SEOULTECH
Seoul National University of Science & Technology

Project Overview for ITM 519

➢ Description

The wide scope for the project is **"modern website design and implementation"** which encompasses a wide range of technologies like HTML, CSS, Django, Git, React, user interfaces, CI/CD, and Python. Developing this project offers students a comprehensive learning experience.

The project topic and functionality are free, but below there are two project ideas that can help students apply their knowledge in a practical setting, showing their skills across these technologies.

1. Real Estate Listing Website
Description: Create a website where real estate agents can list properties for sale or rent, including detailed descriptions, photos, and contact information.
Technology Integration:

- **HTML/CSS**: Design a clean and attractive interface for listing properties, including photo galleries and maps.
- **Django**: Utilize Django for user authentication, property listings, and search functionality. Implement advanced query capabilities for filtering listings.
- **JavaScript & React**: Enhance user interaction with dynamic search results and property pages, without needing to reload the page.
- **Git**: Use Git for source code management, facilitating collaborative development.
- **CI/CD**: Implement CI/CD for automated testing and deployment, ensuring that the website is always running smoothly.

2. Personal Finance Tracker
Description: Build an application where users can track their expenses, set budgets, and view detailed reports and analytics on their personal finances.
Technology Integration:

- **HTML/CSS**: Develop a user-friendly dashboard for inputting expenses, viewing budgets, and analytics.
- **Django**: Use Django for user accounts, transaction records, and budget management. Employ Django's ORM for efficient data querying.
- **JavaScript & React**: Implement React for a dynamic frontend, updating financial summaries, and charts in real-time as users input data.
- **Git**: Practice version control with Git, emphasizing code organization and collaborative development.
- **CI/CD**: Set up CI/CD pipelines for automated testing and deployment, maintaining code quality and application reliability.

➢ Grading

The total portion for the projects is 30% of your final grade. The project is divided in two phases, which are graded as follows:

1) Intermediate proposal presentation: 5% (of final grade)
2) Final presentation: 25% (of final grade)

The evaluation score is given to all the team members. However, individual contributions to each team will be considered as well. For this, each student should submit the evaluation to the team members for each presentation in the e-class system.

➢ **Team formation**

- One team will be formed with 3 or 4 students.
- The results will be announced in the e-class system.

➢ **Feedback strategy**

The feedback will be given during the presentation. Some more detailed comments could be provided through the e-class system.

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Intermediate Presentation: Idea Proposal

(Due date: May 14, during our class time)

➢ Description

- Present the proposal of the group in the given wide topic.
- Prepare the presentation in at most 6 minutes for each team.
  - The purpose of a short presentation is to help the students to learn and practice communicating their main ideas clearly and concisely in a short time.
- The idea proposal should be detailed enough to provide clarity on what the project entails, its scope, and how it integrates the various technologies taught in the course.

➢ Requirements

- **Project Title:** A concise and descriptive title that gives a clear idea of what the project is about.

- **Project Description:** A brief overview of the project, including its purpose, key features, and user interaction flow.

- **Objectives** Specific goals that the project aims to achieve. This should include what the students hope to learn or demonstrate through the project.

- **Technology Stack.** A list of technologies (HTML, CSS, Django, Git, React, CI/CD, Python) that will be used in the project and a brief explanation of why each is chosen. Outline how each technology will be used in the context of the project. For example, Django for the backend, React for the frontend, etc. (Note: it is required to use the technology stack that we learned in class).

- **User Interface Design**. A description of the user interface design, including wireframes or mockups if available. This should cover the main pages/screens of the application. Additionally, a discussion on responsive design considerations for different devices.

- **Collaborative implementation plan**. Include a plan for collaboration among team members for implementing the project. This should cover how tasks will be divided, communication methods, and version control practices using Git.

➢ Evaluation criteria

- **Creativity**: Selection of an engaging and unique topic is key. The idea should stand out for its originality and relevance.
- **Feasibility**: Assess if the project can realistically be developed within the semester's timeframe, considering resources and constraints.

- **Completeness**: The proposal must cover all aspects and potential challenges of the project, including exceptional cases.
- **Planning**: A clear and achievable project plan, including timelines and milestones, is essential for successful completion.
- **Presentation**: Effective organization and clear communication of the proposal demonstrate a deep understanding of the project idea.

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➢ Presentation

- The presentation should include what was detailed in the Requirements section.

➢ Submission Deadline

- Submit 1) the presentation slide and 2) supplementary materials (e.g., source codes) to e-class before class (May 14, 9:59 AM).
- Evaluate the team members. Use the evaluation form in the team project section of the e-class. (The evaluation results are not shown to other team members)
- **Late submissions are not allowed**.

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Final Presentation

(Due date for submission: June 04, 11:59 PM.
Presentation will be held during our class time)

➢ Description

- Present the final implementation of the proposed website deployed locally or online (online deployment might give you extra points in case your group needs them).
- Prepare the presentation within 12 minutes for each team.

➢ Evaluation criteria

- Well-implemented according to the proposed idea
- Completeness of the results
  - Are all the cases considered?
  - Are all the technologies correctly used?
- Analyzing the problems that occurred during the implementations.
- Debugging the problems (coding questions)
- Effective organization and clear communication in the presentation

➢ Deliverables

- Presentation slides including the followings:
  - Final result of the implementation
  - Detailed descriptions of the implemented components and technologies used (libraries, web architecture, git repositories, commit history, etc.)
  - The steps for analyzing the problems and debugging them
- A compressed file for the supplementary materials including all the source codes, a manual document describing how to deploy the source codes and data. Based on this manual, the implemented services could be reproducible in any environments

- A GitHub repository containing all the files of your project. It is imperative that the commit history in your repository reflects consistent development progress, starting with an initial commit to establish the project baseline, followed by a series of subsequent commits that document the evolution and progression of your work. The commit history should also demonstrate the participation of each member of the team.

- Team members Evaluation. Use the evaluation form in the team project section of the e-class. (The evaluation results are not shown by the others)

- Please note that no late submissions will be accepted under any circumstances.