childStatement . ?childStatement rdf:type wdn:P40 . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . } } </pre>	<pre> # ID = 8a, # Question = Humans without children A similar # query which also gives non-truthy 'no value' # statements: PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wdn: <http://www.wikidata.org/prop/novalue/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?human ?humanLabel WHERE{ ?human wdt:P31 wd:Q5. ?human p:P40 ?childStatement. ?childStatement rdf:type wdn:P40. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	[human (Q5)] human "ID = 8a, Question = Humans without children A similar query w hich also gives non-truthy 'no value' statements:" (select this) {+label} ↓ p:[child (P40)] childStatement ↓ rdf:type wdno:P40	OK
9.	<pre> select distinct ?item ?itemLabel ?itemDescription ?sitelinks where { ?item wdt:P31 wd:Q5; wdt:P19/wdt:P131* wd:Q60; wikibase:sitelinks ?sitelinks. SERVICE wikibase:label { bd:serviceParam wikibase:language "en,nl" } } ORDER BY DESC(?sitelinks) </pre>	<pre> # ID = 9, # Question = Humans born in New York City PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?item ?sitelinks ?itemLabel ?itemDescription WHERE{ ?item wdt:P31 wd:Q5. ?item wdt:P19/wdt:P131* wd:Q60. ?item wikibase:sitelinks ?sitelinks. SERVICE wikibase:label {bd:serviceParam wikibase:language "en,nl" .} } ORDER BY DESC(?sitelinks) </pre>	[human (Q5)] item "ID = 9, Question = Humans born in New York City " (select this) {+label} {+description} {+} sitelinks<-wikibase:sitelinks select distinct order by sitelinks, DESC Languages: en,nl ↓ [place of birth (P19)].[located in the administrative territorial entity (P131)]* [New York City (Q60)]	OK

10.	<pre> SELECT ?item ?itemLabel ?article WHERE { ?article schema:about ?item ; schema:isPartOf <https://species.wikimedia.org/> . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } LIMIT 200 </pre>	<pre> # ID = 10, # Question = Items with a Wikispecies sitelink PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?article ?about ?aboutLabel WHERE{ ?article schema:isPartOf <https://species.wikimedia.org/>. ?article schema:about ?about. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } LIMIT 200 </pre>		OK
11.	<pre> SELECT ?author ?authorLabel (COUNT(?paper) AS ?count) WHERE { ?article schema:about ?author ; schema:isPartOf <https://species.wikimedia.org/> . ?author wdt:P31 wd:Q5. ?paper wdt:P50 ?author. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } GROUP BY ?author ?authorLabel ORDER BY DESC(?count) LIMIT 200 </pre>	<pre> # ID = 11, # Question = Items about authors with a Wikispecies page PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX schema: <http://schema.org/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?author (COUNT(?paper) AS ?count) ?authorLabel WHERE{ ?author wdt:P31 wd:Q5. ?paper wdt:P50 ?author. ?article schema:about ?author. ?article schema:isPartOf <https://species.wikimedia.org/>. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?author ?authorLabel ORDER BY DESC(?count) LIMIT 200 </pre>		OK Both timeout

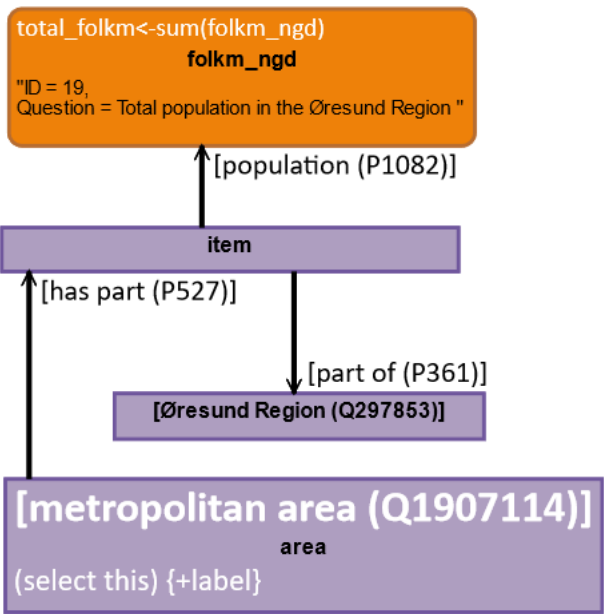
12.	<pre> SELECT ?event ?eventLabel ?date WHERE { ?event wdt:P31/wdt:P279* wd:Q1190554. OPTIONAL { ?event wdt:P585 ?date. } OPTIONAL { ?event wdt:P580 ?date. } FILTER(BOUND(?date) && DATATYPE(?date) = xsd:dateTime). BIND(NOW() - ?date AS ?distance). FILTER(0 <= ?distance && ?distance < 31). OPTIONAL { ?event rdfs:label ?eventLabel. FILTER(LANG(?eventLabel) = "en"). } } LIMIT 10 </pre>	<pre> # ID = 12, # Question = Recent events PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> PREFIX xsd: <http://www.w3.org/2001/XMLSchema#> SELECT ?event ?date ?eventLabel WHERE{ ?event wdt:P31/wdt:P279* wd:Q1190554. OPTIONAL{?event wdt:P585 ?date.} OPTIONAL{?event wdt:P580 ?date.} OPTIONAL{?event rdfs:label ?eventLabel. FILTER(LANG(?eventLabel) = 'en')}} BIND(NOW()-?date AS ?distance) FILTER(BOUND(?date) && DATATYPE(?date) = xsd:dateTime) FILTER(0 <= ?distance && ?distance < 31) } LIMIT 10 </pre>	.. [occurrence (Q1190554)] event "ID = 12, Question = Recent events " bound(date) && datatype(date) = xsd:dateTime 0 <= distance && distance < 31 (select this) date<-[point in time (P585)] date<-[start time (P580)] {h} distance<-now() - date eventLabel<-rdfs:label@en show first 10 row(s)	OK
13.	<pre> SELECT ?eyeColorLabel (COUNT(?human) AS ?count) WHERE { ?human wdt:P31 wd:Q5. ?human wdt:P1340 ?eyeColor. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } GROUP BY ?eyeColorLabel </pre>	<pre> # ID = 13, # Question = Popular eye colors among humans PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT (COUNT(?human) AS ?count) ?eye_colorLabel WHERE{ ?human wdt:P31 wd:Q5. ?human wdt:P1340 ?eye_color. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } GROUP BY ?eye_colorLabel </pre>	count<-count(.) [human (Q5)] human "ID = 13, Question = Popular eye colors among humans " {h+} [eye color (P1340)] {+label}	OK
14.	<pre> SELECT ?human ?humanLabel WHERE { ?human wdt:P21 ?gender . FILTER wikibase:isSomeValue(?gender) SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } </pre>	<pre> # ID = 14, # Question = Humans whose gender we know we don't know PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?human ?humanLabel WHERE{ ?human wdt:P21 ?sex_or_gender. BIND(wikibase:isSomeValue(?sex_or_gender) AS ?expr_1) FILTER(?expr_1) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	human "ID = 14, Question = Humans whose gender we know we don't know " wikibase:isSomeValue([sex or gender (P21)]) (select this) {+label}	OK
15.	<pre> SELECT ?wikipedia WHERE { ?wikipedia wikibase:wikiGroup "wikipedia". } </pre>	<pre> # ID = 15, # Question = URLs of Wikipedia in all languages PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> SELECT ?wikipedia WHERE{ ?wikipedia wikibase:wikiGroup "wikipedia" . } </pre>	wikipedia "ID = 15, Question = URLs of Wikipedia in all languages " wikibase:wikiGroup = "wikipedia" (select this)	OK

16.	<pre> SELECT DISTINCT ?lang ?name WHERE { ?article schema:about wd:Q5 ; schema:inLanguage ?lang ; schema:name ?name ; schema:isPartOf [wikibase:wikiGroup "wikipedia"] . FILTER(?lang IN ('en', 'uz', 'ru', 'ko')) . FILTER (!CONTAINS(?name, ':')) . } </pre>	<pre> # ID = 16, # Question = Names of Wikipedia articles in multiple languages PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?lang ?name WHERE{ ?article schema:about wd:Q5. ?article schema:isPartOf [wikibase:wikiGroup "wikipedia"]. ?article schema:inLanguage ?lang. ?article schema:name ?name. FILTER(?lang IN ("en", "uz", "ru", "ko")) FILTER(!CONTAINS(?name, ":")) } </pre>	article "ID = 16, Question = Names of Wikipedia articles in multiple languages " lang IN("en", "uz", "ru", "ko") !contains(name, ":") {+} lang<-schema:inLanguage {+} name<-schema:name select distinct ↓ schema:isPartOf _b1 wikibase:wikiGroup = "wikipedia" ↓ schema:about [human (Q5)]	OK
17.	<pre> SELECT ?item ?itemLabel ?value ?valueLabel WHERE { ?item wdt:P1800 ?value SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } LIMIT 10 </pre>	<pre> # ID = 17, # Question = All items with a property PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?Wikimedia_database_name ?itemLabel ?Wikimedia_database_nameLabel WHERE{ ?item wdt:P1800 ?Wikimedia_database_name. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } LIMIT 10 </pre>	item "ID = 17, Question = All items with a property " (select this) {+label} {+} [Wikimedia database name (P1800)] {+label} show first 10 row(s)	OK
18.	<pre> SELECT ?lemma ?item WHERE { VALUES ?lemma { "Wikipedia"@de "Wikidata"@de "Berlin"@de "Technische Universitat Berlin"@de } ?sitelink schema:about ?item; schema:isPartOf <https://de.wikipedia.org/>; schema:name ?lemma. } </pre>	<pre> # ID = 18, # Question = Wikidata items of Wikipedia articles PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> SELECT ?about ?lemma WHERE{ ?sitelink schema:isPartOf <https://de.wikipedia.org/>. ?sitelink schema:about ?about. ?sitelink schema:name ?lemma. VALUES ?lemma {"Wikipedia"@de "Wikidata"@de "Berlin"@de "Technische Universitat Berlin"@de} } </pre>	sitelink "ID = 18, Question = Wikidata items of Wikipedia articles " {+} schema:about {+} lemma<-schema:name lemma<-"Wikipedia"@de, "Wikidata"@de, "Berlin"@de, "Technische Universitat Berlin"@de} ↓ schema:isPartOf https://de.wikipedia.org/	OK

19.

```
SELECT distinct ?area ?areaLabel
(sum(?folk_m_ngd) as ?total_folk_m)
WHERE {
  ?item wdt:P361 wd:Q297853.
  ?item wdt:P1082 ?folk_m_ngd.
  ?area wdt:P31 wd:Q1907114.
  ?area wdt:P527 ?item.
  SERVICE wikibase:label { bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en". }
}
group by ?area ?areaLabel
```

```
# ID = 19,
# Question = Total population in the Øresund Region
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?area (SUM(?folk_m_ngd) AS ?total_folk_m)
?areaLabel WHERE{
  ?area wdt:P31 wd:Q1907114.
  ?item wdt:P1082 ?folk_m_ngd.
  ?item wdt:P361 wd:Q297853.
  ?area wdt:P527 ?item.
  SERVICE wikibase:label {bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en" .}
}
GROUP BY ?area ?areaLabel
```



OK

20.	<pre> SELECT ?image ?speciesLabel ?mayorLabel ?placeLabel WHERE { ?species wdt:P279* wd:Q622852 . ?mayor wdt:P31 ?species . ?mayor p:P39 ?node . ?node ps:P39 wd:Q30185 . ?node pq:P642 ?place . optional{?mayor wdt:P18 ?image} SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 20, # Question = Mayors that are any kind of domesticated animal PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?image ?speciesLabel ?mayorLabel ?ofLabel WHERE{ ?species wdt:P279* wd:Q622852. ?mayor wdt:P31 ?species. ?mayor p:P39 ?node. ?node ps:P39 wd:Q30185. OPTIONAL{?mayor wdt:P18 ?image.} ?node pq:P642 ?of. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>		OK
21.	<pre> SELECT ?image ?speciesLabel ?mayorLabel ?placeLabel WHERE { VALUES ?species {wd:Q144 wd:Q146 wd:Q780} ?mayor wdt:P31 ?species . ?mayor p:P39 ?node . ?node ps:P39 wd:Q30185 . ?node pq:P642 ?place . optional{?mayor wdt:P18 ?image} SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 21, # Question = Mayors that are either a dog, a cat or a chicken PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?image ?mayorLabel ?speciesLabel ?ofLabel WHERE{ ?mayor wdt:P31 ?species. ?mayor p:P39 ?node. ?node ps:P39 wd:Q30185. OPTIONAL{?mayor wdt:P18 ?image.} VALUES ?species {wd:Q144 wd:Q146 wd:Q780} ?node pq:P642 ?of. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>		OK

Lexeme queries

1.	<pre>select ?lemma WHERE { ?lexemeId dct:language wd:Q9027; wikibase:lemma ?lemma; wdt:P9660 wd:Q1935308. }</pre>	<pre># ID = 1, # Question = Swedish lexemes missing in SAOB PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?lemma WHERE{ ?lexemeId dct:language wd:Q9027. ?lexemeId wdt:P9660 wd:Q1935308. ?lexemeId wikibase:lemma ?lemma. }</pre>	lexemeld "ID = 1, Question = Swedish lexemes missing in SAOB" {+} wikibase:lemma dct:language [Swedish (Q9027)] [not found in (P9660)] [Svenska Akademiens Ordbok (Q1935308)]	OK
2.	<pre>select ?form ?lemma WHERE { ?lexemeId dct:language wd:Q9027; wikibase:lemma ?lemma; ontolex:lexicalForm ?form. MINUS { ?lexemeId p:P5831 ?statement. ?statement ps:P5831 ?example; pq:P6072 []; pq:P5830 ?form_with_example. } }</pre>	<pre># ID = 2, # Question = Forms in Swedish that have no example demonstrating them PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?lemma ?lexicalForm WHERE{ ?lexemeId dct:language wd:Q9027. ?lexemeId wikibase:lemma ?lemma. ?lexemeId ontolex:lexicalForm ?lexicalForm. MINUS{ ?lexemeId p:P5831 ?statement. ?statement pq:P6072 []. ?statement ps:P5831 ?usage_example. ?statement pq:P5830 ?subject_form. } }</pre>	lexemeld "ID = 2, Question = Forms in Swedish that have no example demonstrating them" {+} wikibase:lemma {+} ontolex:lexicalForm dct:language [Swedish (Q9027)] p:[usage example (P5831)] {not} statement {h+} ps:[usage example (P5831)] {h+} pq:[subject form (P5830)] pq:[subject sense (P6072)] _b5	OK

3.	<pre> SELECT DISTINCT ?l ?word ?lemma WHERE { VALUES ?word {'bought'@en} ?l a ontolex:LexicalEntry ; dct:language wd:Q1860 ; wikibase:lemma ?lemma ; ontolex:lexicalForm ?form . ?form ontolex:representation ?word . } </pre>	<pre> # ID = 3, # Question = Lemmatize a word in English PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?l ?lemma ?word WHERE{ ?l rdf:type ontolex:LexicalEntry. ?l dct:language wd:Q1860. ?l ontolex:lexicalForm ?form. ?l wikibase:lemma ?lemma. VALUES ?word {"bought"@en} ?form ontolex:representation ?word. } </pre>	I "ID = 3, Question = Lemmatize a word in English" (select this) {+} wikibase:lemma word<-"bought"@en} select distinct ↓ rdf:type ontolex:LexicalEntry ↓ dct:language [English (Q1860)] ↓ ontolex:lexicalForm form {+} word<-ontolex:representation	OK
4.	<pre> select ?lexemeId ?lemma WHERE { ?lexemeId dct:language wd:Q9027; wikibase:lemma ?lemma. ?lexemeId wikibase:lexicalCategory wd:Q9788 } ORDER BY ?lemma </pre>	<pre> # ID = 4, # Question = The Swedish alphabet PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?lexemeId ?lemma WHERE{ ?lexemeId dct:language wd:Q9027. ?lexemeId wikibase:lexicalCategory wd:Q9788. ?lexemeId wikibase:lemma ?lemma. } ORDER BY ?lemma </pre>	lexemeld "ID = 4, Question = The Swedish alphabet" (select this) {+} lemma<-wikibase:lemma order by lemma ↓ dct:language [Swedish (Q9027)] ↓ wikibase:lexicalCategory [letter (Q9788)]	OK

5.	<pre> SELECT ?l ?lemma WHERE { ?l dct:language wd:Q9035; wikibase:lemma ?lemma; wikibase:lexicalCategory wd:Q184511. } </pre>	<pre> # ID = 5, # Question = Danish idioms PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?l ?lemma WHERE{ ?l dct:language wd:Q9035. ?l wikibase:lexicalCategory wd:Q184511. ?l wikibase:lemma ?lemma. } </pre>		OK
6.	<pre> SELECT ?l ?lemma ?form ?audio WHERE { ?l dct:language wd:Q9027; wikibase:lemma ?lemma; ontolex:lexicalForm ?form . ?form ontolex:representation ?lemma . minus {?form wdt:P443 ?audio.} } </pre>	<pre> # ID = 6, # Question = All forms in Swedish missing a pronunciation for the form with a representation identical to the lemma of the lexeme PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?l ?lemma ?form WHERE{ ?l dct:language wd:Q9027. ?l ontolex:lexicalForm ?form. ?l wikibase:lemma ?lemma. ?form ontolex:representation ?lemma. MINUS{ ?form wdt:P443 ?audio. } } </pre>		OK

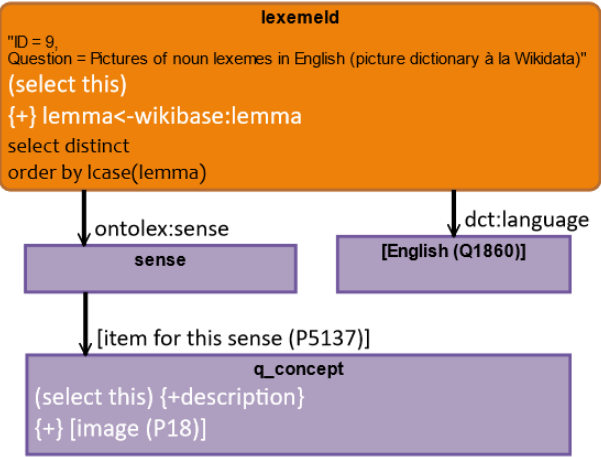
7.	<pre> select ?lexemeId ?lemma WHERE { ?lexemeId dct:language wd:Q1860; wikibase:lemma ?lemma. FILTER (regex(?lemma, '^pota.*')) } </pre>	<pre> # ID = 7, # Question = Lexemes in English that match an expression PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?lexemeId ?lemma WHERE{ ?lexemeId dct:language wd:Q1860. ?lexemeId wikibase:lemma ?lemma. FILTER (REGEX(?lemma, "^pota.*")) } </pre>	lexemeld "ID = 7, Question = Lexemes in English that match an expression" regex(lemma, "^pota.*") (select this) {+} lemma<-wikibase:lemma dct:language [English (Q1860)]	OK
8.	<pre> select ?lexemeId ?lemma ?example WHERE { ?lexemeId <http://purl.org/dc/terms/language> wd:Q9027; wikibase:lemma ?lemma. ?lexemeId p:P5831 ?statement. ?statement ps:P5831 ?example; pq:P6072 []; pq:P5830 []. } </pre>	<pre> # ID = 8, # Question = Lexemes in Swedish with usage example that demonstrates both a form and a sense PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?lexemeId ?lemma ?usage_example WHERE{ ?lexemeId dct:language wd:Q9027. ?lexemeId p:P5831 ?statement. ?statement pq:P6072 []. ?statement pq:P5830 []. ?lexemeId wikibase:lemma ?lemma. ?statement ps:P5831 ?usage_example. } </pre>	lexemeld "ID = 8, Question = Lexemes in Swedish with usage example that demonstrates both a form and a sense" (select this) {+} wikibase:lemma dct:language [Swedish (Q9027)] p:[usage example (P5831)] statement {+} ps:[usage example (P5831)] pq:[subject sense (P6072)] _b7 pq:[subject form (P5830)] _b8	OK

