**Pasig Catholic College**

**Bachelor of Science in Information Technology**

**IT120**

***Commutr***

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**Introduction**

**Project Overview**

Commutr is a public commute direction app that asks users for their starting point and preferred arrival time before showing them the fastest paths to get there using public transportation. The Ionic and Capacitor frameworks will be used to build the app, which will make use of Google Maps for location data and real-time transit information.

Users of the app will have access to several important functions, such as updates and real-time transit data, choices for multimodal routing (e.g., bus, train), route alternatives that are tailored to the user's preferences (e.g., fastest route, least transfers, etc.)

Users of the program can choose their intended destination from a list of suggestions or manually enter the address after entering their beginning location, desired arrival time, and desired destination. The user will then receive a list of potential routes along with the estimated fare and estimated time of arrival for each one from the app.

Users will look to the app for accurate, up-to-date information on available public transit options as well as convenience in planning their commutes. They will also anticipate that the app will be simple to use, offer a variety of commute options, and let them make educated decisions based on their preferences.

**Objective and Purpose**

The primary objective and purpose of the app is to give users a quick and easy method to organize their commutes by giving them access to reliable and current information on available public transit options and letting them personalize their route according to their preferences. With a user-friendly and simple-to-use layout, the app also strives to make it simple for users to explore and access the information they need quickly and effortlessly.

**Multimodal Routing Options:**

Commutr will provide users a variety of routes for their journeys, including bus and train routes. Users can compare several forms of transportation this way and select the one that best matches their needs.

**Personalized Route Options:**

Commutr will let users choose their own routes based on preferences like the quickest route, the fewest transfers, or other factors. Users can utilize this to identify the optimal commuting path and make informed selections based on their priorities.

**Location Data using Google Maps:**

Using Google Maps, location data is provided to the app, which is essential for giving users the most accurate and recent information possible on available public transportation.

**User-friendly and easy to navigate:**

With a clear and simple interface, the app will be made to be simple to use and navigate. Users may easily plan their commutes and get the information they require fast and effortlessly thanks to this.

**Target Audience**

Commutr’s target audience consists of the following:

* Commuters who use the public transportation as their main means of commute to move about their area.
* People who frequently travel via public transportation for errands and/or recreation.
* People who are unfamiliar with the area and require assistance in navigating the available public transportation.
* People who want to use public transit to lessen their carbon footprint.
* People who seek to save money by avoiding driving and using ride-hailing services by taking the public transportation.
* People who desire to organize their commutes more effectively.

The app can be helpful for residents of suburban or rural areas who have few options for public transportation, but it will likely be most helpful for those who live in cities with advanced public transit infrastructure. The program also doesn't require any special technological abilities and is made for users of all ages and backgrounds.

**Software Requirements**

Commutr will mainly be developed using JavaScript, with AngularJS as its framework. HTML5 and SASS will also be used in the development of the project’s front end.

Ionic will also be used as a framework for faster development and more cross platform options and Capacitor will be used to integrate plugins to the app.

**Software Specification/Logical Specification**

* JavaScript as the main programming language
* AngularJS as a framework for JavaScript
* Ionic as framework for more mobile friendly UI development
* Capacitor as the integration module for plugins
* HTML as the markup language
* SASS as the scripting language used for styling

**Hardware Requirements**

Commutr requires a device that can handle its designated tasks and to properly deliver on its purpose for all users involved.

**Table 1. Hardware Requirements**

|  |  |
| --- | --- |
| **Item** | **Specs** |
| **Android** | Android Version 8.0 or higher |
| **RAM** | 1GB or higher |
| **Storage** | 1GB or higher |
| **Others** | Stable Internet Access, GPS Capability |

**Graphical user interface, text, application

Description automatically generatedApplication UI**

**Home Screen**

**Graphical user interface

Description automatically generated**

**Log In Screen**

This is where the user will login into their account

**Graphical user interface, application

Description automatically generated**

**Registration Screen**

This is where the user will create an account

**Map

Description automatically generated**

**Dashboard**

This is the main screen of the app where the user can interact with the map

**A screenshot of a phone

Description automatically generated with low confidence**

**History**

This is where the user will find their previously completed routes

**Graphical user interface, application

Description automatically generated**

**Directions**

This is where the user can organize their planned commute

A screenshot of a phone

Description automatically generated with medium confidence

**Profile**

This is where the user’s profile is located

Graphical user interface, application

Description automatically generated

**Side Menu**

This is where the user can navigate to other pages/features