**Report**

**Semantic Web application for a higher education institution**

Here's a summary of the RDF data and ontology:

Data:

* There are 8 Teachers: Ava, Isabella, Harper, Elijah, DrSmith, DrJohnson, and 2 instances with missing identifiers (one teaches Chemistry101 and the other Physics101).
* There are 10 Students: Ethan, Liam, Amelia, Daniel, Samuel, Emily, Abigail, Alexander, William, and Olivia.
* There are 6 Courses: Math101, Psychology101, Physics101, Chemistry101, Literature101, and History101.
* There are 2 Promotions: AcademicExcellenceScholarship and MeritScholarship.
* Each course is part of a corresponding academic program.

Ontology:

* Main classes include Person, Teacher, Student, EducationalEntity, Program, Course, and Promotion.
* Object properties describe relationships between instances of these classes, such as email addresses, dates of birth, enrollment statuses, teaching relationships, course enrollment, course-program relationships, and promotions awarded to students.
* Some properties define labels or descriptions for courses, teachers, students, and promotions.

Overall, the RDF data and ontology describe an academic setting with teachers, students, courses, programs, and promotions. The ontology provides a schema for organizing the data, while the RDF data provides specific instances of people, courses, and promotions in the academic setting.

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This is an RDF graph that represents a university system. It contains information about people (students and teachers), courses, programs, and promotions/scholarships. The graph uses several prefixes to define namespaces for common RDF vocabularies, such as rdf, rdfs, and owl.

The graph defines four main classes: Person, Teacher, Student, EducationalEntity, Program, Course, and Promotion. Person is the superclass of Teacher and Student, and EducationalEntity is the superclass of Program, Course, and Promotion.

There are several object properties defined in the graph, including teaches, taughtBy, enrolledIn, partOfProgram, and awardedTo. There are also several datatype properties defined in the graph, such as emailAddress, dateOfBirth, hasEnrollmentStatus, courseTitle, courseDescription, teacherName, and studentName.

The graph contains information about several individuals, including Ava, Ethan, Liam, Isabella, Amelia, Harper, Daniel, Elijah, Emily, Samuel, Abigail, Alexander, William, Olivia, DrSmith, and DrJohnson. These individuals are instances of either Teacher or Student.

The graph also contains information about several courses, including Math101, Psychology101, Physics101, Chemistry101, Literature101, and History101. Each course has a course title, a course description, and a program it is part of.

The graph defines several programs, including Bachelor of Science in Computer Science, Bachelor of Arts in Psychology, Bachelor of Science in Physics, Bachelor of Science in Chemistry, Bachelor of Arts in Literature, and Bachelor of Arts in History. Each program has a program name and a program duration.

Finally, the graph defines two promotions/scholarships: AcademicExcellenceScholarship and MeritScholarship. Both promotions are awarded to specific students.

A picture containing diagram

Description automatically generated

Classes: *9*

Object prop.: *5*

Datatype prop.: *16*

Individuals: *21*

Nodes: *25*

Edges: *26*

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https://service.tib.eu/webvowl/#file=ontologies.ttl