

1. Find the name, director and department of all programmes.

PREFIX ns1: <http://example.org/>

```
SELECT ?programme ?name ?director ?department WHERE {  
    ?programme a ns1:Programme .  
    ?programme ns1:programmeName ?name .  
    ?programme ns1:programmeDirector ?director .  
    ?programme ns1:OwnedByDepartment ?department  
}
```

Result:







	programme	name	director	department
1	ns1:10001	"P-01"	"19620522-0023"	"D1"
2	ns1:10011	"P-11"	"19620424-0026"	"D2"
3	ns1:10012	"P-12"	"19610623-0005"	"D2"
4	ns1:10013	"P-13"	"19690408-0009"	"D2"
5	ns1:10014	"P-14"	"19560812-0016"	"D2"
6	ns1:10021	"P-21"	"19570615-0011"	"D3"
7	ns1:10031	"P-31"	"19650303-0019"	"D4"
8	ns1:10032	"P-32"	"19570826-0012"	"D4"
9	ns1:10033	"P-33"	"19570828-0008"	"D4"
10	ns1:10034	"P-34"	"19610918-0027"	"D4"
11	ns1:10041	"P-41"	"19580218-0007"	"D5"
12	ns1:10042	"P-42"	"19620831-0024"	"D5"
13	ns1:10051	"P-51"	"19580515-0017"	"D6"
14	ns1:10052	"P-52"	"19611219-0014"	"D6"
15	ns1:10053	"P-53"	"19600905-0003"	"D6"
16	ns1:10054	"P-54"	"19630126-0001"	"D6"
17	ns1:10061	"P-61"	"19680712-0028"	"D7"
18	ns1:10071	"P-71"	"19610620-0006"	"D8"
19	ns1:10072	"P-72"	"19660630-0020"	"D8"
20	ns1:10073	"P-73"	"19600814-0002"	"D8"
21	ns1:10074	"P-74"	"19601021-0018"	"D8"

2. Find the names of all students who worked as teaching assistants in courses given by the D3-2 division in study period 2 in academic year 2023/2024.

```
PREFIX ns1: <http://example.org/>
SELECT ?Student ?CourseOffering ?studyperiod ?academicyear ?division WHERE {
  ?Student a ns1:TeachingAssistant .
  ?Student ns1:Teaches [ns1:teachesCourseOfferingInstanceID    ?CourseOffering].

  ?courseOffering ns1:courseOfferingStudyPeriod ?studyperiod .
  ?Student ns1:teacherDivisionName ?division .
  ?courseOffering ns1:courseOfferingAcademicYear ?academicyear .
  FILTER regex(?academicyear,"2023-2024")
  FILTER (?studyperiod=2.0)
  FILTER regex(?division,"D3-2")
}
```

Result: TA 32

 Table	 Raw response	 Pivot Table	 Google Chart	 Download as 
Filter query results				
Compact view <input type="checkbox"/> Hide row numbers <input type="checkbox"/>				
Showing results from 0 to 1 of 1. Query took 0.3s, moments ago.				
Student				
1 ns1:19750906-0032				

3. Find all teachers who are assigned more than 120 hours in course 1015 in study period 1 in academic year 2018/2019.

```
PREFIX ns1: <http://example.org/>
SELECT ?Teacher ?CourseOffering ?assignedHours ?period ?courseCode ?academicyear WHERE {
  ?Teacher a ns1:TeachingAssistant .
  ?Teacher ns1:Teaches ?teachingRecord .
  ?teachingRecord ns1:teachesCourseOfferingInstanceID ?CourseOffering ;
                  ns1:teachesAssignedHours ?assignedHours .

  ?courseOffering ns1:courseOfferingCourseCode ?courseCode.
  ?courseOffering ns1:courseOfferingStudyPeriod ?period .
  ?courseOffering ns1:courseOfferingAcademicYear ?academicyear .
  FILTER (?assignedHours>120)
  FILTER (?period=1.0)
  FILTER (?courseCode="1015")
  FILTER regex(?academicyear,"2018-2019")
}
```

4. Find all students registered for course instance I-910 that were not registered for course instance I-911.

PREFIX ns1: <http://example.org/>

```
SELECT DISTINCT ?student ?studentName WHERE {
    ?student a ns1:Student ;
              ns1:studentName ?studentName ;
              ns1:Registrations ?register .

    ?register ns1:registrationsCourseOfferingInstanceID "I-910" .

    FILTER NOT EXISTS {
        ?student ns1:Registrations ?r2 .
        ?r2 ns1:registrationsCourseOfferingInstanceID "I-911" .
    }
}
```

Result: TA 94

	student	studentName
1	ns1:19921201-0094	"TA 94"

5. Find all programmes along with the total number of owned courses. List the results in descending order of number of owned courses.

PREFIX ns1: <http://example.org/>

```
SELECT ?programme ?programmeName (COUNT(DISTINCT ?course) AS ?count)
WHERE {
    ?programme a ns1:Programme ;
               ns1:programmeName ?programmeName ;
               ns1:ProgrammeCourses [ns1:programmeCoursesCourseCode ?course] .

}

GROUP BY ?programme ?programmeName
ORDER BY DESC(?count)
```

Result:

	programme	programmeName	count
1	ns1:10011	"P-11"	"210"^^xsd:integer
2	ns1:10001	"P-01"	"201"^^xsd:integer
3	ns1:10072	"P-72"	"201"^^xsd:integer
4	ns1:10013	"P-13"	"198"^^xsd:integer
5	ns1:10073	"P-73"	"198"^^xsd:integer
6	ns1:10051	"P-51"	"197"^^xsd:integer
7	ns1:10012	"P-12"	"196"^^xsd:integer
8	ns1:10032	"P-32"	"196"^^xsd:integer
9	ns1:10071	"P-71"	"196"^^xsd:integer
10	ns1:10054	"P-54"	"195"^^xsd:integer
11	ns1:10033	"P-33"	"159"^^xsd:integer
12	ns1:10041	"P-41"	"159"^^xsd:integer
13	ns1:10034	"P-34"	"158"^^xsd:integer
14	ns1:10061	"P-61"	"157"^^xsd:integer
15	ns1:10042	"P-42"	"156"^^xsd:integer
16	ns1:10052	"P-52"	"156"^^xsd:integer
17	ns1:10031	"P-31"	"155"^^xsd:integer
18	ns1:10074	"P-74"	"154"^^xsd:integer
19	ns1:10021	"P-21"	"153"^^xsd:integer
20	ns1:10014	"P-14"	"152"^^xsd:integer
21	ns1:10053	"P-53"	"148"^^xsd:integer

6.Find the number of:

A.senior teachers

B.all people

PREFIX ns1: <http://example.org/>

```
SELECT ?type (COUNT(DISTINCT ?person) AS ?count) WHERE {  
  {  
    ?person a ns1:SeniorTeacher .  
    BIND("SeniorTeacher" AS ?type)  
  }  
  UNION  
  {  
    ?person a ns1:Student .  
    BIND("Student" AS ?type)  
  }  
  UNION  
  {  
    {  
      ?person a ns1:SeniorTeacher .  
    }  
    UNION  
    {  
      ?person a ns1:Student .  
    }  
    BIND("Total" AS ?type)  
  }  
}  
GROUP BY ?type
```

Result:

	type	count
1	"SeniorTeacher"	"30"^^xsd:integer
2	"Student"	"410"^^xsd:integer
3	"Total"	"440"^^xsd:integer