9.

```
select distinct ?lexemeId ?lemma ?q_concept
?q_conceptDescription ?picture
WHERE {
  ?lexemeId dct:language wd:Q1860;
            wikibase:lemma ?lemma;
            ontolex:sense ?sense.
  ?sense wdt:P5137 ?q_concept.
  ?q_concept wdt:P18 ?picture.
  SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en". }
}
order by lcasing(?lemma)
```

```
# ID = 9,
# Question = Pictures of noun lexemes in English
              (picture dictionary à la Wikidata)
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX dct: <http://purl.org/dc/terms/>
PREFIX ontolex:
  <http://www.w3.org/ns/lemon/ontolex#>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT DISTINCT ?lexemeId ?lemma ?q_concept ?image
?q_conceptDescription WHERE{
  ?lexemeId dct:language wd:Q1860.
  ?lexemeId ontolex:sense ?sense.
  ?sense wdt:P5137 ?q_concept.
  ?lexemeId wikibase:lemma ?lemma.
  ?q_concept wdt:P18 ?image.

  SERVICE wikibase:label {bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en" .}
}
ORDER BY (LCASE(?lemma))
```



OK

10.	<pre> select distinct ?lexemeId ?lemma ?q_concept ?q_conceptDescription ?picture WHERE { ?lexemeId dct:language wd:Q188; wikibase:lemma ?lemma; ontolex:sense ?sense. ?sense wdt:P5137 ?q_concept. ?q_concept wdt:P18 ?picture. MINUS {?q_concept wdt:P31 wd:Q3624078.}. VALUES ?minus { wd:Q47092 wd:Q198 wd:Q124490 wd:Q170382 wd:Q1576 }. MINUS {?sense wdt:P5137 ?minus.}. VALUES ?filter { wd:Q8102 wd:Q545779 wd:Q1521634 wd:Q184439}. FILTER NOT EXISTS {?sense wdt:P6191 ?filter.}. SERVICE wikibase:label { bd:serviceParam wikibase:language "de,en". } } order by lcase(?lemma) </pre>	<pre> # ID = 10, # Question = German picture dictionary for young children PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?lexemeId ?lemma ?q_concept ?image ?q_conceptDescription WHERE{ ?lexemeId dct:language wd:Q188. ?lexemeId ontolex:sense ?sense. ?sense wdt:P5137 ?q_concept. ?lexemeId wikibase:lemma ?lemma. VALUES ?minus {wd:Q47092 wd:Q198 wd:Q124490 wd:Q170382 wd:Q1576} VALUES ?filter {wd:Q8102 wd:Q545779 wd:Q1521634 wd:Q184439} ?q_concept wdt:P18 ?image. FILTER NOT EXISTS{ ?sense wdt:P6191 ?filter. } MINUS{ ?q_concept wdt:P31 wd:Q3624078. } MINUS{ ?sense wdt:P5137 ?minus. } } SERVICE wikibase:label {bd:serviceParam wikibase:language "de,en" .} } ORDER BY (LCASE(?lemma)) </pre>	lexemeld "ID = 10, Question = German picture dictionary for young children" (select this) {+} lemma<-wikibase:lemma {h} minus<-{[rape (Q47092)], [war (Q198)], [violence (Q124490)], [revolver (Q170382)], [cigar (Q1576)]} {h} filter<-{[slang (Q8102)], [pejorative (Q545779)], [vulgarism (Q1521634)], [profanity (Q184439)]} select distinct order by lcase(lemma) Languages: de,en ontolex:sense sense [German (Q188)] [item for this sense (P5137)] q_concept (select this) {+description} {+} [image (P18)] [instance of (P31)] {not} [sovereign state (Q3624078)] [language style (P6191)] {not} filter [item for this sense (P5137)] {not} minus	OK
11.	<pre> SELECT ?languageLabel (COUNT(?example) AS ?count) WHERE { ?l a ontolex:LexicalEntry; dct:language ?language. ?l p:P5831 ?statement. ?statement ps:P5831 ?example; pq:P6072 []; pq:P5830 []. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } GROUP BY ?languageLabel ORDER BY DESC(?count) </pre>	<pre> # ID = 11, # Question = Lexeme languages by number of usage examples PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX dct: <http://purl.org/dc/terms/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf- syntax-ns#> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT (COUNT(?example) AS ?count) ?languageLabel WHERE{ ?l rdf:type ontolex:LexicalEntry. ?l p:P5831 ?statement. ?statement pq:P6072 []. ?statement pq:P5830 []. ?l dct:language ?language. ?statement ps:P5831 ?example. </pre>	count<-count(example) I "ID = 11, Question = Lexeme languages by number of usage examples" {h+} dct:language {+label} order by count, DESC rdf:type ontolex:LexicalEntry p:[usage example (P5831)] statement {h+} example<-ps:[usage example (P5831)] pq:[subject sense (P6072)] _b9 pq:[subject form (P5830)] _b10	OK

		<pre> SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?languageLabel ORDER BY DESC(?count) </pre>		
12.	<pre> SELECT ?l ?lemma ?languageLabel WHERE { ?l a ontolex:LexicalEntry; dct:language ?language; wikibase:lemma ?lemma . ?l wdt:P31 wd:Q376431. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . } } ORDER BY ?languageLabel </pre>	<pre> # ID = 12, # Question = Lexemes describing a color PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?l ?lemma ?languageLabel WHERE{ ?l wdt:P31 wd:Q376431. ?l rdf:type ontolex:LexicalEntry. ?l dct:language ?language. ?l wikibase:lemma ?lemma. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY ?languageLabel </pre>	[color term (Q376431)] "ID = 12, Question = Lexemes describing a color" (select this) {h+} language<-dct:language {+label} {+} wikibase:lemma order by languageLabel rdf:type ontolex:LexicalEntry	OK
13.	<pre> select ?l ?sense ?lemma ?languageLabel WHERE { ?l a ontolex:LexicalEntry ; ontolex:sense ?sense ; dct:language ?language ; wikibase:lemma ?lemma . ?sense wdt:P5137 wd:Q29053744 . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . } } order by (LCASE(?languageLabel)) </pre>	<pre> # ID = 13, # Question = Lexemes that means water ordered by language PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?l ?lemma ?sense ?languageLabel WHERE{ ?l rdf:type ontolex:LexicalEntry. ?l ontolex:sense ?sense. ?sense wdt:P5137 wd:Q29053744. ?l dct:language ?language. ?l wikibase:lemma ?lemma. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY (LCASE(?languageLabel)) </pre>	"ID = 13, Question = Lexemes that means water ordered by language" (select this) {h+} dct:language {+label} {+} wikibase:lemma order by lcase(languageLabel) ontolex:sense sense (select this) [item for this sense (P5137)] [liquid water (Q29053744)] rdf:type ontolex:LexicalEntry	OK

14.	<pre> SELECT ?meaning ?meaningLabel (count(?l) as ?count) WHERE { ?l a ontolex:LexicalEntry ; ontolex:sense ?sense. ?sense wdt:P5137 ?meaning. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en"} } group by ?meaning ?meaningLabel order by desc(?count) limit 100 </pre>	<pre> # ID = 14, # Question = The 100 most translated concepts in the Lexeme namespace PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf- syntax-ns#> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?P5137 (COUNT(?l) AS ?count) ?P5137Label WHERE{ ?l rdf:type ontolex:LexicalEntry. ?l ontolex:sense ?sense. ?sense wdt:P5137 ?P5137. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?P5137 ?P5137Label ORDER BY DESC(?count) LIMIT 100 </pre>		OK
15.	<pre> SELECT ?l ?lemma ?demoPlaceLabel ?coords WHERE { ?l a ontolex:LexicalEntry ; dct:language ?language ; wikibase:lemma ?lemma . ?language wdt:P218 'sv'. ?l ontolex:sense ?sense. ?sense wdt:P6271 ?demoPlace. ?demoPlace wdt:P625 ?coords SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 15, # Question = Demonyms on map PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf- syntax-ns#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?l ?lemma ?coordinate_location ?demoPlaceLabel WHERE{ ?l rdf:type ontolex:LexicalEntry. ?l dct:language ?language. ?l ontolex:sense ?sense. ?sense wdt:P6271 ?demoPlace. ?l wikibase:lemma ?lemma. ?language wdt:P218 "sv" . ?demoPlace wdt:P625 ?coordinate_location. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>		OK

16.	<pre> select ?lexemeId ?lemma ?form ?word WHERE { ?lexemeId dct:language wd:Q9288; wikibase:lexicalCategory wd:Q1084; wikibase:lemma ?lemma. ?lexemeId ontolex:lexicalForm ?form . ?form wikibase:grammaticalFeature wd:Q499327; wikibase:grammaticalFeature wd:Q1775415; ontolex:representation ?word . } </pre>	<pre> # ID = 16, # Question = Forms in Hebrew that are both feminine and masculine PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX ontolex: <http://www.w3.org/ns/lemon/ontolex#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?lexemeId ?lemma ?form ?representation WHERE{ ?lexemeId dct:language wd:Q9288. ?lexemeId wikibase:lexicalCategory wd:Q1084. ?lexemeId ontolex:lexicalForm ?form. ?form wikibase:grammaticalFeature wd:Q499327. ?form wikibase:grammaticalFeature wd:Q1775415. ?lexemeId wikibase:lemma ?lemma. ?form ontolex:representation ?representation. } </pre>		OK
17.	<pre> select * { ?l dct:language []; wikibase:statements ?c. } order by desc(?c) limit 50 </pre>	<pre> # ID = 17, # Question = Lexemes by number of statements PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX dct: <http://purl.org/dc/terms/> SELECT ?l ?c WHERE{ ?l dct:language []. ?l wikibase:statements ?c. } ORDER BY DESC(?c) LIMIT 50 </pre>		OK

Wikibase predicates

1.	<pre>SELECT ?property2 ?property2Label ?property1 ?property1Label WHERE { ?property1 rdf:type wikibase:Property. ?property1 wdt:P1647 ?property2. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } }</pre>	<pre># ID = 1, # Question = Properties grouped by their parent property PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf- syntax-ns#> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?property1 ?subproperty_of ?property1Label ?subproperty_ofLabel WHERE{ ?property1 rdf:type wikibase:Property. ?property1 wdt:P1647 ?subproperty_of. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} }</pre>	property1 "ID = 1, Question = Properties grouped by their parent property " (select this) {+label} {+} [subproperty of (P1647)] {+label} ↓ rdf:type wikibase:Property	OK
2.	<pre>SELECT DISTINCT ?subProperties ?subPropertiesLabel WHERE { ?subProperties wdt:P1647* wd:P276. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } }</pre>	<pre># ID = 2, # Question = Subproperties of location (P276) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?subProperties ?subPropertiesLabel WHERE{ ?subProperties wdt:P1647* wd:P276. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} }</pre>	subProperties "ID = 2, Question = Subproperties of location (P276) " (select this) {+label} select distinct ↓ [subproperty of (P1647)]* [location (P276)]	OK
3.	<pre>SELECT (COUNT(?property) as ?pcount) ?wbtype WHERE { ?property rdf:type wikibase:Property. ?property wikibase:propertyType ?wbtype. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } GROUP BY ?wbtype ORDER BY DESC(?pcount)</pre>	<pre># ID = 3, # Question = Properties grouped by their Wikibase datatype (Q19798645) with number of properties PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf- syntax-ns#> SELECT ?wbtype (COUNT(?property) AS ?pcount) WHERE{ ?property rdf:type wikibase:Property. ?property wikibase:propertyType ?wbtype. } GROUP BY ?wbtype ORDER BY DESC(?pcount)</pre>	pcount<-count(.) property "ID = 3, Question = Properties grouped by their Wikibase datatype (Q19798645) with number of properties " {+} wbtype<-wikibase:propertyType order by pcount, DESC group by wbtype ↓ rdf:type wikibase:Property	OK

4.	<pre>SELECT DISTINCT ?propertyRel ?propertyItem ?propertyItemLabel WHERE { ?item ?propertyRel ?standard. ?standard wdt:P31 wd:Q317623. ?propertyItem wikibase:directClaim ?propertyRel SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } }</pre>	<pre>PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?propertyRel ?propertyItem ?propertyItemLabel WHERE{ ?standard wdt:P31 wd:Q317623. ?item ?propertyRel ?standard. ?propertyItem wikibase:directClaim ?propertyRel. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} }</pre>	item "ID = 4, Question = Properties with value a technical standard (Q317623) " select distinct property/item (select this) {+label} {+} propertyRel<-wikibase:directClaim ++ ?propertyRel [technical standard (Q317623)] standard	OK
5.	<pre>SELECT ?property ?propertyType ?propertyLabel ?propertyDescription ?propertyAltLabel WHERE { ?property wikibase:propertyType ?propertyType. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } ORDER BY ASC(xsd:integer(STRAFTER(STR(?property), 'P')))</pre>	<pre># ID = 5, # Question = All properties with descriptions and aliases and types PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?property ?propertyType ?propertyLabel ?propertyAltLabel ?propertyDescription WHERE{ ?property wikibase:propertyType ?propertyType. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY (xsd:integer(STRAFTER(STR(?property), "P")))</pre>	property "ID = 5, Question = All properties with descriptions and aliases and types " (select this) {+label} {+altLabel} {+description} {+} wikibase:propertyType order by xsd:integer(strafter(str(property), "P"))	OK
6.	<pre>select ?p ?pLabel (count (*) as ?count) { ?s ?pd ?o . ?p wikibase:directClaim ?pd . ?s wdt:P31/wdt:P279* wd:Q729 . ?o wdt:P31/wdt:P279* wd:Q43501 . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } group by ?p ?pLabel order by desc(?count)</pre>	<pre># ID = 6, # Question = Properties connecting items of type zoo (Q43501) with items of type animal (Q729) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?p (COUNT(*) AS ?count) ?pLabel WHERE{ ?s wdt:P31/wdt:P279* wd:Q729. ?o wdt:P31/wdt:P279* wd:Q43501. ?s ?pd ?o. ?p wikibase:directClaim ?pd. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?p ?pLabel ORDER BY DESC(?count)</pre>	count<-count(*) .. [animal (Q729)] s "ID = 6, Question = Properties connecting items of type zoo (Q43501) with items of type animal (Q729) " order by count, DESC ??pd .. [zoo (Q43501)] o ++ p (select this) {+label} {h+} pd<-wikibase:directClaim	OK

7.	<pre> PREFIX hint: <http://aws.amazon.com/neptune/vocab/v01/QueryHints#> SELECT ?p ?pLabel (SAMPLE(?url) as ?url_comp2) WHERE { hint:Query hint:optimizer "None". BIND(wd:Q4573 as ?comp1) BIND(wd:Q39666 as ?comp2) { ?comp2 ?wdt ?v . ?p wikibase:directClaim ?wdt ; wikibase:propertyType wikibase:ExternalId . FILTER NOT EXISTS { ?comp1 ?wdt [] } OPTIONAL { ?p wdt:P1630 ?f } BIND(uri(REPLACE(?f,"\\\$1",?v)) as ?url) } UNION { BIND(wd:Q4573 as ?p) } UNION { BIND(wd:Q39666 as ?p) } SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } GROUP BY ?p ?pLabel ORDER BY ?url_comp2 </pre>	<pre> # ID = 7, # Question = Identifier properties present on one item, but absent on another # # Manually edited. PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?p (SAMPLE(?url) AS ?url_comp2) ?pLabel WHERE{ { BIND(wd:Q39666 AS ?p) } UNION { BIND(wd:Q4573 AS ?p) } UNION { ?p wikibase:propertyType wikibase:ExternalId. ?comp2 ?wdt ?v. ?p wikibase:directClaim ?wdt. OPTIONAL{?p wdt:P1630 ?f.} FILTER NOT EXISTS{ ?comp1 ?wdt []. } BIND(URI(REPLACE(?f, "\\\$1", ?v)) AS ?url) } } </pre> <pre> <http://aws.amazon.com/neptune/vocab/v01/QueryHints#Query> <http://aws.amazon.com/neptune/vocab/v01/QueryHints#optimizer> "None" . BIND(wd:Q4573 AS ?comp1) BIND(wd:Q39666 AS ?comp2) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } GROUP BY ?p ?pLabel ORDER BY ?url_comp2 </pre>	<pre> url_comp2<-sample(url) http://aws.amazon.com/neptune/vocab/v01/QueryHints#Query "ID = 7, Question = Identifier properties present on one item, but absent on another Manually edited." <http://aws.amazon.com/neptune/vocab/v01/QueryHints#optimizer> = "None" p {+label} {h} comp1<-`[Sean Connery (Q4573)] {h} comp2<-`[Penélope Cruz (Q39666)] order by url_comp2 </pre>	Manually edited. TO DO: UNION construction
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8.	<pre> SELECT ?item ?reference WHERE { ?item wdt:P1343 wd:Q51955019 . ?item p:P1343 [prov:wasDerivedFrom [pr:P958 ?reference]] . } </pre>	<pre> # ID = 8, # Question = Content of a reference for a specific statement PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pr: <http://www.wikidata.org/prop/reference/> PREFIX prov: <http://www.w3.org/ns/prov#> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?item ?P958 WHERE{ ?item wdt:P1343 wd:Q51955019. ?item p:P1343 ?_b2. ?_b2 prov:wasDerivedFrom [pr:P958 ?P958]. } </pre>		OK
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Wikimedia projects

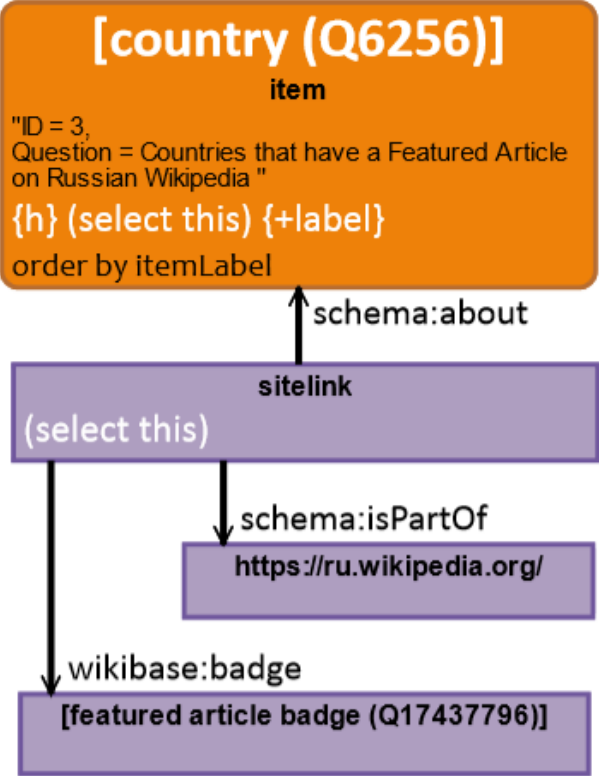
1.	<pre> SELECT ?country ?countryLabel ?article WHERE { ?country wdt:P31 wd:Q3624078 . ?article schema:about ?country . ?article schema:isPartOf <https://en.wikipedia.org/>. SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } </pre>	<pre> # ID = 1, # Question = Countries that have sitelinks to en.wiki PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX schema: <http://schema.org/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?country ?article ?countryLabel WHERE{ ?country wdt:P31 wd:Q3624078. ?article schema:about ?country. ?article schema:isPartOf <https://en.wikipedia.org/>. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>		OK
----	--	---	--	----

