# 2.2 Functional Requirements Specification

## 2.2.1 Requirements:

Requirement ID: REQ1

Title: Navigation  
Description: Provide navigation functionality

Requirement ID: REQ2

Title: Provide information  
Description: Provide information regarding points of interest, sporting and cultural activities

Requirement ID: REQ3

Title: Provide different routes  
Description: Provide different routes based on the users needs

Requirement ID: REQ4

Title: Weekly goals

Description: Provide weekly goals based on the amount of steps the user takes

Requirement ID: REQ5

Title: Login functionality  
Description: The system should allow users and administrators login capabilities.

Requirement ID: REQ6

Title: Personalisation  
Description: Users should be allowed save personalised information.

Requirement ID: REQ7

Title: Maintenance  
Description: The system should allow administrators to update it.

## 2.2.2 Use Cases:

### Use cases for REQ1:

1) Use Case Description: Navigate user to their required location

Use case ID: UC1

Precondition: User is running the NavUP application and enters navigation module.

Postcondition: Client device recieves navigational information to destination

### Actor-System Interaction Model:

**UC1: Navigate user to their required location**

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. The user clicks the Navigation button on the main menu. | 1. The system displays the Navigation page to the user. |
| 1. The user clicks the Get Directions button on the Navigation page. | 1. The system prompts user for their required destination. |
| 1. User enters destination. | 1. The system displays the route and directions to destination. |

2) Use Case Description: Obtain Current Location

Use case ID: UC2

Precondition: User is running the NavUP application and requires their location.

Postcondition: Client device recieves information regarding their location.

### Actor-System Interaction Model:

**UC2: Obtain Current Location**

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. User clicks the Navigation button on the main menu. | 1. The system displays the Navigation page to the user. |
| 1. The user clicks the Get Location button on the Navigation page. | 1. The system displays the users location. |

3) Use Case Description: Search for location

Use case ID: UC3

Precondition: User is running the NavUP application and searches for a given location.

Postcondition: Information regarding the searched location is provided.

### Actor-System Interaction Model:

**UC3:** Search for location

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. User clicks the Navigation button on the main menu. | 1. The system displays the Navigation page to the user. |
| 1. User clicks the Search Location button on the Navigation page. | 1. The system prompts the user for the location they wish to search. |
| 1. The user enters their desired location. | 1. The system provides information regarding the searched location. |

4) Use Case Description: Obtain the estimated time of arrival

Use case ID: UC4

Precondition: User is running the NavUP application and currently traveling to a destination.

Postcondition: Client device recieves and displays the estimated time of arrival.

### Actor-System Interaction Model:

**UC4:** Obtain the estimated time of arrival

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. The User clicks the Navigation button on the main menu. | 1. The system displays the Navigation page to the user. |
| 1. The user clicks the Estimated Time of Arrival button in the Navigation page. | 1. The system displays the estimated time of arrival to the user. |

### Use cases for REQ2:

1) Use Case Description: Display metadata with information regarding venues and points of interest

Use case ID: UC5

Precondition: The user is running the application and is currently en route to a destination.

Postcondition: Client device displays popup of information regarding the point/points of interest.

### Actor-System Interaction Model:

**UC5:** Display metadata with information regarding venues and points of interest

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. User walks past point of interest or venue. | 1. System displays information regarding the point of interest or venue to the user. |

2) Use Case Description: Provide information regarding sporting and cultural activities

Use case ID: UC6

Precondition: The user is running the application and requests to view activities

Postcondition: Client device recieves and displays information regarding the requested activities.

### Actor-System Interaction Model:

**UC6:** Provide information regarding sporting and cultural activities

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. User clicks the Activities button on the main menu. | 1. The system displays information regarding sporting and cultural events that relate to the user |

### Use cases for REQ3:

1) Use Case Description: Provide special routes for users with disabilities

Use case ID: UC7

Precondition: The user is running the application and requires a special route as they have a disability.

Postcondition: Client device recieves and displays information regarding the optimal navigational route for the special needs user.

### Actor-System Interaction Model:

**UC7:** Provide special routes for users with disabilities

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. The User clicks the Routes   button on the main menu. | 1. The system prompts user for destination. |
| 1. User enters destination. | 1. The system prompts the user for the type of route they require |
| 1. The user selects the Special Needs Route | 1. The system displays the route and directions to destination. |

2) Use Case Description: Provide the fastest route

Use case ID: UC8

Precondition: The user running the application and requires the fastest route from one location to the next

Postcondition: Client device recieves and displays information regarding the optimal navigational route.

