

NAME:**MATRIKELNUMMER:**

- 1) Express the following statements about Elise, the care home resident, in RDF triples. Use “<http://dbpedia.org/resource/Australia>” to denote Australia. Use QName shorthand to write RDF. (3pts)

Elise is 92 years old, she comes from Australia, and she inhabits suite No. 5.

Ex:Elise ex:age 92 .

Ex:Elise ex:origin <http://dbpedia.org/resource/Australia>

Ex:Elise ex:inhabits ex:suite-no-5 .

2) Which triples are expressed by the following RDF/XML Document?

Write down first the triples (4pts) in the form "Subject Predicate Object ." and **secondly say shortly in your own words** this RDF document describes given the small excerpt that you see (1pt).

```
<?xml version="1.0"?>
<rdf:RDF
  xmlns:dct="http://purl.org/dc/terms/" xmlns:skos="http://www.w3.org/2004/02/skos/core#"
  xmlns:prov="http://www.w3.org/ns/prov#" xmlns:foaf="http://xmlns.com/foaf/0.1/"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema#" xmlns:org="http://www.w3.org/ns/org#"
  xmlns:gr="http://purl.org/goodrelations/v1#" xmlns:owlTime="http://www.w3.org/2006/time#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">

  <owl:Ontology rdf:about="http://www.w3.org/ns/org#">
    <owl:versionInfo>0.7</owl:versionInfo>
    <dct:title>Core organization ontology</dct:title>
  </owl:Ontology>

  <owl:Class rdf:about="http://www.w3.org/ns/org#Organization">
    <rdf:type rdf:resource="http://www.w3.org/2000/01/rdf-schema#Class" />
    <rdfs:subClassOf rdf:resource="http://xmlns.com/foaf/0.1/Agent" />
  </owl:Class>

</rdf:RDF>
```

<http://www.w3.org/ns/org> rdf:type owl:Ontology

<http://www.w3.org/ns/org> owl:versionInfo 0.7

<http://www.w3.org/ns/org> dc:title "Core organization ontology"

<http://www.w3.org/ns/org#Organization> rdf:type owl:Class

<http://www.w3.org/ns/org#Organization> rdf:type rdf:Class

<http://www.w3.org/ns/org#Organization> rdf:subClassOf <http://xmlns.com/foaf/0.1/Agent>

3) Assume you run the query on the given RDF data. What results do you expect? (2pts)

RDF Data:

```
@prefix ex: <http://example.org/> .
@prefix dc: <http://purl.org/dc/elements/1.1/> .

_:a dc:title "Very good introductory Textbook" .
_:a ex:website <http://kti.tugraz.at/examples/intro-tb-website> .
_:b dc:title "Exceptionally even better intermediate Textbook" .
_:b ex:website <http://kti.tugraz.at/examples/intermediate-tb-website> .
_:c ex:website <http://kti.tugraz.at/examples/tb-website-no-title> .
```

Query:

```
PREFIX ex: <http://example.org/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>

SELECT *
WHERE {
    ?book dc:title ?title .
    ?book ex:website ?website
}
```

_:a "Very good introductory Textbook" http://kti.tugraz.at/examples/intro-tb-website

_:b "Exceptionally even better intermediate Textbook" http://kti.tugraz.at/examples/intermediate-tb-website

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4) Formulate as SPARQL Query, incl the "FROM" dataset selection (5pts):

What are the 5 most recently updated items in the following atom feed:

<http://baltimore.indymedia.org/rss/newsfeed.1-0.rdf> ?

Print the item's URI, its title and its creation date.

```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX rss: <http://purl.org/rss/1.0/>
PREFIX atom: <http://www.w3.org/2005/Atom>
SELECT ?item ?title ?date
WHERE { ?item rdf:type rss:item .
        ?item rss:title ?title .
        ?item atom:updated ?date }
ORDER BY DESC(?date)
LIMIT 5
```