2.	<pre> SELECT ?item ?itemLabel ?cnt WHERE { { SELECT ?item (COUNT(?sitelink) AS ?cnt) WHERE { ?item wdt:P27 wdt:P205 wdt:P17 wd:Q16 . minus {?item wdt:P106 wd:Q488111 .} minus {?item wdt:P106 wd:Q3286043 .} minus {?item wdt:P106 wd:Q4610556 .} ?sitelink schema:about ?item . FILTER NOT EXISTS { ?article schema:about ?item . ?article schema:isPartOf <https://en.wikipedia.org/> . } } GROUP BY ?item ORDER BY DESC (?cnt) LIMIT 1000 } SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en,fr,es,de" } ORDER BY DESC (?cnt) </pre>	<pre> # ID = 2, # Question = Canadian subjects with no English article in Wikipedia PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?cnt ?itemLabel WHERE{ {SELECT ?item (COUNT(?sitelink) AS ?cnt) WHERE{ ?sitelink schema:about ?item. ?item (wdt:P27 wdt:P205 wdt:P17) wd:Q16. FILTER NOT EXISTS{ ?article schema:about ?item. ?article schema:isPartOf <https://en.wikipedia.org/>. } } MINUS{ ?item wdt:P106 wd:Q488111. } MINUS{ ?item wdt:P106 wd:Q3286043. } MINUS{ ?item wdt:P106 wd:Q4610556. }} GROUP BY ?item ?cnt ORDER BY DESC(?cnt) LIMIT 1000 } SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en,fr,es,de" .} ORDER BY DESC(?cnt) </pre>	[] *ID=2, Question = Canadian subjects with no English article in Wikipedia " item {+label} cnt order by cnt, DESC Label Service Languages: [AUTO_LANGUAGE],en,fr,es,de	OK
----	--	---	--	----

3.

```
SELECT ?sitelink ?itemLabel WHERE {
  ?item wdt:P31 wd:Q6256.
  ?sitelink schema:isPartOf
    <https://ru.wikipedia.org/>;
    schema:about ?item;
    wikibase:badge wd:Q17437796 .
  SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en" } .
} ORDER BY ?itemLabel
```

```
# ID = 3,
# Question = Countries that have a Featured Article
on Russian Wikipedia
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX schema: <http://schema.org/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?sitelink ?itemLabel WHERE{
  ?item wdt:P31 wd:Q6256.
  ?sitelink schema:about ?item.
  ?sitelink schema:isPartOf
    <https://ru.wikipedia.org/>.
  ?sitelink wikibase:badge wd:Q17437796.
  SERVICE wikibase:label {bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en" .}
}
ORDER BY ?itemLabel
```



OK

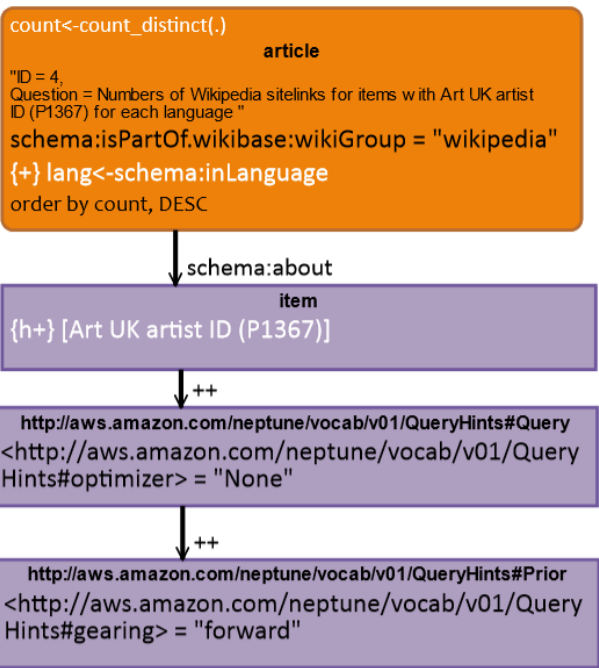
4.

```
PREFIX hint:
<http://aws.amazon.com/neptune/vocab/v01/QueryHints#>
SELECT ?lang (COUNT(DISTINCT ?article) AS ?count) WHERE {
  hint:Query hint:optimizer "None".
  ?item wdt:P1367 ?yp_id .
  ?article schema:about ?item .
  ?article schema:isPartOf / wikibase:wikiGroup "wikipedia" .
  hint:Prior hint:gearing "forward" .
  ?article schema:inLanguage ?lang .
} GROUP BY ?lang
ORDER BY DESC (?count)
```

```
# ID = 4,
# Question = Numbers of Wikipedia sitelinks for
items with Art UK artist ID (P1367) for each
language
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX schema: <http://schema.org/>
PREFIX wikibase: <http://wikiba.se/ontology#>
SELECT ?lang (COUNT(DISTINCT ?article) AS ?count)
WHERE{
  ?article schema:about ?item.
  ?article schema:inLanguage ?lang.
  ?article schema:isPartOf/wikibase:wikiGroup
?wikiGroup.
  ?item wdt:P1367 ?P1367.

<http://aws.amazon.com/neptune/vocab/v01/QueryHints
#Query>
<http://aws.amazon.com/neptune/vocab/v01/QueryHints
#optimizer> "None" .

<http://aws.amazon.com/neptune/vocab/v01/QueryHints
#Prior>
<http://aws.amazon.com/neptune/vocab/v01/QueryHints
#gearing> "forward" .
  FILTER(?wikiGroup = "wikipedia")
}
GROUP BY ?lang
ORDER BY DESC(?count)
```

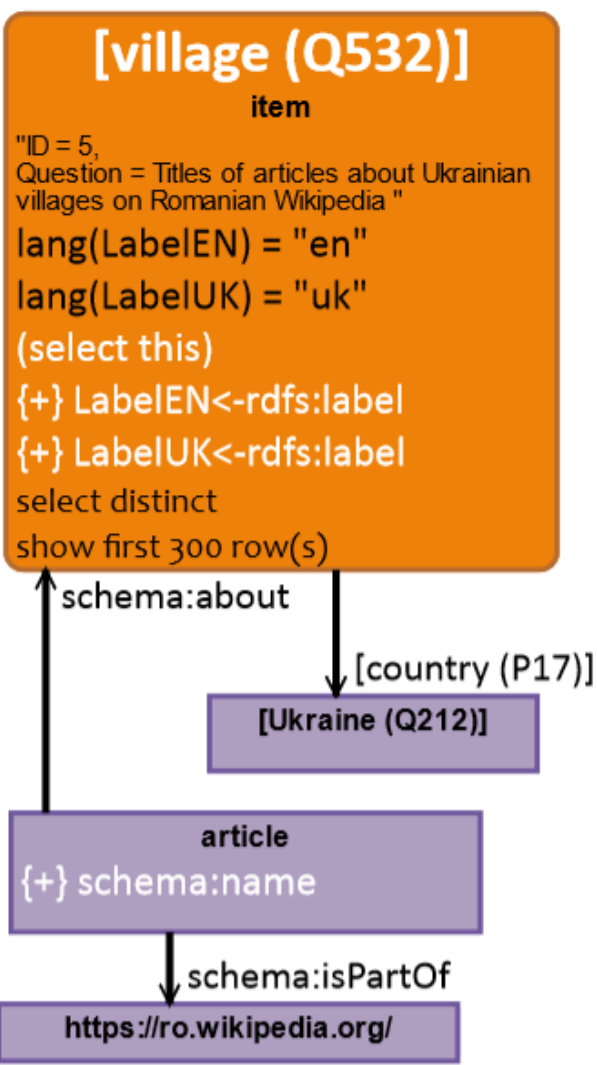


OK

5.

```
SELECT DISTINCT ?item ?LabelEN ?LabelUK
?page_titleRO WHERE {
  ?item wdt:P31 wd:Q532 .
  ?item wdt:P17 wd:Q212 .
  ?article schema:about ?item ;
schema:isPartOf <https://ro.wikipedia.org/> ;
schema:name ?page_titleRO .
  ?item rdfs:label ?LabelEN filter
(lang(?LabelEN) = "en") .
  ?item rdfs:label ?LabelUK filter
(lang(?LabelUK) = "uk") .
}
LIMIT 300
```

```
# ID = 5,
# Question = Titles of articles about Ukrainian
villages on Romanian Wikipedia
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-
schema#>
PREFIX schema: <http://schema.org/>
SELECT DISTINCT ?item ?LabelEN ?LabelUK ?name
WHERE{
  ?item wdt:P31 wd:Q532.
  ?item wdt:P17 wd:Q212.
  ?article schema:about ?item.
  ?article schema:isPartOf
<https://ro.wikipedia.org/>.
  ?item rdfs:label ?LabelEN.
  ?item rdfs:label ?LabelUK.
  ?article schema:name ?name.
  FILTER(LANG(?LabelEN) = "en")
  FILTER(LANG(?LabelUK) = "uk")
}
LIMIT 300
```



OK

6.	<pre> SELECT DISTINCT ?item ?wikisourceSitelink ?wikisourceLanguage WHERE { ?wikisourceSitelink schema:isPartOf [wikibase:wikiGroup "wikisource"]; schema:inLanguage ?wikisourceLanguage; schema:about ?item. ?paper wdt:P31 wd:Q13442814; wdt:P50 ?item. } ORDER BY ?wikisourceLanguage LIMIT 300 </pre>	<pre> # ID = 6, # Question = Wikisource pages for authors of scientific articles PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?wikisourceSitelink ?wikisourceLanguage ?item WHERE{ ?paper wdt:P31 wd:Q13442814. ?wikisourceSitelink schema:isPartOf [wikibase:wikiGroup "wikisource"]. ?wikisourceSitelink schema:about ?item. ?paper wdt:P50 ?item. ?wikisourceSitelink schema:inLanguage ?wikisourceLanguage. } ORDER BY ?wikisourceLanguage LIMIT 300 </pre>	wikisourceSitelink "ID = 6, Question = Wikisource pages for authors of scientific articles " (select this) {+} wikisourceLanguage<-schema:inLanguage select distinct order by wikisourceLanguage show first 300 row(s) ↓ schema:isPartOf wikibase:wikiGroup = "wikisource" ↓ schema:about item (select this) ↑ [author (P50)] [scholarly article (Q13442814)] paper	OK
7.	<pre> select ?item ?itemLabel ?gtaa ?_articleEN ?_articleNL where { ?item wdt:P1741 ?gtaa. OPTIONAL { ?_articleEN schema:about ?item. ?_articleNL schema:about ?item. ?_articleEN schema:isPartOf <https://en.wikipedia.org/>. ?_articleNL schema:isPartOf <https://nl.wikipedia.org/>. } SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en,nl". } } </pre>	<pre> # ID = 7, # Question = Items with a GTAA id and their articles on the Dutch and English Wikipedia PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?GTAA_ID ?articleEN ?articleNL ?itemLabel WHERE{ ?item wdt:P1741 ?GTAA_ID. OPTIONAL{ ?articleEN schema:about ?item. ?articleEN schema:isPartOf <https://en.wikipedia.org/>. ?articleNL schema:about ?item. ?articleNL schema:isPartOf <https://nl.wikipedia.org/>. } SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en,nl" .} } </pre>	item "ID = 7, Question = Items with a GTAA id and their articles on the Dutch and English Wikipedia " (select this) {+label} {+} [GTAA ID (P1741)] Label Service Languages: [AUTO_LANGUAGE],en,nl ↓ ++ [] ↑ schema:about articleNL (select this) ↑ schema:about articleEN (select this) ↓ schema:isPartOf https://nl.wikipedia.org/ ↓ schema:isPartOf https://en.wikipedia.org/	OK

8.	<pre> select ?person ?personLabel ?died ?sitelinks where { ?person wdt:P31 wd:Q5; wdt:P570 ?died. filter (?died >= "2018-01-01T00:00:00Z"^^xsd:dateTime && ?died < "2019-01-01T00:00:00Z"^^xsd:dateTime) ?person wikibase:sitelinks ?sitelinks. service wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } order by desc(?sitelinks) limit 100 </pre>	<pre> # ID = 8, # Question = People deceased in 2018 ordered by the number of sitelinks PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX xsd: <http://www.w3.org/2001/XMLSchema#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?person ?died ?sitelinks ?personLabel WHERE{ ?person wdt:P31 wd:Q5. ?person wdt:P570 ?died. ?person wikibase:sitelinks ?sitelinks. FILTER(?died >= "2018-01-01T00:00:00Z"^^xsd:dateTime && ?died < "2019-01-01T00:00:00Z"^^xsd:dateTime) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY DESC(?sitelinks) LIMIT 100 </pre>	[human (Q5)] person "ID = 8, Question = People deceased in 2018 ordered by the number of sitelinks " died >= "2018-01-01T00:00:00Z"^^xsd:dateTime && died < "2019-01-01T00:00:00Z"^^xsd:dateTime (select this) {+label} {+} died<-[date of death (P570)] {+} sitelinks<-wikibase:sitelinks order by sitelinks, DESC show first 100 row(s)	OK
9.	<pre> SELECT ?item ?comm ?p373 ?cat WHERE { ?item wdt:P131* wd:Q894107. optional {?comm schema:about ?item ; schema:isPartOf <https://commons.wikimedia.org/> .} BIND(replace(wikibase:decodeUri (SUBSTR(STR(?comm), 45)), " ", " ") AS ?comm_decode) optional {?item wdt:P373 ?p373 .} bind(COALESCE(?comm_decode, ?p373) as ?cat) . VALUES ?trida { wd:Q1746392 wd:Q108325 wd:Q4989906 wd:Q10861631 wd:Q15077340 wd:Q1516537 wd:Q47008262} ?item wdt:P31/wdt:P279* ?trida. } </pre>	<pre> # ID = 9, # Question = List of small monuments with link to Commons category (either from sitelink and P373) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX schema: <http://schema.org/> SELECT ?item ?p373 ?cat ?trida ?comm WHERE{ ?item wdt:P31/wdt:P279* ?trida. ?item wdt:P131* wd:Q894107. OPTIONAL{?item wdt:P373 ?p373.} VALUES ?trida {wd:Q1746392 wd:Q108325 wd:Q4989906 wd:Q10861631 wd:Q15077340 wd:Q1516537 wd:Q47008262} OPTIONAL{ ?comm schema:about ?item. ?comm schema:isPartOf <https://commons.wikimedia.org/>. BIND(wikibase:decodeUri (SUBSTR(STR(?comm), 45)) AS ?expr_2) BIND(REPLACE(?expr_2, " ", " ") AS ?comm_decode) } BIND(COALESCE(?comm_decode, ?p373) AS ?cat) } </pre>	.. ?trida item "ID = 9, Question = List of small monuments with link to Commons category (either from sitelink and P373) " (select this) p373<-[Commons category (P373)] {h} trida<-{wd:Q1746392, [chapel (Q108325)], [monument (Q4989906)], [small bell tower (Q10861631)], wd:Q15077340, [technical monument (Q1516537)], [ensemble of small monuments (Q47008262)]} cat<-coalesce(comm_decode, p373)	OK

10.	<pre> SELECT ?person ?personLabel ?parentLabel ?linkcount WHERE { ?parent wdt:P106 wd:Q182436 . ?parent wdt:P40 ?person . ?person wikibase:sitelinks ?linkcount . SERVICE wikibase:label { bd:serviceParam wikibase:language "en,de,es,ar,fr" } } GROUP BY ?linkcount ?person ?personLabel ?parent ?parentLabel ORDER BY DESC(?linkcount) </pre>	<pre> # ID = 10, # Question = Most famous child of a librarian PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?person ?linkcount ?parentLabel ?personLabel WHERE{ ?parent wdt:P106 wd:Q182436. ?parent wdt:P40 ?person. ?person wikibase:sitelinks ?linkcount. SERVICE wikibase:label {bd:serviceParam wikibase:language "en,de,es,ar,fr" .} } ORDER BY DESC(?linkcount) </pre>	{group} parent "ID = 10, Question = Most famous child of a librarian" {h} (select this) {+label} order by linkcount DESC Label Service Languages: en,de,es,ar,fr [occupation (P106)] [librarian (Q182436)] [child (P40)] person (select this) {+label} {+} linkcount<-wikibase:sitelinks	OK
11.	<pre> SELECT DISTINCT ?lang_code ?itemLabel ?item WHERE { VALUES ?lang { wd:Q34770 wd:Q436240 wd:Q1288568 wd:Q33215 } ?item wdt:P31 ?lang ; wdt:P424 ?lang_code . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } ORDER BY ?lang_code </pre>	<pre> # ID = 11, # Question = All languages with a Wikimedia language code (P424) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?item ?lang_code ?itemLabel WHERE{ ?item wdt:P31 ?lang. ?item wdt:P424 ?lang_code. VALUES ?lang {wd:Q34770 wd:Q436240 wd:Q1288568 wd:Q33215} SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY ?lang_code </pre>	??lang item "ID = 11, Question = All languages with a Wikimedia language code (P424) " (select this) {+label} {+} lang_code<-[Wikimedia language code (P424)] {h} lang<-[{language (Q34770)}, [ancient language (Q436240)], [modern language (Q1288568)], [constructed language (Q33215)]] select distinct order by lang_code	OK

12.	<pre> SELECT ?item ?itemLabel ?website WHERE { ?item wdt:P856 ?website. ?website wikibase:wikiGroup "wikipedia". SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 12, # Question = All wikipedia sites PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?website ?itemLabel WHERE{ ?item wdt:P856 ?website. ?website wikibase:wikiGroup "wikipedia" . SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	item "ID = 12, Question = All wikipedia sites " (select this) {+label} ↓ [official website (P856)] website wikibase:wikiGroup = "wikipedia" (select this)	OK
13.	<pre> SELECT ?lang ?name ?itemLabel ?sitelink ?linkcount ?item WHERE { ?item wikibase:sitelinks ?linkcount. ?sitelink schema:name ?name; schema:inLanguage ?lang; schema:about ?item; wikibase:badge wd:Q17437796. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 13, # Question = Featured articles of all Wikimedia projects PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX schema: <http://schema.org/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?sitelinks ?sitelink ?name ?inLanguage ?itemLabel WHERE{ ?sitelink schema:about ?item. ?sitelink wikibase:badge wd:Q17437796. ?item wikibase:sitelinks ?sitelinks. ?sitelink schema:name ?name. ?sitelink schema:inLanguage ?inLanguage. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	item "ID = 13, Question = Featured articles of all Wikimedia projects " (select this) {+label} {+} wikibase:sitelinks ↑ schema:about sitelink (select this) {+} schema:name {+} schema:inLanguage ↓ wikibase:badge [featured article badge (Q17437796)]	OK

Entertainment

1.	<pre>SELECT ?band ?bandLabel WHERE { ?band wdt:P31 wd:Q5741069 . ?band rdfs:label ?bandLabel . FILTER(LANG(?bandLabel) = "en") . FILTER(STRSTARTS(?bandLabel, 'M')) . }</pre>	<pre># ID = 1, # Question = Rock bands that start with 'M' PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> SELECT ?band ?bandLabel WHERE{ ?band wdt:P31 wd:Q5741069. ?band rdfs:label ?bandLabel. FILTER(LANG(?bandLabel) = "en") FILTER(STRSTARTS(?bandLabel, "M")) }</pre>	[rock group (Q5741069)] band "ID = 1, Question = Rock bands that start w ith 'M'" lang(bandLabel) = "en" strstarts(bandLabel, "M") (select this) {+} bandLabel<-rdfs:label	OK
----	---	--	---	----

2.

```

SELECT ?film ?filmLabel ?genre ?d WHERE {
  {
    SELECT ?film (GROUP_CONCAT(DISTINCT ?gL;
SEPARATOR = ", ") AS ?genre) (MIN(YEAR(?date))
AS ?d) WHERE {
      ?sitelink schema:about ?director;
      schema:isPartOf
<https://en.wikipedia.org/>;
      schema:name "Steven Spielberg"@en.
      ?film wdt:P31 wd:Q11424;
      wdt:P136 ?g, ?g.
      ?g rdfs:label ?gL.
      ?film wdt:P57 ?director;
      wdt:P577 ?date.
      FILTER((LANG(?gL)) = "en")
      SERVICE wikibase:label { bd:serviceParam
wikibase:language "en". }
    }
    GROUP BY ?film
  }
  SERVICE wikibase:label { bd:serviceParam
wikibase:language "en". }
}
ORDER BY DESC (?d)

