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Class: BSCS 8<sup>th</sup> SS2

Subject: Semantic Web Techniques

Submitted to: Dr Fahad Maqbool

**Topic: ORSD for Capstone Project**

# **Ontology Requirements Specification Document: Final Year Project (FYP) Process**

## **1. Purpose**

The main goal of this ontology is to define the key terms, concepts, and relationships of capstone project so that people can better understand the process and use the knowledge to solve problems in a specific domain application.

## **2. Scope**

The ontology will cover the stages, roles, and evaluation aspects of the capstone process, from project research to completion and deployment.

## **3. Implementation Language**

The Ontology will be implemented in OWL (Web Ontology Language).

## **4. Intended-End Users**

- Students
- Supervisors
- Project Manager
- Application developers
- Domain Experts

## **5. Intended Uses**

- Students can understand the entire process.
- New students can get a complete idea of FYP.
- It will help supervisors and project managers to evaluate the projects a lot better.
- The department will be able to explain the process to the new batch.

## **6. Ontology Requirements**

### **a. Non-Functional Requirements**

**NFR1.** Easy to Update

**NFR2.** It should follow the **FAIR** data principles.

**NFR3.** It must be fast and efficient.

**NFR4.** It must be well documented and explain each concept clearly.

### **b. Functional Requirements: Groups of Competency Questions**

#### **CQG1. Students (8 CQ)**

##### **1. What is Final Year Project (FYP)?**

**Answer:** It is a major project at the end of your degree where you apply what you have learned to build a real-world solution in a chosen domain.

##### **2. Is the FYP mandatory for all students?**

**Answer:** Yes, it is a compulsory part of your degree.

##### **3. What domains can we choose for our project?**

**Answer:** You can choose any field like healthcare, e-commerce, cybersecurity, machine learning, Langchain, etc.

##### **4. Who will evaluate the project?**

**Answer:** It will be done by supervisor, project manager and external professor.

##### **5. What kind of documentation is required in the FYP?**

**Answer:** You will need to create a proposal, SRS (Software Requirements Specification), design documents, Gantt Chart, Poster, Video, and a user manual.

##### **6. Can we change our project idea after starting?**

**Answer:** Yes, but only in the early stages and with approval from your supervisor.

**7. Are programming skills mandatory for all FYPs?**

**Answer:** Not always. Some projects may focus on research, hardware, UI/UX design

**8. Who conducts the FYP viva or presentation?**

**Answer:** The viva is conducted by an internal faculty member or external examiners from other universities.

**CQG2. Department (3 CQ)**

**1. How does this FYP process help students?**

**Answer:** It gives students a structured path to follow which helps them to understand each phase of the project clearly.

**2. What is the department's role in the FYP?**

**Answer:** The department guides students, assigns supervisors, offers technical resources to the students.

**3. Can students request resources or tools from the department for their project?**

**Answer:** Yes, students can request access to licensed software and tools.

**CQG3. Supervisor and Project Manager (6 CQ)**

**1. What is the role of a Project Manager in an FYP?**

**Answer:** The Project Manager oversees planning and progress, and ensures the team stays on schedule.

**2. Can the Project Manager help with documentation?**

**Answer:** Yes, they can help with final documents.

**3. What is the responsibility of a Supervisor in FYP?**

**Answer:** The supervisor helps the team, offers guidance, reviews progress and makes sure technical standards are met during development.

#### **4. How often should students meet their supervisor?**

**Answer:** Twice a week for updates, feedback, and to resolve any issues in the project.

#### **5. How can a project manager track progress effectively?**

**Answer:** By using progress reports and holding regular meetings with the team and supervisor.

#### **6. Can students switch supervisors during the FYP?**

**Answer:** Only in special cases and with department approval.

### **7. Pre-Glossary of Terms**

#### **a. Terms from Competency Questions + Frequency**

<b>Terms</b>	<b>Frequency</b>
Final Year Project (FYP)	10
Students	5
Project	6
Evaluate	1
Documentation	2
Department	2
Supervisor	3
Role	2
Resources/ Tools	1

#### **b. Terms from Answers + Frequency**

<b>Terms</b>	<b>Frequency</b>
Supervisor	5
Project Manager	2
External Professor / Examiner	2
Technical Resources	1
SRS	1

### **c. Objects**

- FYP (Final Year Project)
- Student
- Supervisor
- Department
- Documentation
- Project Domain