PROJECT PHASE 1

Ontology Requirements Specification Document

Group Members:

Isha Tariq [BSCS51F21S063]

Areeba Imtiaz [BSCS51F21S072]

Fatima Waseem [BSCS51F21S090]

Submitted To :

Dr. Fahad Maqbool

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Domain: Final Year Project (FYP) Process in the Department of Computer Science

1. Purpose

The purpose of this ontology is to model the Final Year Project (FYP) process within the Department of Computer Science. It aims to provide a structured, semantic representation of the FYP process to support better understanding, planning, tracking, and automation of the process for all stakeholders.

2. Scope

This ontology covers all key phases of the FYP process, including:
- Project initiation and approval
- Documentation milestones
- Evaluation and viva procedures
- Deployment and final submission
- Stakeholder roles (students, supervisors, project managers, department)

3. Implementation Language

The ontology will be implemented using OWL (Web Ontology Language) to ensure formal semantics, compatibility with reasoning engines, and extensibility.

4. Intended End-Users

- Undergraduate Students
- Project Supervisors
- Departmental Project Coordinators
- FYP Committee / Evaluation Panel
- Project Managers

5. Intended Uses

- To provide students with a clear understanding of the FYP process and expectations.
- To guide supervisors and managers in overseeing student progress.
- To serve as a reference for documentation and evaluation standards.

- To support automated tools for tracking, evaluation, and assistance.
- To document and preserve departmental procedures and roles.

6. Ontology Requirements

a. Non-Functional Requirements

- The ontology must be scalable and extendable for future enhancements.
- It should support reasoning over timelines, deadlines, and roles.
- It must maintain clarity and unambiguous representation of concepts.
- Should be platform-independent and integrable with web-based FYP systems.

b. Functional Requirements: Groups of Competency Questions

Students

• What is a Final Year Project (FYP)? FYP is a mandatory academic project that demonstrates practical application of knowledge acquired throughout the degree.
• Is participation in an FYP mandatory? Yes, participation in FYP is mandatory for Computer Science students.
• Which Computer Science domains are eligible for an FYP? Eligible domains include AI, Web Development, Cloud Computing, Cybersecurity, and Data Science etc.
• What skills and knowledge from the curriculum are applicable? Applicable skills include programming, system design, databases, AI/ML, documentation, and project management.
• What are the documentation requirements? Required documents include Proposal, SRS, Design Document and Final Report.
• What is the timeline for different FYP milestones? Milestones follow a semester schedule: Proposal → Mid Evaluation → Final Submission → Viva.
• What are the evaluation criteria for FYP projects? Evaluation is based on innovation, completeness, technical depth, documentation, and viva performance.
• Who evaluates the FYP (viva panel, supervisors)? Evaluation is conducted by internal and external faculty including supervisors and evaluators.
• What steps are involved from proposal to deployment? Steps: Proposal → Design → Implementation → Testing → Documentation → Evaluation → Deployment.
• How do I prepare for evaluation and testing phases? Prepare by meeting deadlines, rehearsing presentations, and ensuring system functionality.
• What support resources are available to me? Support includes supervisor guidance, departmental tools, labs, rubrics, and manuals.

Department

• What is the department's role in the FYP lifecycle?

The department assigns supervisors, ensures resources, and oversees the FYP process.
• How does the ontology help students and faculty? Ontology provides clarity on roles, expectations, and reduces confusion.
• How is student progress monitored and recorded? Progress is tracked through reports, evaluations, and project tracking tools.
• What resources must be allocated by the department? Resources include evaluation panels, lab access, funding (if applicable), and templates.

Supervisor

• What are my responsibilities as a supervisor? Supervisors guide students technically and ensure milestones are met.
• How can I effectively track and guide student progress? Track progress via regular meetings, milestone assessments, and tracking systems.
• How do I provide constructive feedback and evaluation? Provide feedback using rubrics, suggest improvements, and offer technical guidance.

Project Manager / Coordinator

• How do I manage and assign projects to students and supervisors? Projects are assigned based on interests, domain expertise, and supervisor availability.
• What are the procedures for timely milestone tracking? Milestones are tracked using timelines, reminders, and reports.
• What tools are required to monitor FYP health and performance? Tools include dashboards, checklists, and feedback forms.

7. Pre-Glossary of Terms

a. Terms from Competency Questions + Frequency

• fyp: 8	• evaluation: 3	• projects: 2
• supervisors: 2	• resources: 2	• department: 2
• students: 2	• student: 2	• progress: 2
• final: 1	• year: 1	• project: 1
• participation: 1	• mandatory: 1	• which: 1

b. Terms from Answers to Competency Questions + Frequency

• include: 5	• evaluation: 5	• fyp: 3
• project: 3	• design: 3	• documentation: 3
• proposal: 3	• milestones: 3	• supervisors: 3
• tools: 3	• mandatory: 2	• science: 2
• students: 2	• applicable: 2	• system: 2

c. Objects

• checklists	• dashboards	• design
• evaluation	• feedback	• manual
• proposal	• report	• rubrics
• srs	• system	• timeline
• tools		