```

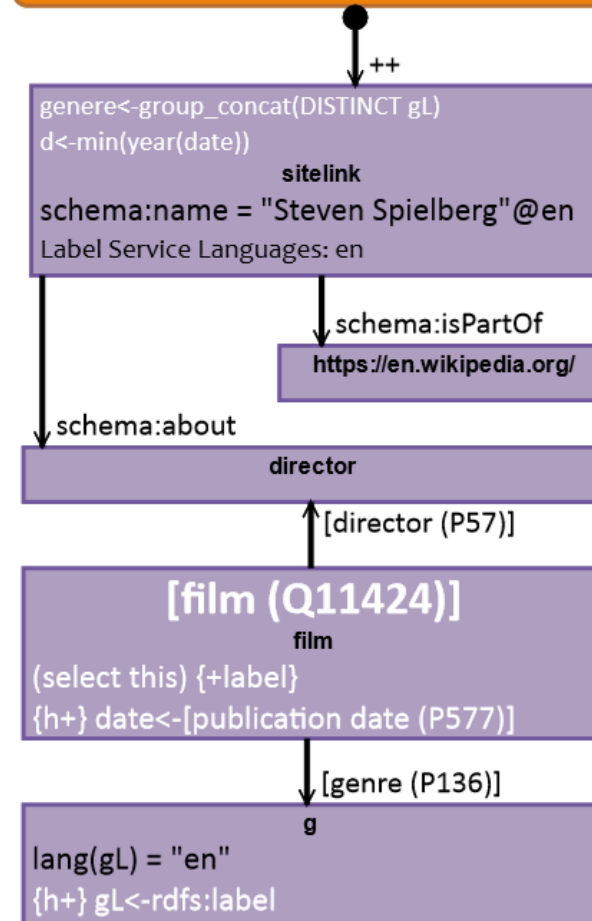
```

# ID = 2,
# Question = Films of directors by their English
Wikipedia name
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX schema: <http://schema.org/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-
schema#>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?film ?genre ?d ?filmLabel WHERE{
  {SELECT ?film (GROUP_CONCAT(DISTINCT ?gL;
SEPARATOR=', ' ) AS ?genre)
(MIN(YEAR(xsd:dateTime(?date))) AS ?d) ?filmLabel
WHERE{
  ?film wdt:P31 wd:Q11424.
  ?sitelink schema:about ?director.
  ?film wdt:P57 ?director.
  ?film wdt:P136 ?g.
  ?sitelink schema:isPartOf
<https://en.wikipedia.org/>.
  ?sitelink schema:name "Steven Spielberg"@en .
  ?film wdt:P577 ?date.
  ?g rdfs:label ?gL.
  FILTER(LANG(?gL) = "en")
  SERVICE wikibase:label {bd:serviceParam
wikibase:language "en" .}
  }
  GROUP BY ?film ?filmLabel
}
  SERVICE wikibase:label {bd:serviceParam
wikibase:language "en" .}
}
ORDER BY DESC(?d)

```

[]

"ID = 2,
Question = Films of directors by their English Wikipedia name"
film {+label}
genre
d
order by d, DESC
Label Service Languages: en



OK

3.	<pre> SELECT DISTINCT ?item ?itemLabel ?awardLabel ?time { ?item wdt:P106/wdt:P279* wd:Q3455803 ; p:P166 ?awardStat . ?awardStat pq:P805 ?award ; ps:P166 wd:Q103360 . ?award wdt:P585 ?time . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } ORDER BY DESC(?time) </pre>	<pre> # ID = 3, # Question = Winner of the Academy Awards by Award and Time PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?item ?time ?itemLabel ?awardLabel WHERE{ ?item wdt:P106/wdt:P279* wd:Q3455803. ?item p:P166 ?awardStat. ?awardStat pq:P805 ?award. ?awardStat ps:P166 wd:Q103360. ?award wdt:P585 ?time. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY DESC(?time) </pre>	<pre> graph TD A["item \"ID = 3, Question = Winner of the Academy Awards by Award and Time\" (select this) {+label} select distinct order by time, DESC"] B["[occupation (P106)].[subclass of (P279)]* [director (Q3455803)]"] C["p:[award received (P166)] awardStat"] D["pq:[statement is subject of (P805)] award {h} (select this) {+label} {+} time<-[point in time (P585)]"] E["ps:[award received (P166)] [Academy Award for Best Director (Q103360)]"] A --> B A --> C C --> D C --> E </pre>	OK
----	--	--	--	----

4.

```

SELECT ?human ?humanLabel ?awardEditionLabel
?awardLabel ?awardWork ?awardWorkLabel ?director
?directorLabel ?time
WHERE
{
  {
    SELECT (SAMPLE(?human) AS ?human) ?award
    ?awardWork (SAMPLE(?director) AS ?director)
    (SAMPLE(?awardEdition) AS ?awardEdition)
    (SAMPLE(?time) AS ?time) WHERE {
      ?award wdt:P31 wd:Q19020 .
      {
        ?human p:P166 ?awardStat .
        ?awardStat ps:P166 ?award .
        ?awardStat pq:P805 ?awardEdition .
        ?awardStat pq:P1686 ?awardWork .
        ?human wdt:P31 wd:Q5 .
      } UNION {
        ?awardWork wdt:P31 wd:Q11424 .
        ?awardWork p:P166 ?awardStat .
        ?awardStat ps:P166 ?award .
        ?awardStat pq:P805 ?awardEdition .
      }
    } OPTIONAL {
      ?awardEdition wdt:P585 ?time .
      ?awardWork wdt:P57 ?director .
    }
  }
  GROUP BY ?awardWork ?award
}

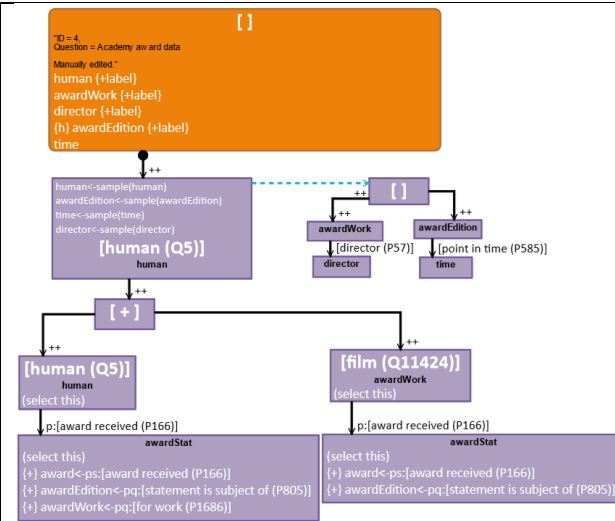
SERVICE wikibase:label {
  bd:serviceParam wikibase:language
  "[AUTO_LANGUAGE],en" .
}
ORDER BY DESC(?time)

```

```

# ID = 4,
# Question = Academy award data
#
# Manually edited.
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX ps:
<http://www.wikidata.org/prop/statement/>
PREFIX pq:
<http://www.wikidata.org/prop/qualifier/>
PREFIX p: <http://www.wikidata.org/prop/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?human ?awardWork ?director ?awardEdition
?time ?award ?humanLabel ?awardWorkLabel
?directorLabel ?awardEditionLabel ?awardLabel
WHERE{
  {SELECT ?human ?awardStat ?award ?awardEdition
  ?awardWork (SAMPLE(?human) AS ?human)
  (SAMPLE(?awardEdition) AS ?awardEdition)
  (SAMPLE(?time) AS ?time) (SAMPLE(?director) AS
  ?director) WHERE{
    ?human wdt:P31 wd:Q5.
    {
      ?human wdt:P31 wd:Q5.
      ?human p:P166 ?awardStat.
      ?awardStat ps:P166 ?award.
      ?awardStat pq:P805 ?awardEdition.
      ?awardStat pq:P1686 ?awardWork.
    }
  } UNION
  {
    ?human wdt:P31 wd:Q5.
    ?awardWork wdt:P31 wd:Q11424.
    ?awardWork p:P166 ?awardStat.
    ?awardStat ps:P166 ?award.
    ?awardStat pq:P805 ?awardEdition.
  }
} OPTIONAL{
  ?awardWork wdt:P57 ?director.
  ?awardEdition wdt:P585 ?time.
}
  GROUP BY ?human ?awardStat ?award ?awardEdition
?awardWork
}
SERVICE wikibase:label {bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en" .}
}

```



To be manually edited.

TO DO: UNION construction, UNIT as main class, OPTIONAL block under UNIT

5.	<pre> SELECT DISTINCT ?Person ?PersonLabel ?NobelPrizeLabel ?AcademyAwardLabel WHERE { ?NobelPrize wdt:P279?/wdt:P31? wd:Q7191 . ?AcademyAward wdt:P279?/wdt:P31? wd:Q19020 . ?Person wdt:P166? ?NobelPrize . ?Person wdt:P166? ?AcademyAward . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . } } </pre>	<pre> # ID = 5, # Question = People that received both Academy Award and Nobel Prize PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?Person ?NobelPrizeLabel ?PersonLabel ?AcademyAwardLabel WHERE{ ?NobelPrize wdt:P279?/wdt:P31? wd:Q7191. ?Person wdt:P166? ?NobelPrize. ?Person wdt:P166? ?AcademyAward. ?AcademyAward wdt:P279?/wdt:P31? wd:Q19020. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	NobelPrize "ID = 5, Question = People that received both Academy Award and Nobel Prize" {h} (select this) {+label} select distinct ↑ [award received (P166)]? Person (select this) {+label} ↓ [award received (P166)]? AcademyAward {h} (select this) {+label} ↓ [subclass of (P279)]?.[instance of (P31)]? [Academy Awards (Q19020)] ↓ [subclass of (P279)]?.[instance of (P31)]? [Nobel Prize (Q7191)]	OK
6.	<pre> SELECT ?awardCount ?award ?awardLabel WHERE { { SELECT (COUNT(?award) AS ?awardCount) ?award WHERE { SELECT (SAMPLE(?human) AS ?human) ?award ?awardWork (SAMPLE(?director) AS ?director) (SAMPLE(?awardEdition) AS ?awardEdition) (SAMPLE(?time) AS ?time) WHERE { ?award wdt:P31 wd:Q19020 . { ?human p:P166 ?awardStat . ?awardStat ps:P166 ?award . ?awardStat pq:P805 ?awardEdition . ?awardStat pq:P1686 ?awardWork . ?human wdt:P31 wd:Q5 . } } UNION { ?awardWork wdt:P31 wd:Q11424 . ?awardWork p:P166 ?awardStat . ?awardStat ps:P166 ?award . ?awardStat pq:P805 ?awardEdition . } OPTIONAL { ?awardEdition wdt:P585 ?time . ?awardWork wdt:P57 ?director . } } GROUP BY ?awardWork ?award } GROUP BY ?award ORDER BY ASC(?awardCount) SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . } </pre>	<pre> # ID = 6, # Question = Number of handed out academy awards per award type per award type # # Manually edited PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?awardCount ?award ?awardLabel WHERE{ {SELECT ?award (COUNT(?award) AS ?awardCount) WHERE{ {SELECT ?award ?awardWork (SAMPLE(?human) AS ?human) (SAMPLE(?awardEdition) AS ?awardEdition) (SAMPLE(?time) AS ?time) (SAMPLE(?director) AS ?director) WHERE{ ?award wdt:P31 wd:Q19020. { ?award wdt:P31 wd:Q19020. ?human wdt:P31 wd:Q5. ?human p:P166 ?awardStat. ?awardStat ps:P166 ?award. ?awardStat pq:P805 ?awardEdition. ?awardStat pq:P1686 ?awardWork. } } } UNION { ?award wdt:P31 wd:Q19020. ?awardWork wdt:P31 wd:Q11424. ?awardWork p:P166 ?awardStat. ?awardStat ps:P166 ?award. ?awardStat pq:P805 ?awardEdition. ?awardStat pq:P1686 ?awardWork. } } UNION { ?award wdt:P31 wd:Q19020. ?awardWork wdt:P31 wd:Q11424. ?awardWork p:P166 ?awardStat. ?awardStat ps:P166 ?award. ?awardStat pq:P805 ?awardEdition. } } </pre>	[] "ID = 6, Question = Number of handed out academy awards per award type Manually edited" awardCount award {+label} ++ awardCount<-COUNT[award] ++ award order by awardCount ++ human<-sample(human) awardEdition<-sample(awardEdition) time<-sample(time) director<-sample(director) [Academy Awards (Q19020)] (select this) ++ [+] ++ [film (Q11424)] awardWork (select this) ++ p[award received (P166)] awardStat (h+) award<-ps[award received (P166)] (h+) awardEdition<-pq[statement is subject of (P805)] (h+) awardEdition<-pq[statement is subject of (P805)] ++ [] ++ awardWork (select this) awardEdition [director (P57)] [point in time (P585)] director time ++ [human (Q5)] human ++ p[award received (P166)] awardStat (h+) award<-ps[award received (P166)] (h+) awardEdition<-pq[statement is subject of (P805)] (h+) awardWork<-pq[for work (P1686)]	Manually edited. TO DO: UNION construction, Multiple unit subqueries, OPTIONAL block under unit

	<pre> } } </pre>	<pre> } OPTIONAL{ ?awardEdition wdt:P585 ?time. ?awardWork wdt:P57 ?director. } GROUP BY ?award ?awardWork } GROUP BY ?award } SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>		
7.	<pre> SELECT ?director ?director_label ?films ?sitelinks ((?films * ?sitelinks) as ?rank) WHERE { {SELECT ?director (count(distinct ?film) as ?films) (count(distinct ?sitelink) as ?sitelinks) WHERE { ?director wdt:P106 wd:Q2526255 . ?film wdt:P57 ?director . ?sitelink schema:about ?director . } GROUP BY ?director } SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?director rdfs:label ?director_label } } ORDER BY DESC(?rank) LIMIT 100 </pre>	<pre> # ID = 7, # Question = Film directors ranked by number of sitelinks multiplied by their number of films PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?director ?films ?sitelinks ?rank WHERE{ {SELECT ?director (COUNT(DISTINCT ?film) AS ?films) (COUNT(DISTINCT ?sitelink) AS ?sitelinks) WHERE{ ?film wdt:P57 ?director. ?director wdt:P106 wd:Q2526255. ?sitelink schema:about ?director.} GROUP BY ?director } BIND(?films * ?sitelinks AS ?rank) SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?director rdfs:label ?director_label. } } ORDER BY DESC(?rank) LIMIT 100 </pre>	[] "ID = 7, Question = Film directors ranked by number of sitelinks multiplied by their number of films" director films sitelinks rank<-films * sitelinks order by rank, DESC show first 100 row(s) <pre> SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?director rdfs:label ?director_label. } </pre> <pre> graph TD A["films<-count_distinct(.) sitelinks<-count_distinct(sitelink) film"] -- "[director (P57)]" --> B["director (select this)"] B -- "[occupation (P106)]" --> C["[film director (Q2526255)]"] B -- "schema:about" --> D["sitelink"] </pre>	OK

8.	<pre> SELECT ?show ?showLabel ?seasonNumber ?episode ?episodeLabel WHERE { BIND(wd:Q886 as ?show) . ?season wdt:P361 ?show . ?episode wdt:P361 ?season . ?season p:P179 [pq:P1545 ?seasonNumber] . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } ORDER BY xsd:integer(?seasonNumber) </pre>	<pre> # ID = 8, # Question = The Simpsons television series # episodes list by season PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?show ?seasonNumber ?episode ?showLabel ?episodeLabel WHERE{ ?season p:P179 [pq:P1545 ?seasonNumber]. ?episode wdt:P361 ?season. ?season wdt:P361 ?show. BIND(wd:Q886 AS ?show) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY xsd:integer(?seasonNumber) </pre>		OK
9.	<pre> SELECT DISTINCT ?pokemon ?pokemonLabel ?pokedexNumber WHERE { ?pokemon wdt:P31/wdt:P279* wd:Q3966183 . ?pokemon p:P1685 ?statement. ?statement ps:P1685 ?pokedexNumber; pq:P972 wd:Q20005020. FILTER (! wikibase:isSomeValue(?pokedexNumber)) SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } ORDER BY (?pokedexNumber) </pre>	<pre> # ID = 9, # Question = Pokémon! PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?pokemon ?pokedexNumber ?pokemonLabel WHERE{ ?pokemon wdt:P31/wdt:P279* wd:Q3966183. ?pokemon p:P1685 ?statement. ?statement pq:P972 wd:Q20005020. ?statement ps:P1685 ?pokedexNumber. FILTER(!wikibase:isSomeValue(?pokedexNumber)) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY ?pokedexNumber </pre>		OK

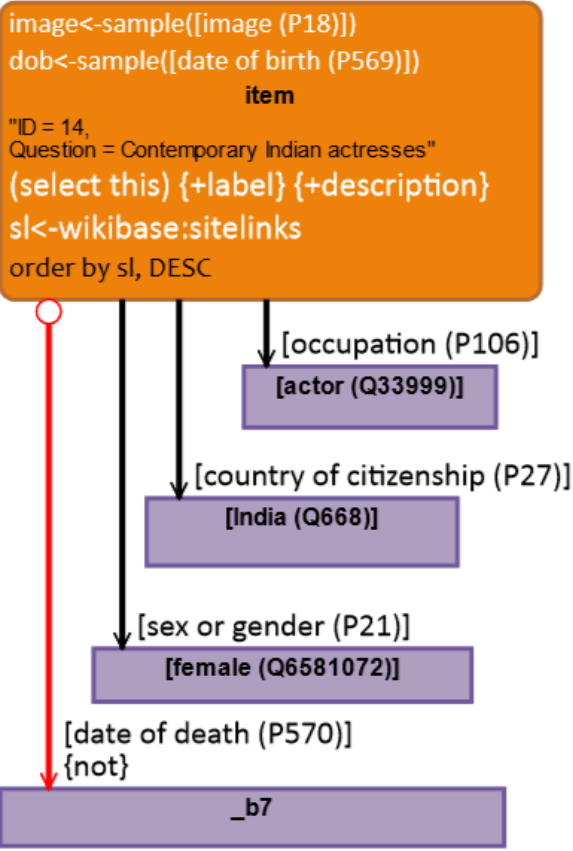
10.	<pre> SELECT (SAMPLE(?seasonNumber) AS ?seasonNumber) (SAMPLE(?episodeNumber) AS ?episodeNumber) (SAMPLE(?title) AS ?title) (MIN(?pubDate) AS ?pubDate) ?episode { ?episode wdt:P31 wd:Q21191270; wdt:P179 wd:Q321423. OPTIONAL { ?episode p:P179 [ps:P179/p:P179 [ps:P179 wd:Q321423; pq:P1545 ?seasonNumber] ; pq:P1545 ?episodeNumber] } OPTIONAL { ?episode wdt:P1476 ?title. } OPTIONAL { ?episode wdt:P577 ?pubDate. } } GROUP BY ?episode ORDER BY IF(BOUND(?seasonNumber), xsd:integer(?seasonNumber), 1000) xsd:integer(?episodeNumber) ?title </pre>	<pre> # ID = 10, # Question = Law & Order episodes PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX p: <http://www.wikidata.org/prop/> SELECT ?episode (SAMPLE(?seasonNumber) AS ?seasonNumber) (SAMPLE(?episodeNumber) AS ?episodeNumber) (SAMPLE(?title) AS ?title) (MIN(?publication date) AS ?pubDate) WHERE{ ?episode wdt:P31 wd:Q21191270. ?episode wdt:P179 wd:Q321423. OPTIONAL{?episode wdt:P1476 ?title.} OPTIONAL{?episode wdt:P577 ?publication_date.} OPTIONAL{ ?episode p:P179 ?_b6. ?_b6 pq:P1545 ?episodeNumber. ?_b6 ps:P179/p:P179 ?_b5. ?_b5 pq:P1545 ?seasonNumber. ?_b5 ps:P179 wd:Q321423. } BIND(xsd:integer(?seasonNumber) AS ?expr_0) } GROUP BY ?episode xsd:integer(?episodeNumber) ORDER BY xsd:integer(?episodeNumber) ?title (IF(BOUND(?seasonNumber), ?expr_0, 1000)) </pre>	seasonNumber<-sample(seasonNumber) episodeNumber<-sample(episodeNumber) title<-sample(title) pubDate<-min((publication date (P577))) [television series episode (Q21191270)] (group) episode "ID = 10, Question = Law & Order episodes" (select this) {h} title<-[title (P1476)] order by order by if(bound(seasonNumber), xsd:integer(seasonNumber), 1000) order by order by xsd:integer(episodeNumber) order by order by title ↓ [part of the series (P179)] ↓ [Law & Order (Q321423)] p:[part of the series (P179)] _b6 {h+} episodeNumber<-pq:[series ordinal (P1545)] ↓ ps:[part of the series (P179)].p:[part of the series (P179)] _b5 {h+} seasonNumber<-pq:[series ordinal (P1545)] ↓ ps:[part of the series (P179)] ↓ [Law & Order (Q321423)]	OK
11.	<pre> SELECT DISTINCT ?episode ?ordinal ?episodeLabel ?subject ?subjectLabel WHERE { ?episode wdt:P31/wdt:P279* wd:Q1983062; p:P179 ?statement. OPTIONAL{ ?episode wdt:P921 ?subject } ?statement ps:P179 wd:Q3577037; pq:P1545 ?ordinal SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } ORDER BY xsd:integer(?ordinal) </pre>	<pre> # ID = 11, # Question = Main subjects of West Wing episodes PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?episode ?main_subject ?ordinal ?episodeLabel ?main_subjectLabel WHERE{ ?episode wdt:P31/wdt:P279* wd:Q1983062. ?episode p:P179 ?statement. ?statement ps:P179 wd:Q3577037. OPTIONAL{?episode wdt:P921 ?main_subject.} ?statement pq:P1545 ?ordinal. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } ORDER BY xsd:integer(?ordinal) </pre>	.. [episode (Q1983062)] episode "ID = 11, Question = Main subjects of West Wing episodes" (select this) {+label} [main subject (P921)] {+label} select distinct order by xsd:integer(ordinal) ↓ p:[part of the series (P179)] statement {+} ordinal<-pq:[series ordinal (P1545)] ↓ ps:[part of the series (P179)] ↓ [The West Wing (Q3577037)]	OK

