

Query 1

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

SELECT ?num ?county ?price WHERE {

 ?z ont:CountyName ?county .

 ?z ont:NumOfHomeless ?num .

 ?z db:Year '2014' .

 ?x ont:MeanPrice ?price .

 ?x ont:CountyName ?county .

{SELECT ?price WHERE {

 ?x db:Year '2014' .

 ?x ont:MeanPrice ?price .

 ?x ont:CountyName ?county .

 ?x ont:HousingPricesType 'Execution' .

}ORDER BY DESC(xsd:float(?price)) LIMIT 1

}}

Query 2

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

```
SELECT DISTINCT ?rain ?year WHERE {  
    ?x db:Year ?year .  
    ?z db:Year ?year .  
    ?z ont:Rainfall ?rain .  
    ?z ont:CountyName 'Dublin' .  
    {  
        SELECT ?num ?year WHERE {  
            ?x ont:NumOfCrime ?num .  
            ?x ont:CrimeName 'Theft and related offences' .  
            ?x db:Year ?year .  
            ?x ont:CountyName 'Dublin' .  
        } ORDER BY DESC(xsd:float(?num)) LIMIT 1  
    }  
}
```

Query 3

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

```
SELECT ?price ?year WHERE {  
    ?z db:Year ?year .  
    ?z ont:MeanPrice ?price .  
    ?z ont:CountyName 'Wicklow' .  
    ?z ont:HousingPricesType 'Execution' .  
    {  
        SELECT ?salary ?year WHERE {  
            ?x ont:SalaryValue ?salary .  
            ?x db:Year ?year .  
            ?x ont:CountyName 'Wicklow' .  
        } ORDER BY DESC(xsd:float(?salary)) LIMIT 1  
    }  
}
```

Query 4

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

SELECT DISTINCT ?homeless ?county WHERE {

 ?z ont:CountyName ?county .

 ?x ont:CountyName ?county .

 ?z ont:NumOfHomeless ?homeless .

 ?z db:Year '2016' .

{

 SELECT ?county WHERE {

 ?x ont:Rainfall ?avgRain .

 ?x ont:CountyName ?county .

 ?x db:Year '89.58' .

 FILTER (xsd:float(?avgRain) < 89.58)

 }}} ORDER BY ASC(xsd:int(?homeless)) LIMIT 1

Query 5

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

SELECT ?price_dub_2010 ?price_dub_2016 ?sal_dub_2010 ?sal_dub_2016

WHERE{

 ?x ont:MeanPrice ?price_dub_2010 .

 ?x db:Year '2010' .

 ?z ont:MeanPrice ?price_dub_2016 .

 ?z db:Year '2016' .

 ?x ont:HousingPricesType 'Execution'.

 ?x ont:CountyName 'Dublin' .

 ?z ont:CountyName 'Dublin' .

 ?z ont:HousingPricesType 'Execution'.

 ?a ont:SalaryValue ?sal_dub_2010 .

 ?b ont:SalaryValue ?sal_dub_2016 .

{ SELECT ?sal_dub_2010 ?sal_dub_2016

WHERE{

 ?a ont:SalaryValue ?sal_dub_2010 .

 ?a db:Year '2010' .

 ?b ont:SalaryValue ?sal_dub_2016 .

 ?b db:Year '2016' .

 ?a ont:CountyName 'Dublin' .

 ?b ont:CountyName 'Dublin' .

}}

}

Query 6

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

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

PREFIX db: <http://dbpedia.org/ontology/>

```
SELECT ?county ?salary ?kidnappings ?county1 ?salary1 ?kidnappings1 WHERE {  
  ?x ont:CountyName ?county .  
  ?x db:Year '2015' .  
  ?x ont:CrimeName 'Kidnapping and related offences' .  
  ?x ont:NumOfCrime ?kidnappings .  
  ?z ont:CountyName ?county1 .  
  ?z db:Year '2015' .  
  ?z ont:CrimeName 'Kidnapping and related offences' .  
  ?z ont:NumOfCrime ?kidnappings1 .  
  {  
    SELECT ?salary ?county WHERE {  
      ?x ont:CountyName ?county .  
      ?x ont:SalaryValue ?salary .  
      ?x db:Year '2015' .  
    } ORDER BY DESC(xsd:float(?salary)) LIMIT 1  
  }  
  {  
    SELECT ?salary1 ?county1 WHERE {  
      ?x ont:CountyName ?county1 .  
      ?x ont:SalaryValue ?salary1 .  
      ?x db:Year '2015' .  
    } ORDER BY ASC(xsd:float(?salary1)) LIMIT 1  
  }  
}
```

