Final Project Assignment: Interactive Mobile and Web Application Development

Objective

The final project aims to synthesize your learning by designing and developing an interactive web application, complemented by a comprehensive prototype. Optionally, you may also develop or prototype a mobile application for your system. This project encourages teamwork, problem-solving, and creative thinking to address real-world issues through technology.

Project Overview

- **Team Formation**: You may work individually or in groups of up to **three (3)** members.
- **Core Deliverables**:
  - A fully designed **Figma prototype** of your application.
  - A functional **web application** implementing all related features.
- **Optional Deliverable**:
  - A **mobile application** developed using any technology **or** a mobile app prototype using Figma or another prototyping tool.
- **Presentation**: A pitch that explains your project choice and how it addresses a specific problem.

Project Requirements

1. Ideation and Planning

- **Project Selection**:
  - Identify a problem or need that your application will solve.
  - Justify the relevance and importance of the problem.
- **Research**:
  - Conduct preliminary research to understand the problem space.
  - Analyze existing solutions and identify gaps your project will fill.
- **Proposal**:
  - Draft a project proposal outlining your objectives, target audience, and proposed features.

2. Figma Prototype

- **Design Scope**: Create a complete design of your application, covering all screens and user interactions.
- **Usability**: Focus on user-friendly interfaces and intuitive navigation.
- **Interactivity**: Utilize Figma's prototyping features to simulate user flows and interactions.
- **Visual Design**: Apply principles of visual hierarchy, typography, color theory, and consistency.

- **Annotations**: Provide notes explaining design decisions, user paths, and any unique features.

3. Web Application Development

- **Functionality**:
  - Develop all core features as outlined in your proposal.
  - Ensure that the application is interactive and meets usability standards.
- **Technology Stack**:
  - Choose appropriate technologies (e.g., HTML, CSS, JavaScript, React, Angular, Vue.js).
- **Responsive Design**:
  - Ensure the application is responsive and accessible on various devices and browsers.
- **Performance**:
  - Optimize for fast loading times and efficient performance.
- **Testing**:
  - Conduct thorough testing to identify and fix bugs.
- **Documentation**:
  - Comment your code and provide a README file with setup instructions.

4. Optional Mobile Application

- **Development**: Build a mobile app version of your system using technologies like Flutter, React Native, Swift, or Kotlin.

- **Prototyping**: Alternatively, create a mobile app prototype using Figma or another tool.

- **Integration**: Ensure the mobile app aligns with the web application in terms of functionality and design.

5. Presentation

Pitch Deck
Create a presentation that includes:
- **Introduction**: Present your team and project title.
- **Problem Statement**: Describe the problem your application addresses.
- **Solution Overview**: Explain how your application solves the problem.
- **Demo**: Showcase key features through screenshots or live demonstration.
- **Technical Approach**: Briefly discuss the technologies and methodologies used.
- **Challenges**: Highlight any significant challenges and how you overcame them.
- **Impact**: Discuss the potential impact and future scope of your project.

Delivery:

- Each team will have **10–15 minutes** to present, followed by a Q&A session.
- All team members should participate in the presentation.

Submission Guidelines

Deliverables

1. **Figma Prototype**:
   a. Share a viewable link to your Figma project.
   b. Ensure all interactive elements are functional in the prototype.

2. **Web Application**:
   a. Submit source code via a Git repository link or as a zipped folder.

3. **Mobile Application (Optional)**:
   a. If developed, submit source code via a Git repository link or as a zipped folder.
   b. If prototyped, provide a link to the interactive prototype.

4. **Project Report**:
   A document (4–6 pages) that includes:
   - **Abstract**: A summary of your project.
   - **Conclusion**: Final thoughts and future work.
   - **References**: Cite all sources and resources used.

5. **Presentation Slides**:
   a. Submit your presentation file in PDF or PPT format.

Submission Method

- Upload all your related files to git repository

Evaluation Criteria

1. **Problem Identification**:
   a. Clarity and relevance of the problem.
   b. Innovation in the proposed solution.
2. **Design Quality**:
   a. Aesthetics and visual appeal.
   b. Consistency and adherence to design principles.
   c. User experience and usability.
3. **Functionality**:
   a. Completeness and correctness of features.
   b. Stability and performance.
   c. Code quality and documentation.
4. **Optional Mobile Application**:
   a. Added value and integration with the web application.
   b. Design and usability (if prototyped).
5. **Presentation Quality**:
   a. Organization and clarity.
   b. Engagement and communication skills.

    c. Effective use of visual aids.
6. **Report Quality**:
    a. Writing quality and structure.
7. **Team Collaboration**:
    a. Equal participation and contribution.
    b. Ability to work cohesively as a team.

Tips for Success

1. **Early Start**: Begin brainstorming and planning as soon as possible.
2. **Regular Meetings**: Schedule consistent team meetings to track progress.
3. **Divide and Conquer**: Assign tasks based on each member's strengths.
4. **User Testing**: Gather feedback from potential users to improve your design.
5. **Backup Plans**: Have contingency plans for potential risks.

Conclusion

This final project is an opportunity to showcase your skills and creativity in interactive application development. We encourage you to tackle meaningful problems and deliver solutions that you are passionate about. Your efforts will culminate in a presentation where you can share your achievements with peers and instructors.