1. **Overview**

This document will serve as a summary of Lab 1. The summary includes the expected deliverables of the lab, as well as the detailed write-up of the respective deliverables.

1. **Deliverables**

The following defines the deliverables to be submitted to the Lab TA prior to Lab 2:

**2.1 Team formation and team leader assignment**

The team will choose an appropriate team name. The team will also appoint a member of the team as the team leader. The team must fill in the Team Registration Form as instructed by Lab TA.

**2.2** **Documentation of Functional Requirements (FR) and Non-Functional Requirements (NFR)**

The team will proceed to brainstorm a project idea which will serve as guidance for the team project. The team will also formulate the target audience of the project. The team will proceed to liaise with the stakeholdersto elicit FR and NFR. The team will then formulate a documentation which contains the FR and NFR.

The team will use [SRS\_Template.doc](https://ntulearn.ntu.edu.sg/bbcswebdav/pid-3068116-dt-content-rid-27044536_1/xid-27044536_1), under sections *4. System Features* and *5. Other Nonfunctional Requirements* as references for the template.

**2.3 Data Dictionary**

The team will create a data dictionary which includes important terms used throughout the project. The team will ensure that the data dictionary contains attributes of, and the relationship between each term.

**2.4 Use Case Models**

The team will identify certain use cases based off the FR. The team will proceed to depict the use cases using a Use Case Diagram.

The team shall make sure that each use case is accompanied by a use case description. The description will explain the interaction between an end-user and the system to carry out a functionality.

**2.5 User Interface (UI) Mock-ups**

The team will use relevant software tools, or hand-drawn methods (if applicable) produce a mock-up of the project’s preliminary user interface.

1. **Project Ideas**

The following are the proposed project ideas:

* 1. **Carpark availability application**

The web application will provide a heatmap of the carparks around Singapore. The heatmap will depict the number of available parking spots in each carpark.

**3.1.1 Feedbacks**

The complexity of the initial project idea is not sufficient to demonstrate the work of a 5-man project.

* 1. **Taxi availability application**

The web application will provide a heatmap of the live location of all taxi around Singapore.

**3.2.1 Feedbacks**

A web application for taxi hailing may not be appropriate. The team considered that a taxi hailing application should be a mobile application instead

* 1. **COVID-19 cases heatmap**

The web application will provide a heatmap of the live COVID-19 cases within Singapore.

* + 1. **Feedbacks**

The team agrees that the project idea is overused and lacks innovation.

* 1. **Dengue fever heatmap**

The web application will provide a heatmap of the live Dengue fever cases within Singapore.

* + 1. **Feedbacks**

The team agrees that the project idea is overused and lacks innovation.

* 1. **Music recommendation web application**

The web application will allow the user to compile a list of favourite music. The list shall then be used to recommend the user other music of which the system deem the user may be interested in.

* + 1. **Feedbacks**

A web application that allows a user to compile a list of music is redundant, as ordinary music players such as Spotify contains said features. The project idea can retain as a supplementary feature and should be built on top of an alternate project idea.

* 1. **AI Shopping Tracking System**

The web application will track the user’s search pattern. Based on the search pattern, the system will recommend the user a list of items that the system predicts the user may be interested in. The web application will also perform a cross-platform check to find the best deals of the items. The best deal includes the cheapest price and rebates, whichever is applicable.

The team has decided to select *3.6 AI Shopping Tracking System* as the project idea.

1. **Team Name**

The following are the proposed team names:

* 1. **FindR**

The name *FindR* mimics the pronunciation of *Finder* and provides a catchy feeling to the customers.

Since there are no alternate suggestions or proposals, the team has unanimously decided to select *4.1 FindR* as the team’s name.

1. **Target Audience**

Based on the selected project idea, the following characteristics shall define the target audience:

* 1. **Users who lack time to perform shopping physically.**

We are targeting workers who have packed schedules. We strongly believe the AI shopping recommendation system will help reduce time taken to shop for goods. The cross-platform comparison feature will also help to save the time needed to navigate through multiple stores or platforms to find the best deals.

* 1. **Users who live far away from physical convenience stores.**

We are targeting customers whose location are inconvenient for physical shopping. An online AI shopping recommendation system will aid the customers in their daily online shopping. The cross-platform comparison feature will further serve to aid the customers in finding the best deals of their everyday online shopping.

* 1. **Users who are home-bound or have mobility issues.**

We are targeting elderlies or disabled customers. The customers could already be engaged with online shopping activities. Thus, an online AI shopping recommendation system with cross-platform comparison feature will certainly aid the customers to make better and informed decisions.

* 1. **Tech-savvy users.**

We are targeting young adults who are mostly familiar with navigating the online world. Our online AI shopping recommendation system will aid the customers to make informed decisions in their purchases.

1. **Functional Requirements (FR)**

The following are the proposed preliminary FR:

**6.1** The user must be able to register for an account with our system.

**6.2** When the user searches for an item, our system must be able to recommend at least three other items to the user.

**6.3** The system must be able to retrieve the prices of the searched items from at least one e-commerce platform.

**6.4** The system must be able to retrieve at least one relevant rebate of the searched item.

**6.5** The system must be able to provide a set of parameters such as price, number of purchases, form of rebate, delivery fee, payment methods and rating which can be tweaked by the user to sort the result.

**6.6** The system must be able to provide the best deal for the user according to the parameters set by the user.

**6.7** The user must be able to compile a wish list of items which must be sold on at least one e-commerce platform.

1. **Non-Functional Requirements (NFR)**

The following are the proposed preliminary NFR:

**7.1** The system must be able to successfully register for an account for the user after the user fills in all the details required within 15 seconds.

**7.2** The system must be able to retrieve and display the search result of the user within 30 seconds.

**7.3** The system must be able to support searches from at least three e-commerce platform.

**7.4** The system must not be down for more than three hours in one year.

**7.5** The system must encrypt the user’s credential information using AES algorithm.

**7.6** The system must be able to display help information in the local language of the user based on the user’s location.

1. **Data Dictionary**

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| --- | --- |
| Voucher | An online code that entitles the holder to a discount, or that may be exchanged for goods or services. |
| Cashback | A form of incentive offered to buyers of certain products whereby they receive a cash refund after making their purchase. |
| Rebate | A form of discount applied to a product sold in the form of cashback or voucher. |
| Wish list | A list of desired items by the user which are available on an e-commerce platform. |
| E-commerce platform | An online platform where sellers advertise and sell their goods to consumers. |
| Price | The amount of money expected, required, or given in payment for the item sold. |
| Delivery fee | The cost of transporting or delivering goods. |
| Payment methods | A method for customers to pay for a product or a service. |