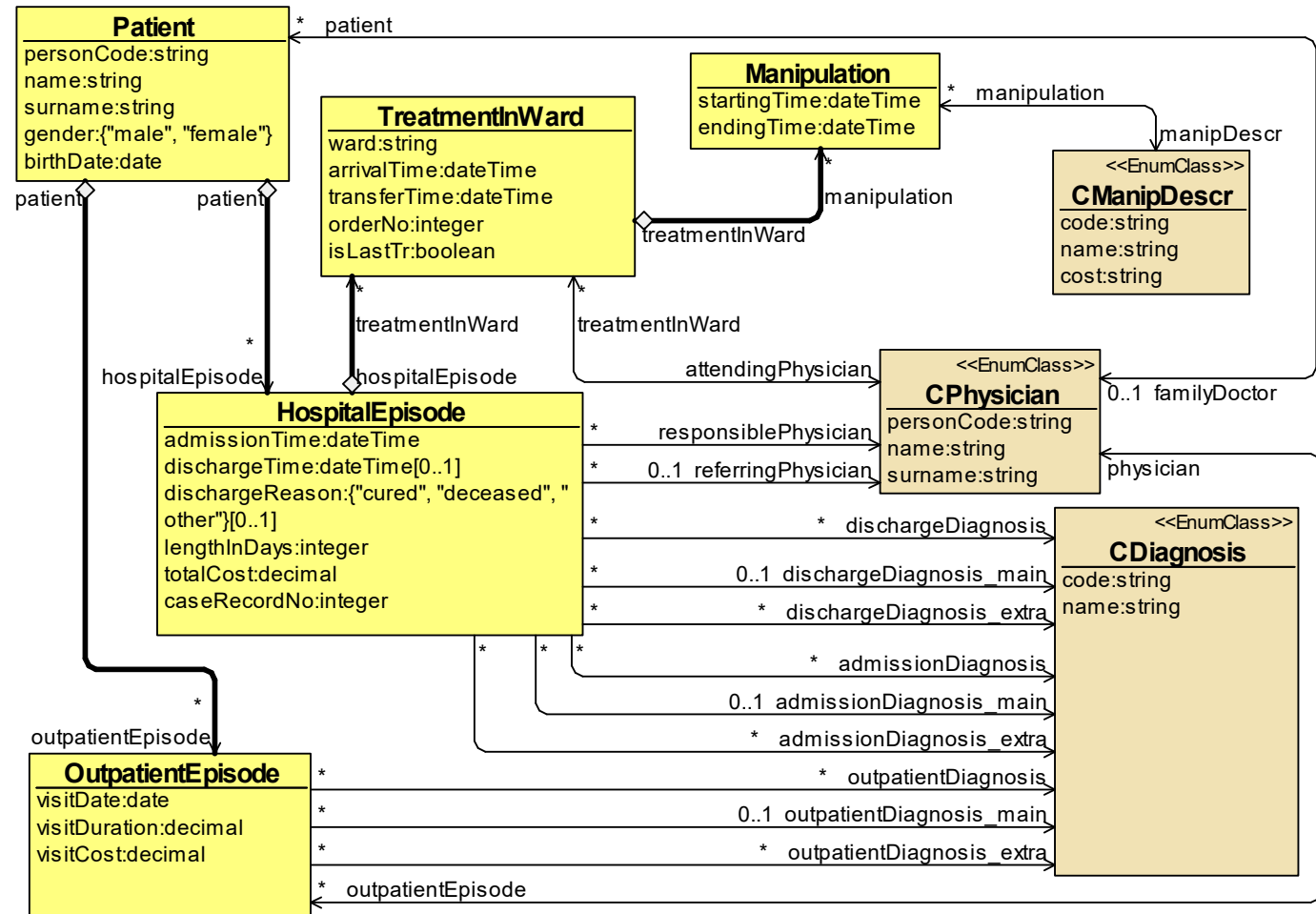


ViziQuer/web and SPARQL User Study

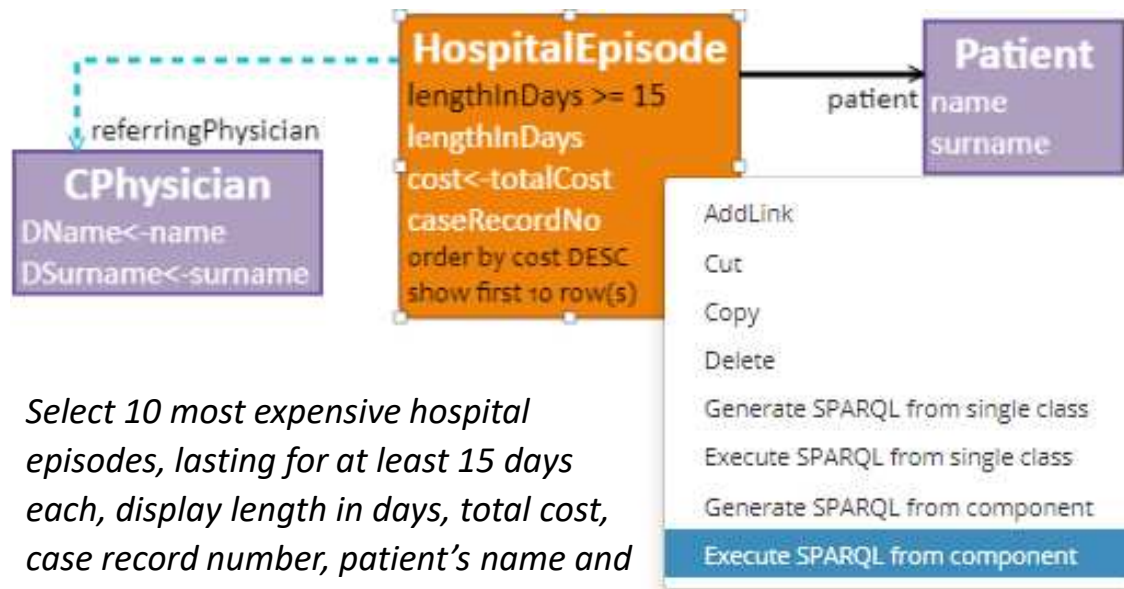
Languages for data analysis queries over RDF data

Example hospital data schema (ontology)



- Structure of the data to be queried
- Central Patient class, hospital and outpatient episodes, treatments in wards, manipulations, diagnosis records
- Manipulation descriptions, physicians (doctors) and diagnoses as classifiers
- Default minimum and maximum cardinality 1 assumption

