

# RDF Ontology and Instances Report

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May 10, 2025

## Overview

This report summarizes the work done in the laboratory 05 about RDF ontology.

## Ontology Classes

Below are examples of classes defined in the ontology:

- Administrator
- Client
- Vendor
- Dream
- ServiceDream - a subclass of Dream
- GiftDream - a subclass of Dream
- Business

## Ontology Properties

Examples of properties in the ontology:

- ownedBy - Business class property
- hasVendor - Business class property
- offers - Business class property
- createdBy - Dream class property
- usedBy - Dream class property
- duration - ServiceDream subclass property

## Sample Instances

### Vendor

```
dfs:marian rdf:type dfs:Vendor ;  
  rdfs:label "Marian" .  
Shows a vendor called Marian.
```

## Client

```
dfs:alice rdf:type dfs:Client ;  
  rdfs:label "Alice" .  
Shows a client called Alice.
```

## Business

```
dfs:RomanBusiness rdf:type dfs:Business ;  
  rdfs:label "Good Romans in work" ;  
  dfs:ownedBy dfs:roman2 ;  
  dfs:hasVendor dfs:roman, dfs:roman2 .  
Shows a business named "Good Romans in work", owned by roman2, where two vendors work, roman  
and roman2.
```

## ServiceDream

```
dfs:frenchWineTasting rdf:type dfs:ServiceDream ;  
  rdfs:label "Tasting of french wine" ;  
  dfs:createdBy dfs:BusinessB ;  
  dfs:duration 240 ;  
  dfs:usedBy dfs:matthew, dfs:damian .  
Shows a dream that is a service named "Tasting of french wine". It was created by a business BusinessB.  
Its duration is 240 minutes. It was used by client matthew and damian.
```

## Queries

This ontology with given instances was tested with a few queries.

### Sample Query

```
SELECT ?dream ?label ?duration  
  WHERE {  
    ?dream rdf:type dfs:ServiceDream ;  
    dfs:usedBy dfs:alice ;  
    rdfs:label ?label ;  
    dfs:duration ?duration .  
    FILTER (?duration > 60)  
  }  
This query gets every ServiceDream that was used by Alice and took more than 60 minutes.
```

## Example application

An example application was created to test the queries mentioned, it works by changing the query used to call the repository.