COMPUTER ENGINEERING DEPARTMENT

Graduation Project Proposal Form

CMPE 405 /CMSE 405 /BLGM 405

Instructor Name:	**Cem Ergün**
Project Title:	**Online Management Solution for Graduation Projects**
Number of team members:	**3-4**
Semester & Year:	**2023-2024 FALL**
Type of Project (HW/SW)**:**	**SW**

1. Project Overview

In the Computer Engineering (Turkish and English) and Software Engineering programs within the department, the "Graduation Project" courses are integral to the fourth year of study. Effective planning and management are crucial for the success of these projects. However, past evaluations have shown that managing and evaluating graduation projects can be challenging for students, supervisors, and committee members. The formation of project groups, typically comprising 3-5 students, often leads to coordination difficulties and missed deadlines for progress and final report submissions. To address these issues, a web-based graduation project management system is proposed. This system aims to streamline project management processes and facilitate evaluation based on predefined rubrics set by the Computer Engineering Department.

2. Detailed specification of the project

The proposed web-based system will facilitate the management and evaluation of graduation projects through three main phases: Topic Selection, Monitoring, and Committee Member Evaluation. Each phase involves interactions between supervisors, team members, and committee evaluators. The system will ensure clear communication, progress tracking, and standardized evaluation criteria.

Phase 1: Topic Selection (Supervisor – Team Members Interaction)

- Team members will select a topic from the provided list (from CMPE/CMSE/BLGM 405) on the web platform.

- A team leader will be chosen, who will then define team members as users within the system.
- Following a meeting between the supervisor and students, a detailed proposal will be collaboratively prepared and uploaded to the web platform.

Phase 2: Monitoring (Supervisor – Team Members Interaction)

- A project progress report webpage will be provided to monitor the activities of project team members on a weekly basis. Link to access project progress report https://staff.emu.edu.tr/duygucelik/en/teaching/cmse406/required-documents
- The team leader will update the progress report after discussions with the supervisor.
- Responsibilities will be assigned to each team member, enabling the supervisor to grade them individually based on their contributions. All these responsibilities will be controlled through web page.
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Phase 3: Committee Member Evaluation

- Committee evaluators will be defined by the system admin.
- Multiple web pages will be designed to allow committee evaluators to assess each team member based on predefined criteria. Link to access evaluation criteria; https://staff.emu.edu.tr/duygucelik/en/teaching/cmse406/evaluation-criterias
    1. Report
    2. Cooperation with supervisor (filled by supervisor)
    3. Quality and contribution of the project
    4. Presentations
    5. Grade summary
- All monitoring and evaluation forms will be online and printable in PDF format for record-keeping purposes.

Conclusion: The proposed web-based graduation project management system aims to streamline the process of managing and evaluating graduation projects. By providing a centralized platform for communication, progress tracking, and evaluation, the system will enhance the efficiency and effectiveness of the graduation project process, benefiting students, supervisors, and committee members alike.

4. Standards that should be used in the project

The project should adhere to industry best practices and standards in web development, including but not limited to:

HTML5, CSS3 for frontend development.
JavaScript (with frameworks like React or Vue.js) for dynamic interactivity.
Server-side scripting with languages like PHP, Python, or Node.js.
Relational database management system (e.g., MySQL, PostgreSQL) for data storage.
RESTful API design for communication between frontend and backend components.

5. Constraints

Constraints on the final product and development stages include:
Compatibility with modern web browsers (Chrome, Firefox, Safari, Edge).
Accessibility standards to ensure usability for all users.
Data security and privacy considerations in handling user information and project data.

6. Tasks to be completed by students

The web-based management system will have the following specifications:

Inputs: Topic selection data, project progress reports, evaluation criteria, user information.
Outputs: Project progress reports, evaluation forms, notifications/alerts.
Target Users: Students, supervisors, committee evaluators, system administrators.
Required Functionality: User authentication, topic selection interface, project progress tracking, evaluation forms, printable PDF reports.

Students will undertake the following tasks during the development stages:

Requirements analysis and system design.
Frontend and backend development.
Implementation of user authentication and authorization.
Integration of project progress tracking and evaluation features.
Testing and debugging.
Documentation of system functionalities and user guides.

7. Tools Required/Expected to be used in the development of the project

Integrated Development Environment (IDE) such as Visual Studio Code, Atom, or JetBrains IntelliJ IDEA.

Version control system (e.g., Git) for collaborative development.

Web development frameworks and libraries as per project requirements.

Relational database management system (DBMS) for data storage.

Web hosting platform for deployment and testing purposes.

8. Resources Required (HW/SW/Data, etc.)

Hardware: Personal computers or laptops for development.

Software: Operating systems (Windows, macOS, Linux), development tools, database management system.

Data: Sample datasets for testing and demonstration purposes.