Query 7

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

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

PREFIX db: <http://dbpedia.org/ontology/>

```
SELECT ?homeless ?year WHERE {  
    ?z db:Year ?year .  
    ?z ont:NumOfHomeless ?homeless .  
    ?z ont:CountyName 'Cork' .  
    {  
        SELECT ?salary ?year WHERE {  
            ?x ont:SalaryValue ?salary .  
            ?x db:Year ?year .  
            ?x ont:CountyName 'Cork' .  
        } ORDER BY DESC(xsd:float(?salary)) LIMIT 1  
    }  
}
```

Query 8

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

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

PREFIX db: <http://dbpedia.org/ontology/>

SELECT ?homeless_2014 ?homeless_2019 ?crime_2014 ?crime_2019

WHERE{

 ?x ont:NumOfHomeless ?homeless_2014 .

 ?x db:Year '2014' .

 ?z ont:NumOfHomeless ?homeless_2019 .

 ?z db:Year '2019' .

 ?x ont:CountyName 'Dublin' .

 ?z ont:CountyName 'Dublin' .

{ SELECT ?crime_2014 ?crime_2019

WHERE{

 ?a ont:NumOfCrime ?crime_2014 .

 ?a db:Year '2014' .

 ?b ont:NumOfCrime ?crime_2019 .

 ?b db:Year '2019' .

 ?a ont:CountyName 'Dublin' .

 ?b ont:CountyName 'Dublin' .

 ?a ont:CrimeName 'Burglary and related offences' .

 ?b ont:CrimeName 'Burglary and related offences' .

}}

}

Query 9

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

SELECT DISTINCT ?priceYear1 ?crimeYear1 ?priceYear2 ?crimeYear2 WHERE {

 ?z ont:MeanPrice ?priceYear1 .

 ?z db:Year '2010' .

 ?z ont:CountyName 'Dublin' .

 ?z ont:HousingPricesType 'Execution' .

 ?w ont:MeanPrice ?priceYear2 .

 ?w db:Year '2014' .

 ?w ont:CountyName 'Dublin' .

 ?w ont:HousingPricesType 'Execution' .

{

 SELECT DISTINCT (SUM(xsd:float(?numYear1)) AS ?crimeYear1) (SUM(xsd:float(?numYear2)) AS
?crimeYear2) WHERE {

 ?x ont:CrimeName 'Burglary and related offences' .

 ?x ont:NumOfCrime ?numYear1 .

 ?x db:Year '2010' .

 ?x ont:CountyName 'Dublin' .

 ?y ont:CrimeName 'Burglary and related offences' .

 ?y ont:NumOfCrime ?numYear2 .

 ?y db:Year '2014' .

 ?y ont:CountyName 'Dublin' .

 }}}

Query 10

PREFIX db: <http://dbpedia.org/ontology/>

PREFIX ont: <http://webprotege.stanford.edu/projectOntology#>

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

SELECT ?old_year ?county ?old_price ?new_price ?old_homeless ?new_homeless WHERE {

 ?x ont:CountyName ?county .

 ?x db:Year ?old_year .

 ?x ont:HousingPricesType 'Execution' .

 ?x ont:MeanPrice ?old_price .

 ?y ont:CountyName ?county .

 ?y db:Year ?b .

 ?y ont:HousingPricesType ' Execution' .

 ?y ont:MeanPrice ?new_price .

 ?s ont:CountyName ?county .

 ?s db:Year ?old_year .

 ?s ont:NumOfHomeless ?old_homeless .

 ?t ont:CountyName ?county .

 ?t db:Year ?b .

 ?t ont:NumOfHomeless ?new_homeless .

FILTER (xsd:int(?old_year) + 1 = xsd:int(?b))

FILTER (xsd:float(?old_price) < xsd:float(?new_price))

FILTER (xsd:float(?old_homeless) >= xsd:float(?new_homeless))

}