12.	<pre> SELECT ?item ?itemLabel (MIN(?date) AS ?firstReleased) ?image WHERE { ?item wdt:P161 wd:Q221074; wdt:P577 ?date SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } OPTIONAL { ?item wdt:P18 ?image. } } GROUP BY ?item ?itemLabel ?image ORDER BY (?date) </pre>	<pre> # ID = 12, # Question = Movies with Bud Spencer PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?image (MIN(?date) AS ?firstReleased) ?itemLabel WHERE{ ?item wdt:P161 wd:Q221074. ?item wdt:P577 ?date. OPTIONAL{?item wdt:P18 ?image.} SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?item ?image ?itemLabel ORDER BY ?date </pre>	firstReleased<-min(date) item "ID = 12, Question = Movies with Bud Spencer" (select this) {+label} {+} date<-[publication date (P577)] image<-[image (P18)] order by date group by image ↓ [cast member (P161)] [Bud Spencer (Q221074)]	OK
13.	<pre> SELECT ?char ?charName (GROUP_CONCAT(DISTINCT ?typeLabel;separator=", ") AS ?types) (GROUP_CONCAT(DISTINCT ?universeLabel;separator=", ") AS ?universes) WHERE { ?char wdt:P1080 wd:Q931597; wdt:P31 ?type ; wdt:P1080 ?universe . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?char rdfs:label ?charName . ?universe rdfs:label ?universeLabel . ?type rdfs:label ?typeLabel .} } GROUP BY ?char ?charName </pre>	<pre> # ID = 13, # Question = Fictional subjects of the Marvel Universe PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?char ?charName (GROUP_CONCAT(DISTINCT ?typeLabel; SEPARATOR=', ') AS ?types) (GROUP_CONCAT(DISTINCT ?universeLabel; SEPARATOR=', ') AS ?universes) WHERE{ ?char wdt:P1080 wd:Q931597. ?char wdt:P31 ?type. ?char wdt:P1080 ?universe. SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?char rdfs:label ?charName. ?universe rdfs:label ?universeLabel. ?type rdfs:label ?typeLabel. } } GROUP BY ?char ?charName </pre>	types<-group_concat(DISTINCT typeLabel) universes<-group_concat(DISTINCT universeLabel) char "ID = 13, Question = Fictional subjects of the Marvel Universe" (select this) charName SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?char rdfs:label ?charName. ?universe rdfs:label ?universeLabel. ?type rdfs:label ?typeLabel. } ↓ [from narrative universe (P1080)] [Marvel Universe (Q931597)] ↓ [instance of (P31)] type ↓ [from narrative universe (P1080)] universe	OK

14.

```
SELECT ?item ?itemLabel ?itemDescription
(SAMPLE(?img) AS ?image) (SAMPLE(?dob) AS ?dob)
?sl
WHERE {
  ?item wdt:P106 wd:Q33999 ;
        wdt:P27 wd:Q668 ;
        wdt:P21 wd:Q6581072 .
  MINUS { ?item wdt:P570 [] }
  OPTIONAL { ?item wdt:P18 ?img }
  OPTIONAL { ?item wdt:P569 ?dob }
  OPTIONAL { ?item wikibase:sitelinks ?sl }
  SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en" }
} GROUP BY ?item ?itemLabel ?itemDescription ?sl
ORDER BY DESC(?sl)
```

```
# ID = 14,
# Question = Contemporary Indian actresses
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?item ?sl (SAMPLE(?image) AS ?image)
(SAMPLE(?date_of_birth) AS ?dob) ?itemLabel
?itemDescription WHERE{
  ?item wdt:P106 wd:Q33999.
  ?item wdt:P27 wd:Q668.
  ?item wdt:P21 wd:Q6581072.
  OPTIONAL{?item wikibase:sitelinks ?sl.}
  OPTIONAL{?item wdt:P18 ?image.}
  OPTIONAL{?item wdt:P569 ?date_of_birth.}
  MINUS{
    ?item wdt:P570 [].
  }
  SERVICE wikibase:label {bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en" .}
}
GROUP BY ?item ?sl ?itemLabel ?itemDescription
ORDER BY DESC(?sl)
```



OK

15.	<pre> SELECT ?sitelink WHERE { ?item wdt:P21 wd:Q6581072 . { ?item wdt:P27 wd:Q843 } { ?item wdt:P106 wd:Q33999 } { ?sitelink schema:about ?item . ?sitelink schema:inLanguage "pa" } ?item wdt:P31 wd:Q5 . } LIMIT 5000 </pre>	<pre> # ID = 15, # Question = Articles on Punjabi (Gurmukhi) Wikipedia about Pakistani actresses PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX schema: <http://schema.org/> SELECT ?sitelink WHERE{ ?item wdt:P31 wd:Q5. ?item wdt:P21 wd:Q6581072. ?item wdt:P27 wd:Q843. ?item wdt:P106 wd:Q33999. ?sitelink schema:about ?item. ?sitelink schema:inLanguage "pa" . } LIMIT 5000 </pre>	[human (Q5)] item "ID = 15, Question = Articles on Punjabi (Gurmukhi) Wikipedia about Pakistani actresses" show first 5000 row(s) ↑ schema:about sitelink schema:inLanguage = "pa" (select this) ↓ [sex or gender (P21)] [female (Q6581072)] ↓ [country of citizenship (P27)] [Pakistan (Q843)] ↓ [occupation (P106)] [actor (Q33999)]	OK
16.	<pre> SELECT ?doctor ?doctorLabel ?ordinal ?performer ?performerLabel WHERE { ?doctor wdt:P31 wd:Q47543030 . OPTIONAL { ?doctor wdt:P1545 ?ordinal } OPTIONAL { ?doctor p:P175 / ps:P175 ?performer } SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } ORDER BY ASC(xsd:integer(?ordinal)) </pre>	<pre> # ID = 16, # Question = All Dr. Who performers PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?doctor ?ordinal ?performer ?doctorLabel ?performerLabel WHERE{ ?doctor wdt:P31 wd:Q47543030. OPTIONAL{?doctor wdt:P1545 ?ordinal.} OPTIONAL{ ?doctor p:P175/ps:P175 ?performer. } SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } ORDER BY xsd:integer(?ordinal) </pre>	[regeneration of The Doctor (Q47543030)] doctor "ID = 16, Question = All Dr. Who performers" (select this) {+label} ordinal<-[series ordinal (P1545)] order by xsd:integer(ordinal) ↓ p:[performer (P175)].ps:[performer (P175)] performer (select this) {+label}	OK

17.	<pre> SELECT ?movie ?movieLabel ?narrative_location ?narrative_locationLabel ?coordinates WHERE { ?movie wdt:P840 ?narrative_location ; wdt:P31 wd:Q11424 . ?narrative_location wdt:P625 ?coordinates . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 17, # Question = Movies and their narrative location on a map PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?movie ?narrative_location ?coordinate_location ?movieLabel ?narrative_locationLabel WHERE{ ?movie wdt:P31 wd:Q11424. ?movie wdt:P840 ?narrative_location. ?narrative_location wdt:P625 ?coordinate_location. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	[film (Q11424)] movie "ID = 17, Question = Movies and their narrative location on a map" (select this) {+label} [narrative location (P840)] narrative_location (select this) {+label} {+} [coordinate location (P625)]	OK
18.	<pre> SELECT DISTINCT ?item ?itemLabel WHERE { ?item wdt:P31 wd:Q11424. ?item wdt:P577 ?pubdate. FILTER((?pubdate >= "2017-01-01T00:00:00Z"^^xsd:dateTime) && (?pubdate <= "2017-12-31T00:00:00Z"^^xsd:dateTime)) SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 18, # Question = Movies released in 2017 PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX xsd: <http://www.w3.org/2001/XMLSchema#> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?item ?itemLabel WHERE{ ?item wdt:P31 wd:Q11424. ?item wdt:P577 ?pubdate. FILTER(?pubdate >= "2017-01-01T00:00:00Z"^^xsd:dateTime && ?pubdate <= "2017-12-31T00:00:00Z"^^xsd:dateTime) SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	[film (Q11424)] item "ID = 18, Question = Movies released in 2017" pubdate >= "2017-01-01T00:00:00Z"^^xsd:dateTime && pubdate <= "2017-12-31T00:00:00Z"^^xsd:dateTime (select this) {+label} {h+} pubdate<-[publication date (P577)] select distinct	OK
19.	<pre> SELECT DISTINCT ?human ?humanLabel WHERE { VALUES ?professions {wd:Q177220 wd:Q639669} ?human wdt:P31 wd:Q5 . ?human wdt:P106 ?professions . ?human wdt:P136 ?genre . ?human wikibase:statements ?statementcount . ?genre rdfs:label ?genreLabel . FILTER CONTAINS(?genreLabel, "rock") . FILTER (?statementcount > 50) . SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } } ORDER BY ?humanLabel LIMIT 50 </pre>	<pre> # ID = 19, # Question = Musicians or singers that have a genre containing 'rock' PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?human ?humanLabel WHERE{ ?human wdt:P31 wd:Q5. ?human wdt:P106 ?professions. ?human wdt:P136 ?genre. ?human wikibase:statements ?statements. VALUES ?professions {wd:Q177220 wd:Q639669} ?genre rdfs:label ?label. FILTER(?statements > 50) FILTER(CONTAINS(?label, "rock")) SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } ORDER BY ?humanLabel LIMIT 50 </pre>	[human (Q5)] human "ID = 19, Question = Musicians or singers that have a genre containing 'rock'" wikibase:statements > 50 (select this) {+label} select distinct order by humanLabel show first 50 row(s) Label Service Languages: en [genre (P136)] genre contains(rdfs:label, "rock") [occupation (P106)] professions {h} professions<--[singer (Q177220)], [musician (Q639669)]	OK

20.	<pre> SELECT DISTINCT ?character ?characterLabel ?birth ?death WITH { SELECT ?fictiontype WHERE { ?fictiontype wdt:P279* wd:Q95074. hint:Prior hint:gearing "forward". } } AS %i WHERE { INCLUDE %i ?character wdt:P31 ?fictiontype. { ?character wdt:P569 ?birth . } UNION { ?character wdt:P570 ?death . } BIND(xsd:integer(YEAR(NOW())/10) as ?actual_decade). FILTER(xsd:integer(YEAR(?birth)/10) = ?actual_decade xsd:integer(YEAR(?death)/10) = ?actual_decade) SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" . } } ORDER BY ?birth ?death </pre>			Unsupported construction: INCLUDE %i
-----	--	--	--	---

Computer Science and Technology

1.	<pre> SELECT DISTINCT ?idExtension ?extension ?mediaType ?idExtensionLabel WHERE { ?idExtension wdt:P31 wd:Q235557; wdt:P1195 ?extension . OPTIONAL { ?idExtension wdt:P1163 ?mediaType } SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } } ORDER BY ?extension ?mediaType </pre>	<pre> # ID = 1, # Question = List of computer files formats PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?idExtension ?extension ?mediaType ?idExtensionLabel WHERE{ ?idExtension wdt:P31 wd:Q235557. ?idExtension wdt:P1195 ?extension. OPTIONAL{?idExtension wdt:P1163 ?mediaType.} SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } ORDER BY ?extension ?mediaType </pre>	[file format (Q235557)] idExtension "ID = 1, Question = List of computer files formats" (select this) {+label} {+} extension<-[file extension (P1195)] mediaType<-[media type (P1163)] select distinct order by extension order by mediaType Label Service Languages: en	OK
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2.	<pre> SELECT DISTINCT ?standard ?standardLabel ?website WHERE { ?standard wdt:P1462 wd:Q37033 . OPTIONAL{ ?standard wdt:P856 ?website } SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } } ORDER BY ?standardLabel </pre>	<pre> # ID = 2, # Question = List of W3C standards PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?standard ?official_website ?standardLabel WHERE{ ?standard wdt:P1462 wd:Q37033. OPTIONAL{?standard wdt:P856 ?official_website.} SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } } ORDER BY ?standardLabel </pre>	standard "ID = 2, Question = List of W3C standards" (select this) {+label} [official website (P856)] select distinct order by standardLabel Label Service Languages: en ↓ [standards body (P1462)] [World Wide Web Consortium (Q37033)]	OK
3.	<pre> SELECT ?software ?softwareLabel ?date (ROUND((NOW() - ?date)/365.2425) AS ?age) { ?software wdt:P31/wdt:P139* wd:Q7397. OPTIONAL { ?software wdt:P571 ?date. } OPTIONAL { ?software p:P348/pq:P577 ?date. } FILTER(BOUND(?date)). SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } ORDER BY ?date LIMIT 10 </pre>	<pre> # ID = 3, # Question = Oldest software PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX xsd: <http://www.w3.org/2001/XMLSchema#> PREFIX p: <http://www.wikidata.org/prop/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?software ?date ?age ?softwareLabel WHERE{ ?software wdt:P31/wdt:P139* wd:Q7397. OPTIONAL{?software wdt:P571 ?date.} OPTIONAL{ ?software p:P348/pq:P577 ?date. } BIND(ROUND(xsd:decimal((NOW()- ?date))/xsd:decimal("365.2425"^^xsd:decimal)) AS ?age) FILTER(BOUND(?date)) SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } ORDER BY ?date LIMIT 10 </pre>	software "ID = 3, Question = Oldest software" bound(date) (select this) {+label} date<-[inception (P571)] age<-round((now() - date) / "365.2425"^^xsd:decimal) order by date show first 10 row(s) Label Service Languages: en ↓ [instance of (P31)].wdt:P139* [software (Q7397)] ↓ p:[software version identifier (P348)].pq:[publication date (P577)] (select this) date	OK

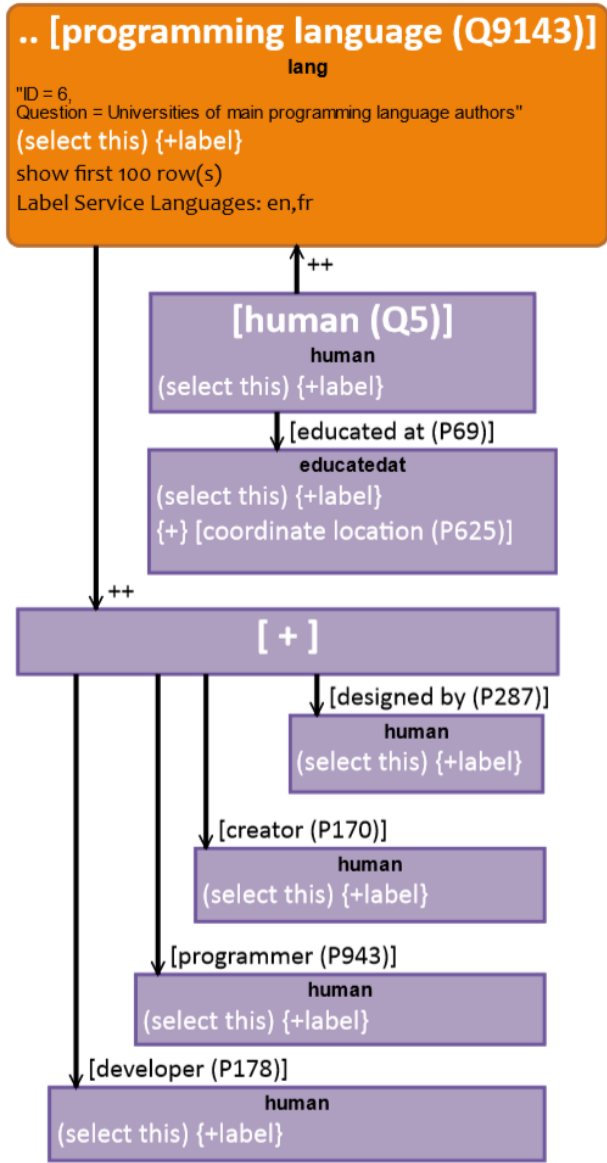
4.	<pre> SELECT DISTINCT ?instance_of ?instance_ofDescription ?instance_ofLabel ?official_website WHERE { SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } ?instance_of (wdt:P31/(wdt:P279*)) wdt:Q341. OPTIONAL { ?instance_of wdt:P856 ?official_website. } ?instance_of wdt:P277 wdt:Q37227. } </pre>	<pre> # ID = 4, # Question = Software written in Go programming language PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?instance_of ?official_website ?instance_ofLabel ?instance_ofDescription WHERE{ ?instance_of wdt:P31/wdt:P279* wd:Q341. ?instance_of wdt:P277 wd:Q37227. OPTIONAL{?instance_of wdt:P856 ?official_website.} SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	.. [free software (Q341)] instance_of "ID = 4, Question = Software written in Go programming language" (select this) {+label} {+description} [official website (P856)] select distinct ↓ [programming language (P277)] [Go (Q37227)]	OK
5.	<pre> SELECT DISTINCT ?instance_of ?instance_ofDescription ?instance_ofLabel ?official_website WHERE { SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } ?instance_of wdt:P31/wdt:P279* wd:Q341 OPTIONAL { ?instance_of wdt:P856 ?official_website. } ?instance_of wdt:P277 wdt:Q37227. } </pre>	<pre> # ID = 5, # Question = Free and open-source software written in Go programming language PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?instance_of ?official_website ?instance_ofLabel ?instance_ofDescription WHERE{ ?instance_of wdt:P31/wdt:P279* wd:Q341. ?instance_of wdt:P277 wd:Q37227. OPTIONAL{?instance_of wdt:P856 ?official_website.} SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	.. [free software (Q341)] instance_of "ID = 5, Question = Free and open-source software written in Go programming language" (select this) {+label} {+description} [official website (P856)] select distinct ↓ [programming language (P277)] [Go (Q37227)]	OK

