

# INF 558: Building Knowledge Graphs

## Report of Homework4

### SPARQL

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#### Task 1.1

```
1 PREFIX dcterms: <http://purl.org/dc/terms/>
2 PREFIX imdb: <http://data.linkedmdb.org/movie/>
3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
4
5 SELECT DISTINCT ?actor_name ?movie_title
6 WHERE {
7   ?movie a imdb:film ;
8         imdb:actor imdb:actor_name ?actor_name ;
9         dcterms:title rdfs:label ?movie_title .
10  FILTER regex(?actor_name, "B")
11 }
12 LIMIT 10
```

QUERY RESULTS

Table Raw Response

Showing 1 to 10 of 10 entries

	actor_name	movie_title
1	"Ben Gazzara"	"Bloodline"
2	"Beau Bridges"	"The Wizard"
3	"Barbara Barrie"	"Hercules: Zero to Hero"
4	"Balakrishna Nandamuri"	"Maharadhi"
5	"Ben Johnson"	"Terror Train"
6	"Bob Hoskins"	"The Favour, the Watch and the Very Big Fish"
7	"Basil Sydney"	"Red Hot Romance"
8	"Bernard Bresslaw"	"Carry On Abroad"
9	"Barbara Windsor"	"Carry On Abroad"
10	"Ben Turpin"	"His New Job"

Showing 1 to 10 of 10 entries

#### Task 1.2

```
9
10 SELECT DISTINCT ?actor ?name
11 WHERE {
12   ?actor a imdb:actor ;
13         imdb:actor_name ?name .
14   ?producer a imdb:producer ;
15         imdb:producer_name ?name .
16   FILTER NOT EXISTS
17   {
18     ?director a imdb:director ;
19             imdb:director_name ?name .
20   }
21 }
22 LIMIT 10
```

QUERY RESULTS

Table Raw Response

Showing 1 to 10 of 10 entries

	actor	name
1	<http://data.linkedmdb.org/actor/16153>	"Dick Clark"
2	<http://data.linkedmdb.org/actor/23837>	"Mohan"
3	<http://data.linkedmdb.org/actor/16188>	"Dilip Kumar"
4	<http://data.linkedmdb.org/actor/10335>	"Brandon Baker"
5	<http://data.linkedmdb.org/actor/18001>	"Gregory Hines"
6	<http://data.linkedmdb.org/actor/15513>	"Damon Wayans"
7	<http://data.linkedmdb.org/actor/25084>	"Peter Greene"
8	<http://data.linkedmdb.org/actor/26841>	"Sean Connery"
9	<http://data.linkedmdb.org/actor/25114>	"Peter Nelson"
10	<http://data.linkedmdb.org/actor/24323>	"Nikki Reed"

Showing 1 to 10 of 10 entries

## Task 1.3

```
13      ?movie a imdb:film ;
14          imdb:actor ?actor ;
15          imdb:director ?director .
16      ?director a imdb:director ;
17          imdb:director_name ?director_name .
18      FILTER ( ?actor_name != ?director_name )
19  }
20  GROUP BY ?actor ?director
21  HAVING ( ?num > 20 )
22  }
23  ?actor imdb:actor_name ?actor_name .
24  ?director imdb:director_name ?director_name .
25  }
26  LIMIT 10
```

QUERY RESULTS

Table Raw Response

Showing 1 to 4 of 4 entries

Search: Show All entries

	actor_name	director_name	num
1	"Stan Laurel"	"James Parrott"	"21"^^xsd:integer
2	"Moe Howard"	"Jules White"	"23"^^xsd:integer
3	"Edna Purviance"	"Charlie Chaplin"	"36"^^xsd:integer
4	"Kenneth Williams"	"Gerald Thomas"	"26"^^xsd:integer

Showing 1 to 4 of 4 entries

## Task 1.4

```
4  PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
5
6  SELECT ?country_name ?millions (COUNT(DISTINCT ?movie) AS ?num)
7  WHERE {
8      ?movie a imdb:film ;
9          imdb:country/imdb:country_name ?country_name ;
10         imdb:country/imdb:country_population ?popu ;
11         imdb:genre/imdb:film_genre_name ?genre_name .
12      FILTER ( ?genre_name = "Drama" ) # ?Comedy Drama
13      BIND( xsd:integer(?popu)/1000000 AS ?millions ).
14  }
15  GROUP BY ?country_name ?millions
16  ORDER BY DESC(?num)
17  LIMIT 10
```

QUERY RESULTS

Table Raw Response

Showing 1 to 10 of 10 entries

Search: Show All entries

	country_name	millions	num
1	"United States"	"303.824"^^xsd:decimal	"3043"^^xsd:integer
2	"United Kingdom"	"60.943"^^xsd:decimal	"541"^^xsd:integer
3	"France"	"64.094"^^xsd:decimal	"392"^^xsd:integer
4	"Italy"	"58.145"^^xsd:decimal	"259"^^xsd:integer
5	"Canada"	"33.679"^^xsd:decimal	"244"^^xsd:integer
6	"Argentina"	"40.677"^^xsd:decimal	"184"^^xsd:integer
7	"Spain"	"40.491"^^xsd:decimal	"159"^^xsd:integer
8	"Germany"	"82.369"^^xsd:decimal	"141"^^xsd:integer
9	"Japan"	"127.288"^^xsd:decimal	"127"^^xsd:integer
10	"India"	"1147.995"^^xsd:decimal	"126"^^xsd:integer

Showing 1 to 10 of 10 entries

## Task 1.5

```
14  {
15      ?db_actor a dbo:Actor ;
16          foaf:gender ?gender ;
17          dbo:birthDate ?birth ;
18          dbo:birthYear ?y.
19      FILTER ( ?y > "1970"^^xsd:year && REGEX ( ?gender, "female", "i" ) )
20  }
21  GROUP BY ?db_actor
22  }
23  ?actor a imdb:actor ;
24      owl:sameAs ?db_actor ;
25      imdb:actor_name ?name .
26  }
27  LIMIT 10
```

QUERY RESULTS

Table Raw Response

Showing 1 to 10 of 10 entries

Search: Show All entries

	name	date_of_birth
1	"Mayumi Yamaguchi"	"1975-05-12"^^xsd:date
2	"Inday Ba"	"1972-08-10"^^xsd:date
3	"Miho Fujima"	"1978-11-29"^^xsd:date
4	"Maho Nonami"	"1980-05-13"^^xsd:date
5	"Rena Tanaka"	"1980-05-22"^^xsd:date
6	"Alexandra Rapaport"	"1971-12-26"^^xsd:date
7	"Maud Forget"	"1982-05-07"^^xsd:date
8	"Sarah Patterson"	"1972-01-22"^^xsd:date
9	"Yui Ichikawa"	"1986-02-10"^^xsd:date
10	"Dany Verissimo"	"1982-06-27"^^xsd:date

Showing 1 to 10 of 10 entries

## Task 2.1

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## Task 2.2