A simple query example

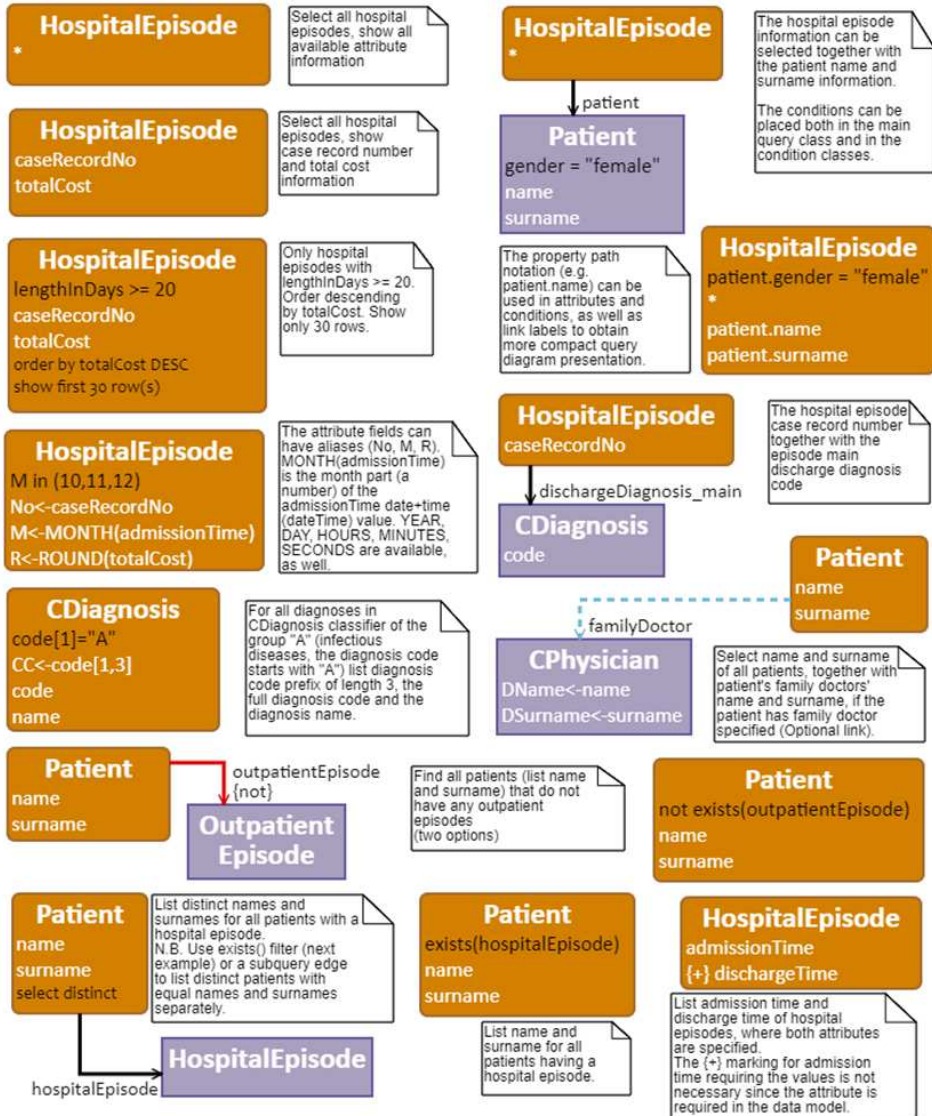


Select 10 most expensive hospital episodes, lasting for at least 15 days each, display length in days, total cost, case record number, patient's name and surname, as well as name and surname of referring physician, if specified.

- Create a graph with a node for each concept (class) involved
- Main class/node as the starting point
- Model links connect the classes (specify link name, required or optional)
- Add selection attributes (using model attribute name, or an alias) and conditions
- Ordering and slicing modifiers can be introduced, as well (into the main class/node)
- Generate or execute the textual SPARQL query that corresponds to the query diagram fragment

#	lengthInDays	cost	caseRecordNo	DName	DSurname	name	surname
1	153	165054.88814043565	9383729	Christian	Brooks	Staci	Wade
2	15	138808.51593338096	8460329	Morris	Figuroa	Chris	Ruiz
3	95	132834.28	9180629	Kendra	Woodard	Julia	Powers
4	80	120506.23999999999	9567829	Christian	Brooks	Joann	Boone