6.

```
SELECT ?lang ?langLabel ?human ?humanLabel
?educatedat ?educatedatLabel ?coords
{
  ?lang wdt:P31/wdt:P279* wd:Q9143 .
  ?human wdt:P31 wd:Q5 .
  { ?lang wdt:P287 ?human }
  UNION
  { ?lang wdt:P170 ?human }
  UNION
  { ?lang wdt:P943 ?human }
  UNION
  { ?lang wdt:P178 ?human } .

  ?human wdt:P69 ?educatedat .
  ?educatedat wdt:P625 ?coords .
  SERVICE wikibase:label { bd:serviceParam
  wikibase:language "en,fr" }
}
LIMIT 100
```

```
# ID = 6,
# Question = Universities of main programming
language authors
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?lang ?human ?educatedat
?coordinate_location ?langLabel ?humanLabel
?educatedatLabel WHERE{
  ?lang wdt:P31/wdt:P279* wd:Q9143.
  ?human wdt:P31 wd:Q5.
  {
    ?lang wdt:P31/wdt:P279* wd:Q9143.
    ?lang wdt:P287 ?human.
  }
  UNION
  {
    ?lang wdt:P31/wdt:P279* wd:Q9143.
    ?lang wdt:P170 ?human.
  }
  UNION
  {
    ?lang wdt:P31/wdt:P279* wd:Q9143.
    ?lang wdt:P943 ?human.
  }
  UNION
  {
    ?lang wdt:P31/wdt:P279* wd:Q9143.
    ?lang wdt:P178 ?human.
  }
  ?human wdt:P69 ?educatedat.
  ?educatedat wdt:P625 ?coordinate_location.
  SERVICE wikibase:label {bd:serviceParam
  wikibase:language "en,fr" .}
}
LIMIT 100
```



OK

7.	<pre> SELECT ?database ?databaseLabel ?license ?licenseLabel ?value WHERE { ?database ?p ?wds . OPTIONAL { ?database wdt:P275 ?license } ?wds ?v ?value. ?wdP wikibase:statementProperty ?v. ?wdP wikibase:claim ?p. ?wds pq:P31 wd:Q27075870. SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } ORDER BY ASC(?databaseLabel) </pre>	<pre> # ID = 7, # Question = Websites with OpenAPI endpoints PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?database ?copyright_license ?databaseLabel ?copyright_licenseLabel WHERE{ ?database ?p ?wds. ?wds pq:P31 wd:Q27075870. OPTIONAL{?database wdt:P275 ?copyright_license.} ?wds ?v ?value. ?wdP wikibase:statementProperty ?v. ?wdP wikibase:claim ?p. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } ORDER BY ?databaseLabel </pre>	database "ID = 7, Question = Websites with OpenAPI endpoints" (select this) {+label} [copyright license (P275)] {+label} order by databaseLabel Label Service Languages: en wdP {h+} v<-wikibase:statementProperty {h+} p<-wikibase:claim wds {+} value<-??v pq:[instance of (P31)] [OpenAPI endpoint (Q27075870)]	OK
8.	<pre> SELECT ?ereader ?ereaderLabel WHERE { ?ereader wdt:P31 wd:Q726235 . ?ereader wdt:P1072 wd:Q1941622 . SERVICE wikibase:label { bd:serviceParam wikibase:language "en" . } } </pre>	<pre> # ID = 8, # Question = E-Readers that support the mobipocket file format PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?ereader ?ereaderLabel WHERE{ ?ereader wdt:P31 wd:Q726235. ?ereader wdt:P1072 wd:Q1941622. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>	[e-book reader (Q726235)] ereader "ID = 8, Question = E-Readers that support the mobipocket file format" (select this) {+label} Label Service Languages: en [readable file format (P1072)] [Mobipocket (Q1941622)]	OK

9.	<pre> SELECT ?app ?appLabel (COUNT(?format) AS ?count) WHERE { ?app (p:P31/ps:P31/wdt:P279) wd:Q7397 . ?app wdt:P1072 ?format . SERVICE wikibase:label { bd:serviceParam wikibase:language "en" . } GROUP BY ?app ?appLabel ORDER BY DESC(?count) </pre>	<pre> # ID = 9, # Question = Software applications ranked in descending order by the number of writable file formats PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?app (COUNT(?format) AS ?count) ?appLabel WHERE{ ?app wdt:P1072 ?format. ?app p:P31/ps:P31/wdt:P279 wd:Q7397. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } GROUP BY ?app ?appLabel ORDER BY DESC(?count) </pre>	count<-count(.) format "ID = 9, Question = Softw are applications ranked in descending order by the number of writable file formats" order by count, DESC Label Service Languages: en ↑ [readable file format (P1072)] app (select this) {+label} ↓ p:[instance of (P31)].ps:[instance of (P31)].[subclass of (P279)] [software (Q7397)]	OK
10.	<pre> SELECT DISTINCT ?mediaType (COUNT (?ff) as ?count) WHERE { ?ff wdt:P31/wdt:P279* wd:Q235557. ?ff wdt:P1163 ?mediaType. SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } } GROUP BY ?mediaType ORDER BY DESC (?count) </pre>	<pre> # ID = 10, # Question = Return a bubble chart of mediatypes by count of file formats PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?mediaType (COUNT(?ff) AS ?count) WHERE{ ?ff wdt:P31/wdt:P279* wd:Q235557. ?ff wdt:P1163 ?mediaType. } GROUP BY ?mediaType ORDER BY DESC(?count) </pre>	count<-count(.) .. [file format (Q235557)] ff "ID = 10, Question = Return a bubble chart of mediatypes by count of file formats" {+} mediaType<-[media type (P1163)] order by count, DESC group by mediaType Label Service Languages: en	OK
11.	<pre> SELECT ?personLabel ?image ?Erdos WHERE { ?person wdt:P485 wd:Q964035 . ?person wdt:P18 ?image . ?person wdt:P2021 ?Erdos SERVICE wikibase:label { bd:serviceParam wikibase:language "en" . } } </pre>	<pre> # ID = 11, # Question = Erdos Numbers and images of people who have oral histories in the Computer History Museum's collection PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?image ?Erdos_number ?personLabel WHERE{ ?person wdt:P485 wd:Q964035. ?person wdt:P18 ?image. ?person wdt:P2021 ?Erdos_number. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>	person "ID = 11, Question = Erdos Numbers and images of people who have oral histories in the Computer History Museum's collection" {h} (select this) {+label} {+} [image (P18)] {+} [Erdős number (P2021)] Label Service Languages: en ↓ [archives at (P485)] [Computer History Museum (Q964035)]	OK

Biology and Medicine

1. <pre>SELECT ?disease ?doid ?enLabel (count(?language) as ?languages) WHERE { ?disease wdt:P699 ?doid ; rdfs:label ?label ; rdfs:label ?enLabel . FILTER (lang(?enLabel) = "en") BIND (lang(?label) AS ?language) } group by ?disease ?doid ?enLabel order by desc(?languages)</pre>	<pre># ID = 1, # Question = The number of existing translations for diseases in Wikidata PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> SELECT ?disease ?doid ?enLabel (COUNT(?language) AS ?languages) WHERE{ ?disease wdt:P699 ?doid. ?disease rdfs:label ?label. ?disease rdfs:label ?enLabel. BIND (LANG(?label) AS ?language) FILTER (LANG(?enLabel) = "en") } GROUP BY ?disease ?doid ?enLabel ORDER BY DESC(?languages)</pre>	<pre>languages<-count(language) {group} disease "ID = 1, Question = The number of existing translations for diseases in Wikidata" lang(enLabel) = "en" (select this) {+} doid<-[Disease Ontology ID (P699)] {h+} rdfs:label {+} enLabel<-rdfs:label {h} language<-lang(label) order by languages, DESC</pre>	OK
2. <pre>SELECT DISTINCT ?item ?itemLabel ?rgb ?link WHERE { VALUES ?toggle { true false } ?disease wdt:P699 ?doid; wdt:P279+ wd:Q18123741; wdt:P2176 ?drug. ?drug rdfs:label ?drugLabel. FILTER (LANG(?drugLabel) = "en"). ?disease rdfs:label ?diseaseLabel. FILTER (LANG(?diseaseLabel) = "en"). BIND (IF(?toggle,?disease,?drug) AS ?item). BIND (IF(?toggle,?diseaseLabel,?drugLabel) AS ?itemLabel). BIND (IF(?toggle,"FFA500","7FFF00") AS ?rgb). BIND (IF(?toggle,"",?disease) AS ?link). }</pre>	<pre># ID = 2, # Question = A network of Drug-disease interactions on infectious diseases (Source: Disease Ontology, NDF-RT and ChEMBL) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?item ?itemLabel ?rgb ?link WHERE{ ?disease wdt:P279+ wd:Q18123741. ?disease wdt:P2176 ?drug. ?disease wdt:P699 ?Disease_Ontology_ID. ?disease rdfs:label ?diseaseLabel. VALUES ?toggle {true false} ?drug rdfs:label ?drugLabel. BIND(IF(?toggle, ?disease, ?drug) AS ?item) BIND(IF(?toggle, ?diseaseLabel, ?drugLabel) AS ?itemLabel) BIND(IF(?toggle, "FFA500", "7FFF00") AS ?rgb) BIND(IF(?toggle, "", ?disease) AS ?link) FILTER (LANG(?diseaseLabel) = "en") FILTER (LANG(?drugLabel) = "en") }</pre>	<pre>disease "ID = 2, Question = A network of Drug-disease interactions on infectious diseases (Source: Disease Ontology, NDF-RT and ChEMBL)" lang(diseaseLabel) = "en" {h+} [Disease Ontology ID (P699)] {h+} diseaseLabel<-rdfs:label {h} toggle<-{true, false} item<-if(toggle, disease, drug) itemLabel<-if(toggle, diseaseLabel, drugLabel) rgb<-if(toggle, "FFA500", "7FFF00") link<-if(toggle, "", disease) select distinct [subclass of (P279)]+ [infectious disease (Q18123741)] [drug or therapy used for treatment (P2176)] drug lang(drugLabel) = "en" {h+} drugLabel<-rdfs:label</pre>	OK

3.	<pre> SELECT (COUNT(?disease) AS ?total) (SUM(?ref) AS ?byDO) (100*?byDO/?total AS ?percent) WHERE { {?disease wdt:P31 wd:Q12136 } UNION {?disease wdt:P279 wd:Q12136 .} OPTIONAL { ?disease p:P699 ?statement. BIND(1 AS ?ref). } } </pre>	<pre> # ID = 3, # Question = The number of Wikidata items on Diseases and the percentage of those with a pointer to the Disease Ontology, # # Manually edited PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX xsd: <http://www.w3.org/2001/XMLSchema#> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX p: <http://www.wikidata.org/prop/> SELECT ?percent (COUNT(?disease) AS ?total) (SUM(?ref) AS ?byDO) WHERE{ { ?disease wdt:P31 wd:Q12136. } UNION { wd:Q12136 wdt:P279 ?disease. } OPTIONAL{ ?disease p:P699 ?statement. BIND(1 AS ?ref) } BIND(xsd:decimal((100 * ?byDO))/xsd:decimal(?total) AS ?percent) } GROUP BY ?percent </pre>	total<-count(disease) byDO<-sum(ref) [] "ID = 3, Question = The number of Wikidata items on Diseases and the percentage of those with a pointer to the Disease Ontology, Manually edited" percent<-(100 * byDO) / total	Manually edited. TO DO: to add UNIT class as main, UNION block, OPTIONAL block
4.	<pre> SELECT DISTINCT ?item ?ncbi_gene ?date_modified WHERE { ?item wdt:P351 ?ncbi_gene ; wdt:P703 wd:Q15978631 ; schema:dateModified ?date_modified . BIND(now() - ?date_modified as ?date_range) FILTER (?date_range < 8) } </pre>	<pre> # ID = 4, # Question = Human genes updated this week PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX schema: <http://schema.org/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT DISTINCT ?item ?Entrez_Gene_ID ?date_modified WHERE{ ?item wdt:P703 wd:Q15978631. ?item wdt:P351 ?Entrez_Gene_ID. ?item schema:dateModified ?date_modified. BIND(NOW()-?date_modified AS ?date_range) FILTER(?date_range < 8) } </pre>	item "ID = 4, Question = Human genes updated this week" date_range < 8 (select this) {+} [Entrez Gene ID (P351)] {+} date_modified<-schema:dateModified {h} date_range<-now() - date_modified select distinct [found in taxon (P703)] [Homo sapiens (Q15978631)]	OK
5.	<pre> SELECT ?variant_typeLabel (count(?variant_typeLabel) as ?counts) WHERE { ?item wdt:P3329 ?civic_id ; wdt:P31 ?variant_type . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } GROUP BY ?variant_typeLabel ORDER BY ?counts </pre>	<pre> # ID = 5, # Question = Counts of gene-variant types sourced from the CIViC database PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT (COUNT(?variant_typeLabel) AS ?counts) ?variant_typeLabel WHERE{ ?item wdt:P3329 ?CIViC_variant_ID. ?item wdt:P31 ?variant_type. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?variant_typeLabel ORDER BY ?counts </pre>	counts<-count(variant_typeLabel) item "ID = 5, Question = Counts of gene-variant types sourced from the CIViC database" {h+} [CIViC variant ID (P3329)] {h+} variant_type<-[instance of (P31)] {+label} order by counts	OK

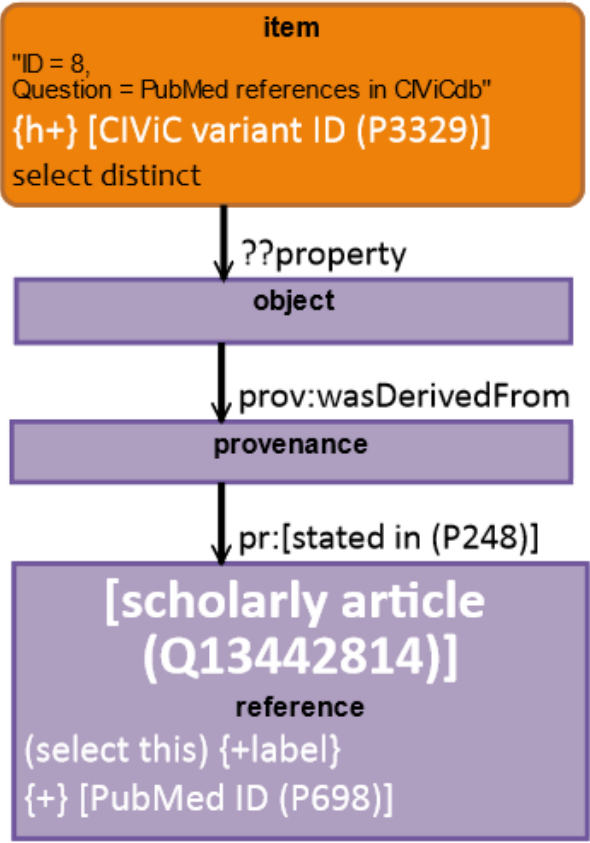
6.	<pre> SELECT ?geneLabel ?variantLabel WHERE { VALUES ?disease {wd:Q188874} ?variant wdt:P3358 ?disease ; wdt:P3433 ?gene . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } </pre>	<pre> # ID = 6, # Question = Which variant of which gene predicts a positive prognosis in colorectal cancer PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?variantLabel ?biological_variant_ofLabel WHERE{ ?variant wdt:P3358 ?disease. ?variant wdt:P3433 ?biological_variant_of. VALUES ?disease {wd:Q188874} SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	variant "ID = 6, Question = Which variant of which gene predicts a positive prognosis in colorectal cancer" {h} (select this) {+label} {h+} [biological variant of (P3433)] {+label} [positive prognostic predictor (P3358)] disease {h} disease<--{wd:[colorectal cancer (Q188874)]}	OK
7.	<pre> SELECT DISTINCT ?civic_id ?item ?itemLabel WHERE { VALUES ?property { wdt:P3356 wdt:P3357 wdt:P3358 wdt:P3359 } ?item wdt:P3329 ?civic_id . {?item ?property wd:Q1164529.} UNION {?item p:P3354 ?o . ?o pq:P2175 wd:Q1164529 .} UNION {?item p:P3354 ?o . ?o pq:P2175 wd:Q1164529 .} SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } </pre>	<pre> # ID = 7, # Question = Variants that are associated with renal cell carcinoma PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX pq: <http://www.wikidata.org/prop/qualifier/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?item ?CIViC_variant_ID ?itemLabel WHERE{ { ?item ?property wd:Q1164529. } UNION { ?item p:P3354 ?o. ?o pq:P2175 wd:Q1164529. } UNION { ?item p:P3354 ?o. ?o pq:P2175 wd:Q1164529. } ?item wdt:P3329 ?CIViC_variant_ID. VALUES ?property {wdt:P3356 wdt:P3357 wdt:P3358 wdt:P3359} SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	item "ID = 7, Question = Variants that are associated with renal cell carcinoma" (select this) {+label} {+} [CIViC variant ID (P3329)] {h} property<--{[positive diagnostic predictor (P3356)], [negative diagnostic predictor (P3357)], [positive prognostic predictor (P3358)], [negative prognostic predictor (P3359)]} select distinct ++ [+] ??property [renal cell carcinoma (Q1164529)] p:[positive therapeutic predictor (P3354)] o pq:[medical condition treated (P2175)] [renal cell carcinoma (Q1164529)] p:[positive therapeutic predictor (P3354)] o pq:[medical condition treated (P2175)] [renal cell carcinoma (Q1164529)]	OK

8.

```
SELECT DISTINCT ?reference ?referenceLabel
?pmid
WHERE
{
  ?item wdt:P3329 ?civicId ;
  ?property ?object .
  ?object prov:wasDerivedFrom ?provenance .
  ?provenance pr:P248 ?reference .
  ?reference wdt:P31 wd:Q13442814 ;
  wdt:P698 ?pmid .

  SERVICE wikibase:label { bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en" }
}
```

```
# ID = 8,
# Question = PubMed references in CIViCdb
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX pr:
<http://www.wikidata.org/prop/reference/>
PREFIX prov: <http://www.w3.org/ns/prov#>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT DISTINCT ?reference ?PubMed_ID
?referenceLabel WHERE{
  ?reference wdt:P31 wd:Q13442814.
  ?item ?property ?object.
  ?object prov:wasDerivedFrom ?provenance.
  ?provenance pr:P248 ?reference.
  ?item wdt:P3329 ?CIViC_variant_ID.
  ?reference wdt:P698 ?PubMed_ID.
  SERVICE wikibase:label {bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en" .}
}
```



