

IM3080 Design and Innovation Project (AY20xx/xx Semester x)

Individual Report

Name: Zheng Xuguang

Group No: 1

Project Title: NyMe (Carpooling application)

Contributions to the Project (1 page)

Research and design on the appropriate algorithms for pricing calculation. Without any background knowledge in the details behind the carpooling industry, plenty of research must be done to determine the best method for our application to calculate the suitable price for each ride, which varies from distance and time required for the ride.

Assisted in designing the block diagram of the application. Block diagram shows the basic structure of the application and gives developers a clear guideline during the developing process.

Contributed to frontend implementation of various navigation, such as stack navigation, tab navigation and drawer navigation (not implemented in final version).

Contributed for designing the posters. IEM is a course with a mix of the art and technology. Designing the poster is a chance to implement the theories in visual communication into a pragmatic product.

Assisted in writing the group report. Chapter 5 of the report contains various diagrams crafted during the ideation stage. Annotations and explanations are required to make the diagrams easy to be understood.

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to at least two of the points below:

- (a) Engineering knowledge
- (b) Problem Analysis
- (c) Investigation
- (d) Design/development of Solutions
- (e) Modern Tool Usage
- (f) The Engineer and Society
- (g) Environment and Sustainability
- (h) Ethics
- (i) Individual and Team Work
- (j) Communication
- (k) Project Management and Finance
- (l) Lifelong Learning

Point 1: Environmental and Sustainability

The motive for this application is based on reducing the carbon emissions by using carpooling as a method to reduce the number of vehicles. During the processes in researching and developing the project, we have a deeper understanding about the various fact about carbon footprints, giving us stronger determination to be more concerned to saving the environment

Point 2: Design of solutions

Different from the past school project, this project is much larger in scale, not only in group size, but also in the amount of work required and the complicity of the application. The designing of the software becomes a challenging task. We have put in a lot of effort to get the idea of the applications, make prototypes about the navigations and make numerous changes until the design is finalized. For the design of the pricing strategy, it has been challenging to figure out from existing similar apps such as grab and gojek as the algorithms are not 100% transparent. We thus need various discussions to add in our own understanding about how the prices should be set.

Point 3: Modern tool usage

React Native is a new and popular platform for designing mobile applications. It is very different from the Android Studio which we used for our previous course in school, and thus we have to learn every from scratch. Other tools such as figma and canvas are also used, giving us more hands on experience in the popular tools for software engineering.