School of Computing

CA326 Year 3 Project Proposal Form

SECTION A

Project Title: Carpool

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Staff Member Consulted: Darragh O' Brien

Project Description

What is our Project?

A carpooling application for DCU students. A carpool is a situation in which person A who owns a vehicle is travelling to a destination, and another person B is going to the same/ similar destination and person B pays an amount of money to travel in the vehicle with person A. It is a cost-efficient and effective way to earn extra money while travelling.

How do we plan to implement it?

In this project, we are moving our attention mainly to mobile users because the app would mostly be accessed on the go. This is why we plan to implement our project by using a web app using ReactNative as the frontend with JavaScript and Express for the backend using JavaScript. We plan to use the OpenStreetMap API to show the map and the routing to each location. OpenRouteService to find the routes from and to each location. We will use a third-party module to convert from a text-based location to the geographic coordinates of the location described by the user.

Constraints

Our project will have the following constraints;

- Gender Filtering - We recognize that certain passengers due to personal reasons may prefer to ride or not ride with members of a certain gender. This is why our app will allow both the driver and passengers to filter by gender.
- Location too far - This will allow a driver to choose how far they are willing to travel to pick up a passenger.
- The number of passengers - The app will allow a driver to filter how many passengers they would like to have in their vehicle.

Division of Work

Student 1: Frontend with React Native

Student 2: Backend with Express and MongoDB

Programming language(s)

- JavaScript
- CSS

Programming tool(s)

- VS Code
- React Native
- npm
- MongoDB
- Express
- Node.js

Learning Challenges

- JavaScript
- React Native
- MongoDB
- Express

Hardware/software platform

- Mobile devices (Android, iOS)
- Web

Special hardware/software requirements

No special hardware/software requirements.