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## EXERCISE 7A

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## Who is Caroline Kennedy’s father, and what is his birthdate and his death date?

#

SELECT ?father ?bdate ?ddate

WHERE {

 kennedys:CarolineKennedy schema:parent ?f .

 ?f schema:gender "male" .

 ?f schema:birthDate ?bdate .

 ?f schema:deathDate ?ddate .

}

## Who is Caroline Kennedy’s father, and what triples do we have in the graph that have this resource as subject?

#

SELECT \*

WHERE {

 kennedys:CarolineKennedy schema:parent ?f .

 ?f schema:gender "male" .

 ?f ?p ?o.

}

## Who is whose mother

#

SELECT \*

WHERE {

 ?child schema:parent ?mother .

 ?mother schema:gender "female" .

}

## Which persons graduated at the same university or college as one of their parents?

#

SELECT \*

WHERE {

 ?s schema:alumniOf ?org .

 ?s schema:parent ?parent .

 ?parent schema:alumniOf ?org .

}

## Which persons have the same given name as one of their parents?

#

SELECT \*

WHERE {

 ?s schema:givenName ?name .

 ?s schema:parent ?parent .

 ?parent schema:givenName ?name .

}

## Which persons have the same given name as one of their grandparents?

#

SELECT \*

WHERE {

 ?s schema:givenName ?name .

 ?s schema:parent ?parent .

 ?parent schema:parent ?grandparent.

 ?grandparent schema:givenName ?name .

}

## Which persons have the same job title as one of their parents?

#

SELECT \*

WHERE {

 ?person schema:parent ?parent .

 ?person schema:jobTitle ?title .

 ?parent schema:jobTitle ?title .

}

## Which persons are married to a spouse that has the same job title as one of their parents?

#

SELECT \*

WHERE {

 ?s schema:spouse ?spouse .

 ?spouse schema:jobTitle ?title .

 ?s schema:parent ?parent .

 ?parent schema:jobTitle ?title .

}

##Find all dead Kennedys (assuming this to mean: with a specified death date)

#

SELECT ?person

WHERE {

 ?person schema:deathDate ?deathdate .

}

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## EXERCISE 7B

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## Which distinct predicates are used in the Kennedys-graph?

#

SELECT DISTINCT ?p

WHERE {

 [] ?p [] .

}

##Which predicates are used with instances of the class schema:Person as object?

#

SELECT DISTINCT ?p

WHERE {

 [] ?p ?o .

 ?o a schema:Person .

}

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## EXERCISE 7C

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##Create a list of all job titles that occur in the graph, sorted in ascending order

#

SELECT DISTINCT ?title

WHERE {

 [] schema:jobTitle ?title.

} ORDER BY ASC(?title)

##Find the five persons with the oldest birthdates

#

SELECT DISTINCT ?person ?birthdate

WHERE {

 ?person schema:birthDate ?birthdate .

} ORDER BY ASC(?birthdate) LIMIT 5

##Find the two persons with the most recent death dates

#

SELECT ?person ?deathdate

WHERE {

 ?person schema:deathDate ?deathdate .

} ORDER BY DESC(?deathdate) LIMIT 2

## How many people graduated at Harvard

#

SELECT \*

WHERE {

 ?s schema:alumniOf kennedys:Harvard.

}

## Find for each person which job titles that person has, but select only persons that have “navy” among their job titles

#

SELECT \*

WHERE {

 ?person schema:jobTitle "navy".

 ?person schema:jobTitle ?title.

}

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## EXERCISE 7D

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## Find the labels of all superclasses of schema:CollegeOrUniversity excluding this class

#

SELECT ?c

WHERE {

 schema:CollegeOrUniversity rdfs:subClassOf\* / rdfs:label ?c .

}

## Find all ancestors of Rory Kennedy

#

SELECT \*

WHERE {

 kennedys:RoryKennedy schema:parent+ ?ancestor.

}

## Find all offspring of Joseph Kennedy, ordered by birthdate (ascending)

#

SELECT \*

WHERE {

 ?s schema:parent+ kennedys:JosephKennedy.

 ?s schema:birthDate ?date .

} ORDER BY ?date

## Find all subclasses of schema:Organization, including schema:Organization itself

#

SELECT \*

WHERE {

 ?class rdfs:subClassOf\* schema:Organization .

}

## Find all predicates that relate an instance of person to an instance of a subclass of schema:Organization.

#

SELECT DISTINCT ?p

WHERE {

 ?person a schema:Person .

 ?person ?p ?o .

 ?o a / rdfs:subClassOf\* schema:Organization .

}

## Which persons are each other’s nephew and niece?

#

SELECT DISTINCT ?nephew ?niece

WHERE {

 ?nephew schema:parent / schema:parent ?grandparent .

 ?niece schema:parent / schema:parent ?grandparent .

 ?nephew schema:gender "male" .

 ?niece schema:gender "female" .

}

## The following query was used in the video

#

SELECT (COUNT (DISTINCT (?p)) AS ?c)

WHERE {

 [] ?p [] .

}