Prefixes

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX owl: <http://www.w3.org/2002/07/owl#>

PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

PREFIX cw: http://www.semanticweb.org/restaurants#

SPARQL

Subtask SPARQL.1 Create a query with at least a triple pattern and a FILTER..

Query: List Restaurant with pizza amount greater then 10

```
SELECT ?resturant ?amount
WHERE {
?resturant cw:servesMenuItem ?pizza.
?pizza  cw:hasValue ?value.
 ?value cw:amount ?amount.
FILTER (?amount >  "10"^^<http://www.w3.org/2001/XMLSchema#decimal>)
}
```

Subtask SPARQL.2 Create a query that uses at least one triple pattern, a FILTER and AVG function. (20%).

Query: Get Avg pizza amount

```
SELECT  (AVG(?amount) as ?avg)
WHERE {
?pizza a cw:Pizza.
?pizza  cw:hasValue ?value.
 ?value cw:amount ?amount.
FILTER (?amount >  0)
}
```

Subtask SPARQL.3 Create a query that groups results, uses aggregates, and filters the results. (20%).

Query: list avg pizza amount according to restaurant

```
SELECT ?resturant   (AVG(?amount) as ?avg)
WHERE {
?resturant cw:servesMenuItem ?pizza.
?pizza  cw:hasValue ?value.
 ?value cw:amount ?amount.
FILTER (?amount >  0)
} GROUP BY ?resturant
```

Subtask SPARQL.4 Create a query (different from SPARQL.3) that group results, uses aggregates, filters the results and orders the results according to two variables.

Query: List Avg resturant pizza amount, sorted by city and average

```
SELECT ?resturant   (AVG(?amount) as ?avg)
WHERE {
?resturant cw:servesMenuItem ?pizza.
?resturant cw:hasCity ?city.
?pizza  cw:hasValue ?value.
 ?value cw:amount ?amount.
 ?pizza a ?type.
FILTER (?amount  >= 0)
} GROUP BY ?resturant order by desc (?city && ?avg)
```

Subtask SPARQL.5 Create a query that uses the Union graph pattern and negation.

Query: List American Restaurant that are not Gourmet Restaurants

```
SELECT ?resturant
WHERE {
{?resturant a cw:Restaurant.} UNION {?resturant a cw:AmericanRestaurant.}
  FILTER NOT EXISTS {
    ?resturant a cw:GourmetRestaurants.
```

```
  }
}
```