

HOMEWORK SEMANTIC WEB

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Q1:

Find that landmark article on data integration written by an Indian researcher in the 1990s.

```
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX dbr: <http://dbpedia.org/resource/>
PREFIX dbp: <http://dbpedia.org/property/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
CONSTRUCT {?article dbo:author ?author}
WHERE{
    ?author rdf:type dbo:Person.
    ?author dbo:country|dbo:birthPlace|dbo:nationality dbr:India.
    ?author rdf:type dbo:Scientist.
    ?article rdf:type dbo:WrittenWork.
    ?article dbo:author ?author.
    {
        {
            ?article dbo:abstract ?c.
            FILTER(REGEX(?c, "landmark" ,"i" )).
        }
        UNION
        {
            ?article rdfs:comment ?d.
            FILTER(REGEX(?d, "landmark" ,"i" )).
        }
    }
    {
        {
            ?article dbp:releaseDate ?releaseDate.
            FILTER(?releaseDate >= "1990"^^xsd:integer).
            FILTER(?releaseDate < "2000"^^xsd:integer).
        }
        UNION
        {
            ?article dbo:firstPublicationDate ?releaseDate1.
            FILTER(?releaseDate1 >= "1990-01-01"^^xsd:date).
            FILTER(?releaseDate1 < "2000-01-01"^^xsd:date).
        }
    }
    UNION
    {
```

```

        ?article dbo:PublicationDate ?releaseDate1.
        FILTER(?releaseDate1 >= "1990-01-01"^^xsd:date).
        FILTER(?releaseDate1 < "2000-01-01"^^xsd:date).
    }
}
{
    {
        ?article dbo:abstract ?e.
        FILTER(REGEX(?e, "data integration" ,"i" )).
    }
    UNION
    {
        ?article rdfs:comment ?f.
        FILTER(REGEX(?f, "data integration" ,"i" )).
    }
}
}

```

Q2:

Propose another question in natural language and give your answer by checking Linked Data.

Find the soccer players who are born in a country with more than 8 million inhabitants, who played as goalkeeper for a club that has a stadium with more than 20,000 seats and the club country is different from the birth country.

```

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX dbr: <http://dbpedia.org/resource/>
PREFIX dbp: <http://dbpedia.org/property/>

CONSTRUCT {
    ?soccerplayer dbo:birthPlace ?countryOfBirth.
    ?soccerplayer dbo:ground ?countryOfTeam
}
WHERE {
    ?soccerplayer a dbo:SoccerPlayer ;
    dbo:position|dbp:position
    <http://dbpedia.org/resource/Goalkeeper_(association_football)> ;
    dbo:birthPlace ?countryOfBirth ;
    dbo:team ?team .
    ?team dbo:capacity ?stadiumcapacity ;
    dbo:ground ?countryOfTeam .
    ?countryOfBirth a dbo:Country ;
    dbo:populationTotal ?population .
    ?countryOfTeam a dbo:Country .
    FILTER (?countryOfTeam != ?countryOfBirth)
}

```

```
FILTER (?stadiumcapacity > 20000)
FILTER (?population > 8000000)
} ORDER BY ?soccerplayer
```