### Requirement Model

##### **Target Audience**

The target audience of this project

##### **Problem Statements**

* Visitors/Students are unsure of the way to a specific location within the campus

##### **Client Requirements**

A **Front-End** progressive web application which should have functions such as

* User login (Google, Facebook, Directie User)
* View floor maps which is able to be zoomed in and out
* Detect user’s location
* Routing of shortest path to destination
* Speech navigation
* Locate nearby facilities
* View facility information
* Write comments on the facility
* View user profile
* Edit user profile

A **Back-End** progressive web application which should have functions such as

* Manage Beacons (Creating, Updating & Deleting of beacon)
* Manage Beacon Relations (Creating, Updating & Deleting of beacon relations)
* Manage Facilities (Creating, Updating & Deleting of facility)xx
* Manage Units (Creating, Updating & Deleting of unit)
* Manage Floor Maps (Creating, Updating & Deleting of floor map)
* Manage Comments (Creating, Updating & Deleting of comment)
* Manager Users (Creating, Updating & Deleting of user)

##### **User Story**

A user, be it a visitor, staff or student of SP wants to navigate to a destination within SP. The user accesses the web application on their mobile phone through a URL or by scanning the QR code. The web application will be able to know the user’s location within SP where all rooms/units will have a beacon planted. The nearest beacon to the user will be used as an indication of the user’s current location and it will be indicated to the user on the floor map.

For example, when the user is at T2139 and opens up the web application, the floor plan of level 3 of DMIT school will be shown since T2139 is on level 3 and a blinking indicator on the unit 2139 will be shown to the user as well to indicate the user’s current location.

Once the user chooses a destination, the shortest route to it from the user’s current location will be shown and there will be an option to activate voice navigation as well. The user can also tap on a button to see the directions needed in a step by step format to reach the destination.

##### **Critical Success Factor**

* The ease of access of the web application to increase usage of the application
* The ease of use and simplicity of the web application so that users will be able to navigate around the campus easily by themselves