### Actor-System Interaction Model:

UC8**:** Provide the fastest route

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the main window. |
| 1. The user clicks the Routes   button on the main menu. | The system prompts user for destination. |
| 1. User enters destination. | 1. The system prompts the user for the type of route they require |
| 1. The user selects the fastest path route | 1. The system displays the route and directions to destination. |

### Use cases for REQ4:

1) Use Case Description: Collecting and viewing rewards

Use case ID: UC9

Precondition: The user is logged in and completes an activity

Postcondition: Client recieves a notification concerning the completion of an activity and is directed to the third party rewards system.

### Actor-System Interaction Model:

**UC9:** Collecting and viewing rewards

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the the users page. |
| 1. The user completes an activity. | 1. The system notifies the user concerning the completion of an activity and directs user to third party rewards system. |

### Use cases for REQ6:

1) Use Case Description: Allow users the ability to save a location

Use case ID: UC10

Precondition: The user is logged in and wishes to save their location

Postcondition: Client device displays storage of location by showing an icon over the users current position

### Actor-System Interaction Model:

**UC10:** Allow users the ability to save a location

|  |  |
| --- | --- |
| **Actor: User** | **System: NavUP** |
|  | 1. The NavUP displays the the users page. |
| 1. The user clicks the Save Location button | 1. The system prompts the user for a description for the saved location. |
| 1. The user enters a description for the location and presses the Submit button. | 1. The system saves the users current location and displays an icon over the users position. |

### Use cases for REQ7:

1) Use Case Description: Add or remove venue

Use case ID: UC11

Precondition: The aministrator is logged in and wishes to add or remove a venue.

Postcondition: The system is updated with the added venue.

### Actor-System Interaction Model:

**UC11:** Add or remove venue

|  |  |
| --- | --- |
| **Actor: Administrator** | **System: NavUP** |
|  | 1. The NavUP displays the administrators page. |
| 1. The administrator clicks on the Add/Remove Venue button. | 1. The system prompts the administrator for the location and name of the venue. |
| 1. The administrator enters the required information and presses the Submit button. | 1. The system adds the given venue. |

2) Use Case Description: Add or remove event

Use case ID: UC12

Precondition: The administrator is logged in as an and wishes to add or remove an event to the application.

Postcondition: The system is updated in terms of the the event.

### Actor-System Interaction Model:

**UC12:** Add or remove event

|  |  |
| --- | --- |
| **Actor: Administrator** | **System: NavUP** |
|  | 1. The NavUP displays the administrators page. |
| 1. The administrator clicks on the Add/Remove Event button. | 1. The system prompts the administrator for the location and name of the event. |
| 1. The administrator enters the required information and presses the Submit button. | 1. The system adds the given event. |

3) Use Case Description: Update information

Use case ID: UC13

Precondition: The administrator is logged in and wishes to update the information of a venue or landmark.

Postcondition: The system is updated with the new information regarding the venue or landmark.

### Actor-System Interaction Model:

**UC13:** Update information

|  |  |
| --- | --- |
| **Actor: Administrator** | **System: NavUP** |
|  | 1. The NavUP displays the administrators page. |
| 1. The administrator clicks on the Update Information button. | 1. The system prompts the administrator for the name or the venue or landmark for which the administrator wants to update the information. |
| 1. The administrator enters the required information and presses the Submit button. | 1. The system prompts the administrator to enter the new information for the required venue or lanmark |
| 1. The administrator enters the required information and presses the Submit button. | 1. The system updates the application with the new information. |

4) Use Case Description: Create or remove goals

Use case ID: UC14

Precondition: The administrator is logged in and wishes to create or remove goals.

Postcondition: The system is updated with the new information regarding the goals.

### Actor-System Interaction Model:

**UC13:** Create or remove goals

|  |  |
| --- | --- |
| **Actor: Administrator** | **System: NavUP** |
|  | 1. The NavUP displays the administrators page. |
| 1. The administrator clicks on the Add/Remove Goals button. | 1. The system prompts the administrator for the name, requirements and reward for the goal they wish to add or remove. |
| 1. The administrator enters the required information and presses the Submit button. | 1. The system updates the application with the new information. |