

# SPARQL Graph Practice

Jeffrey Partyka

**To try these queries yourself in Gruff, create a new knowledge store, then import simpsons.rdf and copy/paste the queries into the Gruff SPARQL interface.**

## Query #1: Get all triples

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX simpsons: <http://www.simpsons.com/simpsons/>
PREFIX ppl: <http://www.randompeople.com/ppl/>
PREFIX job: <http://www.job.com/job/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?subj ?pred ?obj
WHERE {
    ?subj ?pred ?obj .
}
```

## Query #2: Get all triples with simpsons:Homer as the subject

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX simpsons: <http://www.simpsons.com/simpsons/>
PREFIX ppl: <http://www.randompeople.com/ppl/>
PREFIX job: <http://www.job.com/job/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?pred ?obj
WHERE {
    <simpsons:Homer> ?pred ?obj .
}
```

## Query #3: Get the surnames of all people that Bart knows

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX simpsons: <http://www.simpsons.com/simpsons/>
PREFIX ppl: <http://www.randompeople.com/ppl/>
PREFIX job: <http://www.job.com/job/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?surname
WHERE {
    <simpsons:Bart> foaf:knows ?person .
    ?person foaf:surname ?surname .
}
```

## Query #4: Get all Simpsons characters with an age > 10

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX simpsons: <http://www.simpsons.com/simpsons/>
PREFIX ppl: <http://www.randompeople.com/ppl/>
PREFIX job: <http://www.job.com/job/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?person
WHERE {
    ?person ppl:hasAge ?age .
    FILTER(xsd:integer(?age) > 10) }
```

## Query #5: For each person that is of `rdf:type foaf:Person`, get their name and the school they attend

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX simpsons: <http://www.simpsons.com/simpsons/>
PREFIX ppl: <http://www.randompeople.com/ppl/>
PREFIX job: <http://www.job.com/job/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?name ?school
WHERE {
    ?person rdf:type <foaf:Person> ;
        foaf:name ?name ;
        ppl:attendsSchool ?school .    }
```

## Query #6: Get the names of Marge's sisters (blank node practice)

```
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX simpsons: <http://www.simpsons.com/simpsons/>
PREFIX ppl: <http://www.randompeople.com/ppl/>
PREFIX job: <http://www.job.com/job/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?sisterName
WHERE {
    <simpsons:Marge> ppl:hasSister ?bn .
    ?bn ?pred ?sister .
    ?sister foaf:name ?sisterName .
}
```