5	45	113483.04000000001	8897829	Willie	Singh	Lillie	Peters
6	83	102878.28	9249129	Kendra	Woodard	Gayle	Dunn
7	117	95912.08	8817429			Lynnette	Shepherd
8	63	90504.24	9770029	Morris	Figuroa	Jerry	Ramos
9	197	87320.34010944146	9151229	Myrna	Wallace	Nina	Miles
10	16	86230.88	9788229	Lara	Knapp	Melody	Gallegos

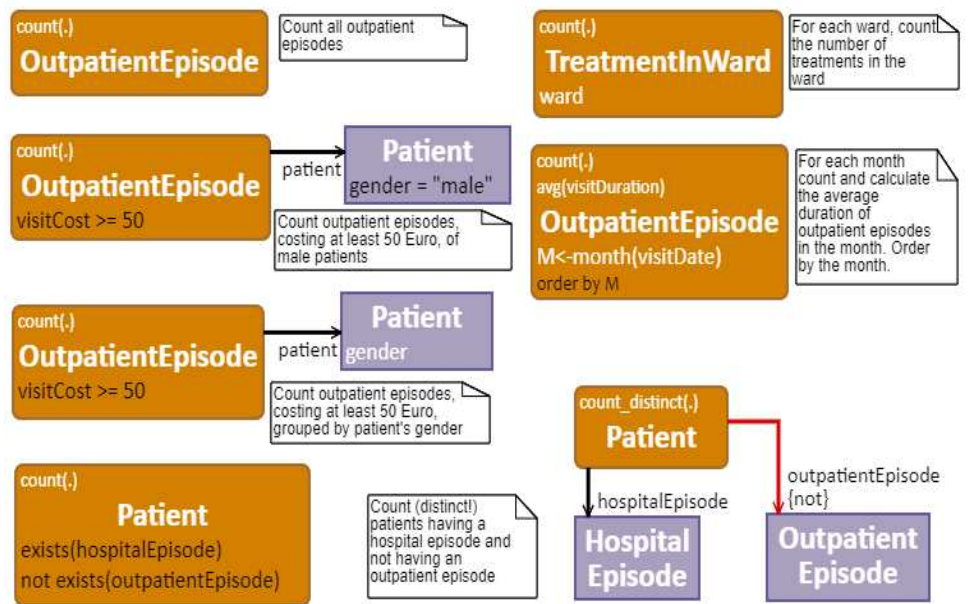
Class-attribute-link-condition queries



Viziquer: Query examples

Please see 'Example queries' document

Simple and attribute-based statistics



Property Editor windows

```
count(.)
sum(visitCost)
OutpatientEpisode
visitCost >= 50
M<-MONTH(visitDate)
order by M
order by gender
```

Conditions

Expression

visitCost >= 50

Cancel OK

Attributes

Alias

M

Expression

MONTH(visitDate)

Require Values

IsInternal

GroupValues

Cancel OK

Main Plus Extra Style

Aggregates +

count(.)

sum(visitCost)

Class

OutpatientEpisode

Instance

Comment

Conditions +

visitCost >= 50

Attributes +

M<-MONTH(visitDate)

OrderBy +

order by M

order by gender

Thank you!