Ollscoil Teicneolaíochta an Atlantaigh

Atlantic Technological University

B.Sc. (Hons) in Software Development

Applied Project & Minor Dissertation

Project Proposal

Each student must complete the following form and submit it to their supervisor for consideration. Once your supervisor has signed-off on the proposal, you must submit the document for consideration using Moodle.

1. **Student Name:** Shauna Martyn
2. **Supervisor Name:** Andrew Beatty
3. **Project Name:** Food delivery app – Dinner Dash

4. **Project Context**

Describe the context of the problem domain here. Explain what you are proposing to do and your rationale for doing it. Explain why the problem domain is of interest.

The food delivery industry has experienced exponential growth in recent years, driven by factors such as convenience, busy lifestyles, and the impact of the COIVD-19 pandemic. As more people opt for the easy of ordering food from their smartphones the need for efficient and user-friendly food delivery apps have become even more important.

Develop and create a user-friendly food delivery app that connects users with a wide range of local restaurants. The app will allow users to browse menus, place orders, and track their deliveries in real-time. It will also include features for payment processing, order customisation and AI customer service bot to suggest dishes and menu items.

The food delivery industry is experiencing unprecedented demand, making it a lucrative and highly relevant project choice. People are seeking convenient solutions for their everyday needs and a food delivery app caters to this demand by offering a hassle-free way to order meals. The app servers as a platform for local restaurants to expand their reach, especially those without their own delivery infrastructure. Using cutting-edge and technologies such as GPS tracking, secure payment gateways and machine learning for personalised recommendations can further enhance the apps appeal and functionality.
By prioritising user-experience, security and technological advancements, this app aims to redefine the food delivery experience ultimately making it more accessible and enjoyable for everyone involved.

5. Project Objectives

Write out the key objectives of the project as bullet points. Each objective should be clear, realisable, and measurable / testable, i.e., the success of your project is determined by the degree to which these are realised.

- Develop a user-friendly cross-platform mobile application.
- Implement a secure user authentication and registration system to ensure the privacy and security of user information.
- Create a seamless menu browsing and ordering interface, allowing users to select dishes, customise orders and add them to their basket.
- Integrate a real-time order tracking system to provide users with updates on the status and location of their orders.
- Integrate a recommendation engine to suggest personalised dishes and restaurants based on user preferences and order history.
- Implement a customer support system, including in-app chat support.
- Conduct rigorous testing, including functional, usability and security testing to ensures the apps reliability and stability.

6. Technologies & System Architecture

Explain the technologies you are going to use and why you selected them. These include the programming languages, operating systems, presentation and storage technologies and any cloud / 3rd party libraries / services that you intend to use.

Front-end: JavaScript, Typescript, Dart.
Back-end: Node.js, Python, Java.
Presentation Technologies: React, Flutter, Ionic
Storage Technologies: MongoDB, MySQL
Third-Party Services and Libraries: Google Maps API, Django, Stripe, PayPal, GitHub.
Cloud Services: AWS, Azure, Heroku, Google cloud.

React allows for simultaneous development for iOS and Android which reduces development time. Flutter is a cross-platform UI toolkit that allows for the development of natively complied applications for mobile, web, and desktop from a single codebase. It also provides widgets for building the app's user interface.
MongoDB is a NoSQL database and can handle content like customer reviews.
Amazon Web Services offers a wide range of cloud services for hosting. It also provides scalability, reliability, and security. Google Cloud has a robust infrastructure, advanced AI capabilities, and seamless integration with other Google service. Heroku offers simple deployment and management without the need for extensive infrastructure management.

7. Schedule of Work

Using a Gantt chart or tabular format, outline your schedule of work for all the key project activities, deliverables, and dates.

Task Description	Start Date	End Date
Project Planning and Research	25 Sept 23	2 Oct 23
Define Project Scope and Objective	2 Oct 23	5 Oct 23
Technology Stack Selection	6 Oct 23	9 Oct 23
Design User Interface	10 Oct 23	24 Oct 23
UI Design and Prototyping	25 Oct 23	1 Nov 23
Backend Development	2 Nov 23	17 Nov 23
Database Design and Implementation	18 Nov 23	26 Nov 23
User Authentication and Authorisation	26 Nov 23	3 Dec 23
Frontend Development	4 Dec 23	18 Dec 23
Implementing User Interface	19 Dec 23	23 Dec 23
Integration of API's	27 Dec 23	30 Dec 23
Testing and Quality Assurance	3 Jan 24	6 Jan 24
Deployment and Launch	7 Jan 24	10 Jan 24