OK

9.	<pre> SELECT ?propertyLabel (count(?prognostic_type) as ?counts) WHERE { VALUES ?prognostic_type {wdt:P3354 wdt:P3355 wdt:P3356 wdt:P3357 wdt:P3358 wdt:P3359} ?item wdt:P3329 ?civic_id ; ?prognostic_type ?prognostic_value . ?property wikibase:directClaim ?prognostic_type . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" } } GROUP BY ?propertyLabel ?prognostic_typeLabel ORDER BY ?counts </pre>	<pre> # ID = 9, # Question = Variant counts by predictor type PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT (COUNT(?prognostic_type) AS ?counts) ?propertyLabel WHERE{ ?property wikibase:directClaim ?prognostic_type. VALUES ?prognostic_type {wdt:P3354 wdt:P3355 wdt:P3356 wdt:P3357 wdt:P3358 wdt:P3359} ?item wdt:P3329 ?CIViC_variant_ID. ?item ?prognostic_type ?prognostic_value. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } GROUP BY ?propertyLabel ORDER BY ?counts </pre>	counts<-count(.) prognostic_type "ID = 9, Question = Variant counts by predictor type" {h} prognostic_type<-{[positive therapeutic predictor (P3354)], [negative therapeutic predictor (P3355)], [positive diagnostic predictor (P3356)], [negative diagnostic predictor (P3357)], [positive prognostic predictor (P3358)], [negative prognostic predictor (P3359)]} order by counts group by prognostic_typeLabel wikibase:directClaim property {h} (select this) {+label} ++ item {h+} [CIViC variant ID (P3329)] {h+} prognostic_value<-??prognostic_type	OK
10.	<pre> SELECT ?item ?itemLabel ?uniprotid WHERE { ?item wdt:P352 ?uniprotid ; wdt:P703 wd:Q15978631 . SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } } </pre>	<pre> # ID = 10, # Question = Get Wikidata - UniprotId mappings for homo sapiens PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?UniProt_protein_ID ?itemLabel WHERE{ ?item wdt:P703 wd:Q15978631. ?item wdt:P352 ?UniProt_protein_ID. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>	item "ID = 10, Question = Get Wikidata - UniprotId mappings for homo sapiens" (select this) {+label} {+} [UniProt protein ID (P352)] Label Service Languages: en [found in taxon (P703)] [Homo sapiens (Q15978631)]	OK

11.	<pre> PREFIX pr: <http://www.wikidata.org/prop/reference/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX prov: <http://www.w3.org/ns/prov#> SELECT ?compound ?compoundLabel ?speciesLabel ?sourceLabel ?doi ?wpid WHERE { ?compound wdt:P31 wd:Q11173. MINUS { ?compound wdt:P31 wd:Q8054. } ?compound p:P703 ?statement. ?statement rdf:type wikibase:BestRank. ?statement ps:P703 ?species. OPTIONAL { ?statement (prov:wasDerivedFrom/pr:P248) ?source. OPTIONAL { ?source wdt:P2410 ?wpid. } OPTIONAL { ?source wdt:P356 ?doi. } } SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } ORDER BY ASC(?compound) </pre>	<pre> # ID = 11, # Question = Metabolites and the species where they # are found in PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX ps: <http://www.wikidata.org/prop/statement/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX prov: <http://www.w3.org/ns/prov#> PREFIX pr: <http://www.wikidata.org/prop/reference/> PREFIX p: <http://www.wikidata.org/prop/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?compound ?WikiPathways_ID ?DOI ?compoundLabel ?found_in_taxonLabel ?sourceLabel WHERE{ ?compound wdt:P31 wd:Q11173. ?compound p:P703 ?statement. ?statement rdf:type wikibase:BestRank. ?statement ps:P703 ?found_in_taxon. OPTIONAL{ ?statement prov:wasDerivedFrom/pr:P248 ?source. OPTIONAL{?source wdt:P2410 ?WikiPathways_ID.} OPTIONAL{?source wdt:P356 ?DOI.} } MINUS{ ?compound wdt:P31 wd:Q8054. } SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } ORDER BY ?compound </pre>	[chemical compound (Q11173)] compound "ID = 11, Question = Metabolites and the species where they are found in" (select this) {+label} order by compound Label Service Languages: en p:[found in taxon (P703)] statement {h+} ps:[found in taxon (P703)] {+label} rdf:type wikibase:BestRank prov:wasDerivedFrom.pr:[stated in (P248)] source {h} (select this) {+label} [WikiPathways ID (P2410)] [DOI (P356)] [instance of (P31)] {not} [protein (Q8054)]	OK Both timeout
12.	<pre> PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wp: <http://vocabularies.wikipathways.org/wp#> PREFIX dcterms: <http://purl.org/dc/terms/> SELECT DISTINCT ?wpid ?metaboliteLabel ?pKa ?pKa2 ?metabolite2Label ?wpid2 WITH { SELECT ?wpid ?source_pathway ?metabolite ?pKa ?pKa2 ?metabolite2 ?wpid2 WHERE { ?pathway wdt:P2410 ?wpid ; wdt:P527 ?metabolite ; wdt:P2888 ?source_pathway . ?metabolite wdt:P1117 ?pKa . } SERVICE <http://sparql.wikipathways.org/sparql> { ?wp_mb1 wp:bdbWikidata ?metabolite . ?wp_mb1 dcterms:isPartOf ?interaction . ?interaction rdf:type wp:Interaction . ?wp_mb2 dcterms:isPartOf ?interaction . ?wp_mb2 wp:bdbWikidata ?metabolite2 . FILTER (?wp_mb1 != ?wp_mb2) } } AS %result WHERE { INCLUDE %result ?metabolite2 wdt:P1117 ?pKa2 . ?pathway2 wdt:P2410 ?wpid2 ; </pre>			Unsupported construction: WITH {...} AS %result INCLUDE %i

	<pre> wdt:P527 ?metabolite2 ; SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } </pre>			
13.	<pre> PREFIX gas: <http://www.bigdata.com/rdf/gas#> SELECT ?item ?itemLabel ?pic ?linkTo WHERE { SERVICE gas:service { gas:program gas:gasClass "com.bigdata.rdf.graph.analytics.SSSP" ; gas:in wdt:Q1968598; gas:traversalDirection "Reverse"; gas:out ?item ; gas:out1 ?depth ; gas:maxIterations 3 ; gas:linkType wdt:P171 . } OPTIONAL { ?item wdt:P171 ?linkTo } OPTIONAL { ?item wdt:P18 ?pic } SERVICE wikibase:label {bd:serviceParam wikibase:language "en" } } </pre>	<pre> # ID = 13, # Question = Asterophryinae parent taxon reverse graph PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?parent_taxon ?image ?itemLabel WHERE{ SERVICE <http://www.bigdata.com/rdf/gas#service> { <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#out> ?item. <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#in> wd:Q1968598. <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#out1> ?depth. <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#linkType> wdt:P171. <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#out1> ?depth. <http://www.bigdata.com/rdf/gas#maxIterations> 3 . <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#gasClass> "com.bigdata.rdf.graph.analytics.SSSP" . <http://www.bigdata.com/rdf/gas#program> <http://www.bigdata.com/rdf/gas#traversalDirection> "Reverse" . } OPTIONAL{?item wdt:P171 ?parent_taxon.} OPTIONAL{?item wdt:P18 ?image.} SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>	item "ID = 13, Question = Asterophryinae parent taxon reverse graph" (select this) {+label} [parent taxon (P171)] [image (P18)] Label Service Languages: en {SERVICE: http://www.bigdata.com/rdf/gas#service} <http://www.bigdata.com/rdf/gas#out> http://www.bigdata.com/rdf/gas#program <http://www.bigdata.com/rdf/gas#gasClass> = "com.bigdata.rdf.graph.analytics.SSSP" <http://www.bigdata.com/rdf/gas#traversalDirection> = "Reverse" <http://www.bigdata.com/rdf/gas#maxIterations> = 3 <http://www.bigdata.com/rdf/gas#in> [Asterophryinae (Q1968598)] <http://www.bigdata.com/rdf/gas#out1> depth <http://www.bigdata.com/rdf/gas#linkType> wdt:P171	OK
14.	<pre> SELECT ?pathway ?pathwayLabel ?wpid WHERE { ?pathway wdt:P2410 ?wpid ; wdt:P703 wd:Q15978631 . SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } } </pre>	<pre> # ID = 14, # Question = All human pathways from Wikipathways PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?pathway ?WikiPathways_ID ?pathwayLabel WHERE{ ?pathway wdt:P703 wd:Q15978631. ?pathway wdt:P2410 ?WikiPathways_ID. SERVICE wikibase:label {bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .} } </pre>	pathway "ID = 14, Question = All human pathways from Wikipathways" (select this) {+label} {+} [WikiPathways ID (P2410)] [found in taxon (P703)] [Homo sapiens (Q15978631)]	OK

15.

```

prefix void: <http://rdfs.org/ns/void#>
prefix pav: <http://purl.org/pav/>
prefix xsd: <http://www.w3.org/2001/XMLSchema#>
prefix freq: <http://purl.org/cld/freq/>
prefix biopax: <http://www.biopax.org/release/biopax-level3.owl#>
prefix skos: <http://www.w3.org/2004/02/skos/core#>
prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
prefix gpml: <http://vocabularies.wikipathways.org/gpml#>
prefix wp: <http://vocabularies.wikipathways.org/wp#>
prefix dcterms: <http://purl.org/dc/terms/>
prefix wprdf: <http://rdf.wikipathways.org/>
prefix prov: <http://www.w3.org/ns/prov#>
prefix foaf: <http://xmlns.com/foaf/0.1/>
prefix dc: <http://purl.org/dc/elements/1.1/>

SELECT DISTINCT ?biomarkerLabel ?proteinLabel
?geneID ?WP_gene ?PathwayID ?PathwayName
WHERE {
  VALUES ?biomarker {wd:Q420633 wd:Q27125809
wd:Q422462}
  ?biomarker wdt:P31 wd:Q11173.
  ?biomarker wdt:P638 ?pdbID .
  ?protein wdt:P31 wd:Q8054 .
  ?protein wdt:P638 ?pdbID .
  ?protein wdt:P702 ?gene .
  ?gene wdt:P703 wd:Q15978631 .
  ?gene wdt:P2888 ?geneID .
  BIND (
    IRI (
      CONCAT (
        "https",
        SUBSTR (
          STR(?geneID),
          5)
        )) AS ?newIRI
  )

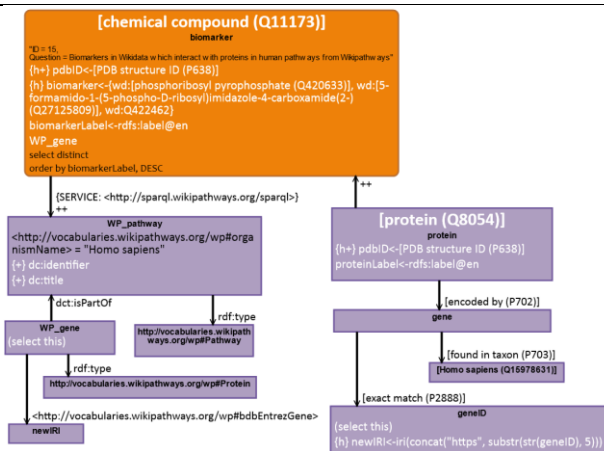
  SERVICE
<http://sparql.wikipathways.org/sparql> {
  ?WP_pathway a wp:Pathway .
  ?WP_pathway wp:organismName "Homo sapiens".
  ?WP_pathway dc:identifier ?PathwayID .
  ?WP_pathway dc:title ?PathwayName .
  ?WP_gene a wp:Protein .
  ?WP_gene wp:bdbEntrezGene ?newIRI .
  ?WP_gene dcterms:isPartOf ?WP_pathway .
}
OPTIONAL{?biomarker rdfs:label ?biomarkerLabel.
FILTER(LANG(?biomarkerLabel) = "en").
}
OPTIONAL {?protein rdfs:label ?proteinLabel.
FILTER(LANG(?proteinLabel) = "en").
}
}
ORDER BY DESC (?biomarkerLabel)

```

```

# ID = 15,
# Question = Biomarkers in Wikidata which interact
with proteins in human pathways from Wikipathways
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-
schema#>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-
syntax-ns#>
PREFIX dct: <http://purl.org/dc/terms/>
SELECT DISTINCT ?biomarkerLabel ?WP_gene
?identifier ?title ?proteinLabel ?geneID WHERE{
  ?biomarker wdt:P31 wd:Q11173.
  ?protein wdt:P31 wd:Q8054.
  SERVICE <http://sparql.wikipathways.org/sparql> {
    ?WP_pathway rdf:type
<http://vocabularies.wikipathways.org/wp#Pathway>.
    ?WP_gene dct:isPartOf ?WP_pathway.
    ?WP_gene rdf:type
<http://vocabularies.wikipathways.org/wp#Protein>.
    ?WP_gene
<http://vocabularies.wikipathways.org/wp#bdbEntrezGene>
?newIRI.
    ?WP_pathway dc:identifier ?identifier.
    ?WP_pathway dc:title ?title.
    ?WP_pathway
<http://vocabularies.wikipathways.org/wp#organismName>
"Homo sapiens" .
  }
  ?protein wdt:P702 ?gene.
  ?gene wdt:P703 wd:Q15978631.
  ?gene wdt:P2888 ?geneID.
  ?biomarker wdt:P638 ?pdbID.
  VALUES ?biomarker {wd:Q420633 wd:Q27125809
wd:Q422462}
  OPTIONAL{?biomarker rdfs:label ?biomarkerLabel.
FILTER(LANG(?biomarkerLabel) = 'en')}
  ?protein wdt:P638 ?pdbID.
  OPTIONAL{?protein rdfs:label ?proteinLabel.
FILTER(LANG(?proteinLabel) = 'en')}
  BIND (IRI (CONCAT ("https", SUBSTR (STR(?geneID),
5))) AS ?newIRI)
}
ORDER BY DESC (?biomarkerLabel)

```



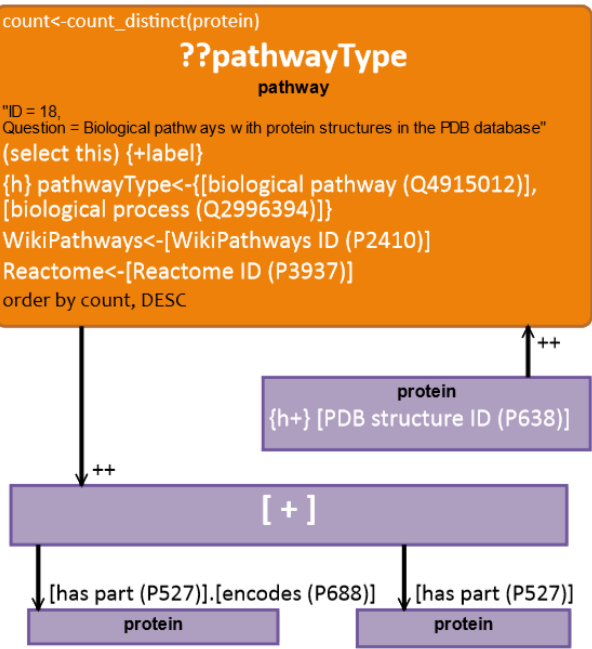
OK

16.	<pre> SELECT ?citation ?citationLabel (count(?pathway) as ?times_cited) WHERE { ?pathway wdt:P2410 ?WikiPathwaysID ; wdt:P2860 ?citation . SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } GROUP BY ?pathway ?citation ?citationLabel </pre>	<pre> # ID = 16, # Question = Ranking of most cited work in WikiPathways PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?citation (COUNT(?pathway) AS ?times_cited) ?citationLabel WHERE{ ?pathway wdt:P2410 ?WikiPathways_ID. ?pathway wdt:P2860 ?citation. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } GROUP BY ?pathway ?citation ?citationLabel </pre>	times_cited<-count(.) pathway "ID = 16, Question = Ranking of most cited work in WikiPathways" {h+} [WikiPathways ID (P2410)] {+} citation<-[cites work (P2860)] {+label} group by citation Label Service Languages: en	OK
17.	<pre> SELECT ?path ?genes ?metabolites ?pathway WHERE { {SELECT DISTINCT ?path (COUNT(?pwPart) AS ?genes) WHERE { ?path wdt:P2410 ?WikipathsID. ?path wdt:P527 ?pwPart. ?pwPart wdt:P31 wd:Q7187. SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } GROUP BY ?path ?genes } {SELECT DISTINCT ?path (COUNT(?pwPart) AS ?metabolites) WHERE { ?path wdt:P2410 ?WikipathsID. ?path wdt:P527 ?pwPart. ?pwPart wdt:P31 wd:Q11173. SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } GROUP BY ?path ?metabolites } OPTIONAL { ?path rdfs:label ?pathway. } } ORDER BY DESC(?genes) </pre>	<pre> # ID = 17, # Question = Gene and metabolite counts per pathway PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?path ?label ?genes ?metabolites WHERE{ {SELECT ?path (COUNT(?pwPart) AS ?genes) WHERE{ ?pwPart wdt:P31 wd:Q7187. ?path wdt:P527 ?pwPart.} GROUP BY ?path ?genes } {SELECT ?path (COUNT(?pwPart) AS ?metabolites) WHERE{ ?pwPart wdt:P31 wd:Q11173. ?path wdt:P527 ?pwPart.} GROUP BY ?path ?metabolites } OPTIONAL{?path rdfs:label ?label.} } ORDER BY DESC(?genes) </pre>	path "ID = 17, Question = Gene and metabolite counts per pathway" (select this) rdfs:label genes metabolites order by genes, DESC ↓ [has part (P527)] metabolites<-count(pwPart) pwPart group by metabolites Label Service Languages: en ↓ [has part (P527)] genes<-count(.) [gene (Q7187)] pwPart group by genes Label Service Languages: en ↑ == [chemical compound (Q11173)] pwPart	OK

18.

```
SELECT ?pathway ?pathwayLabel ?WikiPathways
?Reactome (COUNT(DISTINCT ?protein) as ?count)
WHERE {
  VALUES ?pathwayType {wd:Q4915012 wd:Q2996394 }
  ?pathway wdt:P31 ?pathwayType .
  { ?pathway wdt:P527/wdt:P688 ?protein . }
  UNION
  { ?pathway wdt:P527 ?protein . }
  ?protein wdt:P638 ?PDBID .
  OPTIONAL { ?pathway wdt:P2410 ?WikiPathways }
  OPTIONAL { ?pathway wdt:P3937 ?Reactome }
  SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en". }
} GROUP BY ?pathway ?pathwayLabel ?WikiPathways
?Reactome
ORDER BY DESC(?count)
```

```
# ID = 18,
# Question = Biological pathways with protein
structures in the PDB database
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?pathway ?WikiPathways ?Reactome
(COUNT(DISTINCT ?protein) AS ?count) ?pathwayLabel
WHERE{
  ?pathway wdt:P31 ?pathwayType.
  {
    ?pathway wdt:P31 ?pathwayType.
    ?pathway wdt:P527/wdt:P688 ?protein.
  }
  UNION
  {
    ?pathway wdt:P31 ?pathwayType.
    ?pathway wdt:P527 ?protein.
  }
}
VALUES ?pathwayType {wd:Q4915012 wd:Q2996394}
OPTIONAL{?pathway wdt:P2410 ?WikiPathways.}
OPTIONAL{?pathway wdt:P3937 ?Reactome.}
?protein wdt:P638 ?PDB_structure_ID.
SERVICE wikibase:label {bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en" .}
}
GROUP BY ?pathway ?WikiPathways ?Reactome
?pathwayLabel
ORDER BY DESC(?count)
```



OK

Both timeout

19.

```

SELECT DISTINCT ?pathway ?pathwayLabel ?pwpart
?pwpartLabel ?variant ?variantLabel
?disease?diseaseLabel WHERE {

    VALUES ?predictor {p:P3354 p:P3355 p:P3356
p:P3357 p:P3358 p:P3359}
    VALUES ?predictorQualifier {pq:P2175}
    VALUES ?wpID {"WP2828"}

    ?pathway wdt:P2410 ?wpID ;
        wdt:P527 ?pwpart .
    ?disease wdt:P279+ wd:Q504775 .
    ?variant wdt:P3329 ?civicID ;
        ?predictor ?node ;
        wdt:P3433 ?pwpart .
    {?node ?predictorStatement ?drug_label ;
        ?predictorQualifier ?disease .}

    UNION
    {
        ?node ?predictorStatement ?disease .
    }

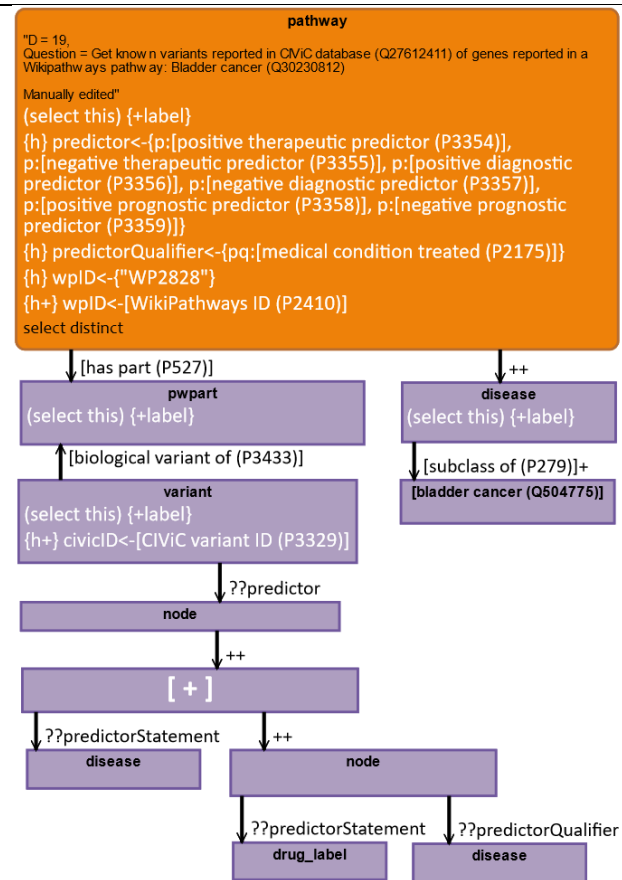
    SERVICE wikibase:label { bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en". }
}

```

```

# D = 19,
# Question = Get known variants reported in CIViC
database (Q27612411) of genes reported in a
Wikipathways pathway: Bladder cancer (Q30230812)
#
# Manually edited
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT DISTINCT ?predictor ?predictorQualifier
?wpID ?pathway ?disease ?pwpart ?variant
?pathwayLabel ?diseaseLabel ?pwpartLabel
?variantLabel WHERE{
    {
        ?node ?predictorStatement ?drug_label.
        ?node ?predictorStatement ?disease.
    }
    UNION
    {
        ?node ?predictorQualifier ?disease.
    }
    ?disease wdt:P279+ wd:Q504775.
    ?pathway wdt:P527 ?pwpart.
    ?variant wdt:P3433 ?pwpart.
    ?variant ?predictor ?node.
    VALUES ?predictor {p:P3354 p:P3355 p:P3356
p:P3357 p:P3358 p:P3359}
    VALUES ?predictorQualifier {pq:P2175}
    VALUES ?wpID {"WP2828"}
    ?pathway wdt:P2410 ?wpID.
    ?variant wdt:P3329 ?civicID.
    SERVICE wikibase:label {bd:serviceParam
wikibase:language "[AUTO_LANGUAGE],en". }
}

```



Manually edited.

