Cairo University
Faculty of Computers & Artificial Intelligence
2022 – 2023

Course Projects

The following project handle different aspects of the Semantic web course.

- Students work in groups of maximum 3 for this Project

- Deadline of submission is 30/12

The Project Deliverables

1. Printed Report containing:
   a. Cover page (Project Name, Group members)
   b. Definition of the problem
   c. Design of the proposed solution
   d. Graphical user Interface

Use the Protege editor to define an ontology for a university. Clearly distinguish individuals from classes and the subclass and others relationships.

A. Define classes using your ontology for the following items (not limited):

- *University*
- *Faculty*
- *Department*
- *Program (Module)*
- *Course*
- *academic staff*
- *Exams*
- *Course work*
- *Thesis*
- *Lecture hall*
- *Library*
- *Lab room*
- *Lecturer*
- *TA*
- *Student*

Note: **Programs** are *IS, IT, CS, DS,AI* and *General*. While **Departments** are *IS, IT, CS, AI* and *DS*. So a course like programming 1 in first year has a "General" program, and is offered by "CS" department. In 3rd and 4th year courses the program is the same as the department.

B. Add the following queries on protégé:

1. Get all TAs belonging to a department.
2. Get the courses a student is currently studying.
3. Get all the courses offered by a certain faculty.
4. Get Lecturers of a faculty.
5. Get all faculties of a university.

C. Repeat the previous queries in clips by adding rule(s) for each of the queries and printing out the result. You can import your ontology from the "Clips Tab" in protégé.

Note: In **protégé** queries you will have to put constant values for:
- "department" in Q1
- "student" in Q2.
- "faculty" in Q3.
- "faculty" in Q4.
- "university" in Q5.

   While in **clips** take all of these values as inputs from the user.

D. Add a report to your project with the diagram of your ontology showing the relations between the classes and describe the slots of each class separate from the diagram.