

**COMP 6741**

**Intelligent Systems**

Project-1 Report

Roboprof

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Team **AK\_G\_04**

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[GitHub Link](https://github.com/aryansaxena094/IS_AK_G_04.git)

We certify that this submission is the original work of members of the group and meets the Faculty’s Expectations of Originality

Aryan Saxena Benjamin Douglas

COMP 6741 – PROJECT REPORT 1

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COMP 6741 – PROJECT REPORT 2

1. **Vocabulary**
   1. **Vocabulary**

For our project, we used some of the public and most widely used vocabularies.

|  |  |  |
| --- | --- | --- |
| Prefix | URI | Comments |
| rdf | <http://www.w3.org/1999/02/22-rdf-syntax-ns#> | for representing interconnected data |
| rdfs | <http://www.w3.org/2000/01/rdf-schema#> | name the relationship between things as well as the two ends of the link |
| foaf | <http://xmlns.com/foaf/0.1/> | describing persons, their activities and their relations to other people and objects |
| vivo | <http://vivoweb.org/ontology/core#> |  |
| ex | <http://example.org/ns#> |  |
| dbo | <http://dbpedia.org/ontology/> |  |
| dbr | <http://dbpedia.org/resource/> |  |

* 1. **Schema**
  2. **Classes**

This section provides a detailed description of the different classes used for building the schema.

1. University :

ex:University a rdfs:Class ;

rdfs:label "University"@en ;

rdfs:comment "An institution of higher education and research."@en .

1. Course:

ex:Course a rdfs:Class ;

rdfs:label "Course"@en ;

rdfs:comment "A unit of teaching that typically lasts one academic term, is led by one or more instructors, and has a fixed roster of students."@en .

1. Lecture:

ex:Lecture a rdfs:Class ;

rdfs:label "Lecture"@en ;

rdfs:comment "A lecture is a specific instance of instruction within a course."@en .

1. Topic :

ex:Topic a rdfs:Class ;

rdfs:label "Topic"@en ;

rdfs:comment "A specific subject matter covered within the academic content of a course."@en .

1. Student:

ex:Student a rdfs:Class ;

rdfs:label "Student"@en ;

rdfs:subClassOf foaf:Person ;

rdfs:comment "An individual who is studying at a university or other place of higher education."@en

* 1. **Property**

1. hasName
2. hasLink
3. offersCourse

1. **Knowledge Base Construction**
   1. **Dataset**
   2. **Development Process**
2. **Graph Queries**
   1. List all courses offered by [university]
   2. In which courses is [topic] discussed?
   3. Which [topics] are covered in [course] during [lecture number]?
   4. List all [courses] offered by [university] within the [subject] (e.g., “COMP”, “SOEN”).
   5. What [materials] (slides, readings) are recommended for [topic] in [course] [number]?
   6. How many credits is [course] [number] worth?
   7. For [course] [number], what additional resources (links to web pages) are available?
   8. Detail the content (slides, worksheets, readings) available for [lecture number] in [course] [number].
   9. What reading materials are recommended for studying [topic] in [course]?
   10. What competencies [topics] does a student gain after completing [course] [number]?
   11. What grades did [student] achieve in [course] [number]?
   12. Which [students] have completed [course] [number]?
   13. Print a transcript for a [student], listing all the course taken with their grades.
3. **Triplestore and SPARQL Endpoint Setup**