TO DO: UNION
construction, with
multiple nodes from
parent query

20.	<pre> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wp: <http://vocabularies.wikipathways.org/wp#> SELECT DISTINCT ?interaction_type WHERE { VALUES ?wpid {"WP716"} ?item wdt:P2410 ?wpid ; wdt:P2888 ?source_pathway . SERVICE <http://sparql.wikipathways.org/sparql> { ?wp_pathway dc:identifier ?source_pathway . ?s dct:isPartOf ?wp_pathway, ?interaction . ?interaction rdf:type wp:Interaction . ?interaction rdf:type ?interaction_type . ?interaction wp:participants ?participants. } } </pre>	<pre> # ID = 20, # Question = Known interaction types in Wikipathways for a pathway with Identifier WP716 (federated query) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdf: <http://www.w3.org/1999/02/22-rdf- syntax-ns#> PREFIX dct: <http://purl.org/dc/terms/> PREFIX dc: <http://purl.org/dc/elements/1.1/> SELECT DISTINCT ?type WHERE{ SERVICE <http://sparql.wikipathways.org/sparql> { ?wp_pathway dc:identifier ?source_pathway. ?s dct:isPartOf ?wp_pathway. ?s dct:isPartOf ?interaction. ?interaction rdf:type <http://vocabularies.wikipathways.org/wp#Interaction >. ?interaction <http://vocabularies.wikipathways.org/wp#participants > ?participants. ?interaction rdf:type ?type. } ?item wdt:P2888 ?source_pathway. ?item wdt:P2410 ?wpid. VALUES ?wpid {"WP716"} } </pre>	item "ID = 20, Question = Known interaction types in Wikipathways for a pathway with Identifier WP716 (federated query)" {h+} wpid<-[WikiPathways ID (P2410)] {h} wpid<-"WP716" select distinct [exact match (P2888)] source_pathway {SERVICE: http://sparql.wikipathways.org/sparql} dc:identifier wp_pathway dct:isPartOf s dct:isPartOf interaction {+} rdf:type rdf:type http://vocabularies.wikipathways.org/wp#Interaction <http://vocabularies.wikipathways.org/wp#participants> participants	OK
21.	<pre> PREFIX dct: <http://purl.org/dc/terms/> PREFIX wp: <http://vocabularies.wikipathways.org/wp#> SELECT DISTINCT ?item ?pw_annotation WHERE { VALUES ?wpid {"WP716"} ?item wdt:P2410 ?wpid ; wdt:P2888 ?source_pathway . SERVICE <http://sparql.wikipathways.org/sparql> { ?wp_pathway dc:identifier ?source_pathway . ?wp_pathway wp:ontologyTag ?pw_annotation . } } </pre>	<pre> # ID = 21, # Question = Local annotations from Wikipathways using Federated query on a Pathway with identifier WP716 (federated query) PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX dc: <http://purl.org/dc/elements/1.1/> SELECT DISTINCT ?item ?pw_annotation WHERE{ SERVICE <http://sparql.wikipathways.org/sparql> { ?wp_pathway dc:identifier ?source_pathway. ?wp_pathway <http://vocabularies.wikipathways.org/wp#ontologyTag > ?pw_annotation. } ?item wdt:P2888 ?source_pathway. ?item wdt:P2410 ?wpid. VALUES ?wpid {"WP716"} } </pre>	item "ID = 21, Question = Local annotations from Wikipathways using Federated query on a Pathway with identifier WP716 (federated query)" (select this) {h+} wpid<-[WikiPathways ID (P2410)] {h} wpid<-"WP716" select distinct [exact match (P2888)] source_pathway {SERVICE: http://sparql.wikipathways.org/sparql} dc:identifier wp_pathway <http://vocabularies.wikipathways.org/wp#ontologyTag> pw_annotation (select this)	OK

22.

```

SELECT ?drugLabel ?geneLabel
?biological_processLabel ?diseaseLabel
WHERE {
  ?drug wdt:P129 ?gene_product .
  ?gene wdt:P688 ?gene_product .
  ?disease wdt:P2293 ?gene .
  ?disease wdt:P279* wd:Q12078 .
  ?gene_product wdt:P682 ?biological_process .

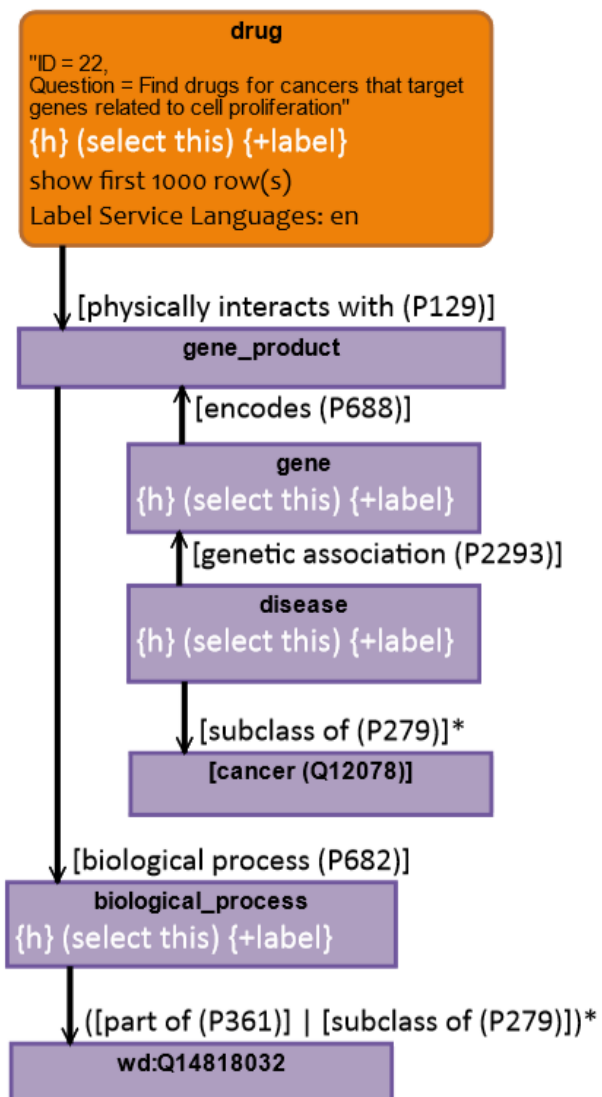
  ?biological_process (wdt:P361|wdt:P279)*
wd:Q14818032 .
  SERVICE wikibase:label {
    bd:serviceParam wikibase:language "en" .
  }
}
LIMIT 1000

```

```

# ID = 22,
# Question = Find drugs for cancers that target
genes related to cell proliferation
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX bd: <http://www.bigdata.com/rdf#>
SELECT ?drugLabel ?biological_processLabel
?geneLabel ?diseaseLabel WHERE{
  ?drug wdt:P129 ?gene_product.
  ?gene_product wdt:P682 ?biological_process.
  ?biological_process (wdt:P361|wdt:P279)*
wd:Q14818032.
  ?gene wdt:P688 ?gene_product.
  ?disease wdt:P2293 ?gene.
  ?disease wdt:P279* wd:Q12078.
  SERVICE wikibase:label {bd:serviceParam
wikibase:language "en" .}
}
LIMIT 1000

```



OK

23.	<pre> SELECT ?item ?itemLabel ?pic ?linkTo WHERE { wd:Q42196 wdt:P171* ?item OPTIONAL { ?item wdt:P171 ?linkTo } OPTIONAL { ?item wdt:P18 ?pic } SERVICE wikibase:label {bd:serviceParam wikibase:language "en" } } </pre>	<pre> # ID = 23, # Question = Parent taxons of Blue Whale PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?item ?parent_taxon ?image ?itemLabel WHERE{ wd:Q42196 wdt:P171* ?item. OPTIONAL{?item wdt:P171 ?parent_taxon.} OPTIONAL{?item wdt:P18 ?image.} SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>	[Balaenoptera musculus (Q42196)] "ID = 23, Question = Parent taxons of Blue Whale" Label Service Languages: en ↓ [parent taxon (P171)]* item (select this) {+label} [parent taxon (P171)] [image (P18)]	OK
24.	<pre> SELECT ?item ?taxonname WHERE { ?item wdt:P31 wd:Q16521 ; wdt:P105 wd:Q7432 ; wdt:P171* wd:Q7367 ; wdt:P225 ?taxonname . } </pre>	<pre> # ID = 24, # Question = Mosquito species PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?item ?taxon_name WHERE{ ?item wdt:P31 wd:Q16521. ?item wdt:P105 wd:Q7432. ?item wdt:P171* wd:Q7367. ?item wdt:P225 ?taxon_name. } </pre>	[taxon (Q16521)] item "ID = 24, Question = Mosquito species" (select this) {+} [taxon name (P225)] ↓ [taxon rank (P105)] [species (Q7432)] ↓ [parent taxon (P171)]* [Culicidae (Q7367)]	OK

25.	<pre> SELECT ?taxon ?eponym ?taxonName ?eponymLabel WHERE { ?taxon wdt:P31 wd:Q16521; wdt:P225 ?taxonName; wdt:P138 ?eponym. SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } ORDER BY ?eponym </pre>	<pre> # ID = 25, # Question = Taxons and what they are named after PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?taxon ?taxon_name ?eponym ?eponymLabel WHERE{ ?taxon wdt:P31 wd:Q16521. ?taxon wdt:P225 ?taxon_name. ?taxon wdt:P138 ?eponym. SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } ORDER BY ?eponym </pre>	[taxon (Q16521)] taxon "ID = 25, Question = Taxons and what they are named after" (select this) {+} [taxon name (P225)] {+} eponym<-[named after (P138)] {+label} order by eponym Label Service Languages: en	OK Both timeout
26.	<pre> SELECT DISTINCT ?personLabel (CONCAT("https://twitter.com/",?twitterName) AS ?twitterlink) ?pic WHERE { ?person wdt:P2002 ?twitterName ; wdt:P106 ?occupation . OPTIONAL { ?person wdt:P18 ?pic . } ?occupation wdt:P279* wd:Q864503 . SERVICE wikibase:label { bd:serviceParam wikibase:language "en" } } </pre>	<pre> # ID = 26, # Question = Biologists with Twitter accounts PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT DISTINCT ?image ?twitterlink ?personLabel WHERE{ ?person wdt:P106 ?occupation. ?occupation wdt:P279* wd:Q864503. ?person wdt:P2002 ?twitterName. OPTIONAL{?person wdt:P18 ?image.} BIND(CONCAT("https://twitter.com/", ?twitterName) AS ?twitterlink) SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .} } </pre>	person "ID = 26, Question = Biologists with Twitter accounts" {h} (select this) {+label} {h+} twitterName<-[Twitter username (P2002)] [image (P18)] twitterlink<-concat("https://twitter.com/", twitterName) select distinct Label Service Languages: en ↓ [occupation (P106)] occupation ↓ [subclass of (P279)]* [biologist (Q864503)]	OK

27.	<pre> SELECT * WHERE { { SELECT ?cell_line ?cell_line_name WHERE { ?cell_line wdt:P31 wd:Q21014462; rdfs:label ?cell_line_name. } FILTER (LANG(?cell_line_name) = "en"). Filter REGEX(STR(?cell_line_name), "^[\w\-\.\.]+\.[A-z]+\$") } ?tld wdt:P31/wdt:P279* wd:Q14296; rdfs:label ?tld_name. FILTER (LANG(?tld_name) = "en"). FILTER REGEX(STR(?cell_line_name), CONCAT(REPLACE(?tld_name, "\.", "\\\\"), "\$"), "i") BIND (URI (CONCAT("http://", ?cell_line_name)) as ?url) } </pre>	<pre> # ID = 27, # Question = Cell lines with names that could also # be URLs (Internet of Cell Lines). # # Manually edited PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> SELECT ?tld_name ?cell_line ?cell_line_name ?tld ?url WHERE{ ?tld wdt:P31/wdt:P279* wd:Q14296. {SELECT DISTINCT ?tld ?cell_line_name ?cell_line WHERE{ ?cell_line wdt:P31 wd:Q21014462. ?cell_line rdfs:label ?cell_line_name. FILTER (LANG(?cell_line_name) = "en") FILTER (REGEX(STR(?cell_line_name), "[\w\-\.\.]+\.[A-z]+\$")) } ?tld rdfs:label ?tld_name. BIND(URI (CONCAT("http://", ?cell_line_name)) AS ?url) FILTER (LANG(?tld_name) = "en") FILTER (REGEX(STR(?cell_line_name), CONCAT(REPLACE(?tld_name, "\.", "\\\\"), "\$"), "i")) } } </pre>	.. [top-level domain (Q14296)] tld "ID = 27, Question = Cell lines with names that could also be URLs (Internet of Cell Lines)." Manually edited" lang(tld_name) = "en" regex(str(cell_line_name), concat(replace(tld_name, "\.", "\\\\"), "\$"), "i") (select this) {+} tld_name<-rdfs:label cell_line cell_line_name url<-uri(concat("http://", cell_line_name)) ++ [cell line (Q21014462)] cell_line lang(cell_line_name) = "en" regex(str(cell_line_name), "[\w\-\.\.]+\.[A-z]+\$") (select this) {+} cell_line_name<-rdfs:label	Manually edited. TO DO: to mark link as subquery link
28.	<pre> SELECT ?moleculeLabel ?formule ?picture ?molecule WHERE { ?molecule wdt:P31 wd:Q12140; wdt:P274 ?formule; wdt:P117 ?picture SERVICE wikibase:label { bd:serviceParam wikibase:language "en, de" . } } ORDER BY ?moleculeLabel </pre>	<pre> # ID = 28, # Question = List of pharmaceutical drugs with # picture PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wd: <http://www.wikidata.org/entity/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?molecule ?chemical_formula ?chemical_structure ?moleculeLabel WHERE{ ?molecule wdt:P31 wd:Q12140. ?molecule wdt:P274 ?chemical_formula. ?molecule wdt:P117 ?chemical_structure. SERVICE wikibase:label {bd:serviceParam wikibase:language "en, de" .} } ORDER BY ?moleculeLabel </pre>	[medication (Q12140)] molecule "ID = 28, Question = List of pharmaceutical drugs with picture" (select this) {+label} {+} [chemical formula (P274)] {+} [chemical structure (P117)] order by moleculeLabel Label Service Languages: en, de	OK

29.	<pre> SELECT ?organism_name WHERE { ?organism_item wdt:P276 wd:Q5880; rdfs:label ?organism_name . ?gene wdt:P703 ?organism_item; wdt:P1056 wd:Q319541 . FILTER (LANG(?organism_name) = "en") . } </pre>	<pre> # ID = 29, # Question = Organisms that are located in the # female urogenital tract and that have a gene with # product indole PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX rdfs: <http://www.w3.org/2000/01/rdf- schema#> PREFIX wd: <http://www.wikidata.org/entity/> SELECT ?organism_name WHERE{ ?organism_item wdt:P276 wd:Q5880. ?gene wdt:P703 ?organism_item. ?gene wdt:P1056 wd:Q319541. ?organism_item rdfs:label ?organism_name. FILTER (LANG(?organism_name) = "en") } </pre>		OK
30.	<pre> SELECT ?animal ?scientific_names ?common_names ?statusLabel where { { SELECT DISTINCT ?animal (GROUP_CONCAT(DISTINCT ?scientific_name; separator=", ") as ?scientific_names) (GROUP_CONCAT(DISTINCT ?common_name; separator=", ") as ?common_names) WHERE { ?animal wdt:P141 ?status; wdt:P225 ?scientific_name; wdt:P1843 ?common_name. filter(?status IN (wd:Q11394, wd:Q219127, wd:Q278113)). FILTER(LANGMATCHES (LANG (?common_name), "en")) } group by ?animal }. ?animal wdt:P141 ?status. SERVICE wikibase:label { bd:serviceParam wikibase:language "en". } } </pre>	<pre> # ID = 30, # Question = Threatened Species of Animals as per # IUCN Classification # # Manually edited PREFIX wdt: <http://www.wikidata.org/prop/direct/> PREFIX wikibase: <http://wikiba.se/ontology#> PREFIX bd: <http://www.bigdata.com/rdf#> SELECT ?animal ?scientific_names ?common_names ?statusLabel WHERE{ {SELECT ?status ?animal (GROUP_CONCAT(DISTINCT ?scientific_name; SEPARATOR=', ') AS ?scientific_names) (GROUP_CONCAT(DISTINCT ?common_name; SEPARATOR=', ') AS ?common_names) WHERE{ ?animal wdt:P1843 ?common_name. ?animal wdt:P225 ?scientific_name. ?animal wdt:P141 ?status. FILTER(?status IN (<http://www.wikidata.org/entity/Q11394>, <http://www.wikidata.org/entity/Q219127>, <http://www.wikidata.org/entity/Q278113>)) FILTER(LANGMATCHES (LANG (?common_name), "en"))} GROUP BY ?status ?animal } ?animal wdt:P141 ?status. SERVICE wikibase:label {bd:serviceParam wikibase:language "en". } } </pre>		Manually edited. TO DO: subquery with more than one node from parent query