**Introduction**

The software requirements specification (SRS) should aptly outline the functional requirements of the system to ensure that a third party could develop the functionality to a required degree without further input. Thus, the functional requirements should be precise and extensive to eliminate deviation from the system’s goals. The intended audience of the application includes students of the University of Pretoria, the staff and simple visitors. The NavUP system will help users to navigate campuses by allowing users to choose destinations, locate their current location, set up the appropriate path by taking into account human congestion and visually representing said path for the user to follow. NavUP will also have a notifications system that will tell the user of events he/she might be interested in. An achievements system will also be in place to award users for walking certain distances or visiting certain locations. NavUP can be used by new students who do not know their way around campuses yet, or simply by staff members who want to avoid clustered pathways. It is a tool that will help optimise campus navigation and reduce travel time from one destination to the other. NavUP also hopes to incorporate locations with access for the disabled into its maps for those that are in need of such features. The SRS will help give a detailed representation of the functional requirements and how they will work together to make up NavUP.

2. Location Management Subsystem

2.1 Save Location

1. Description: The NavUP system must be able to save a location that the user specifies.
2. Pre-conditions
   1. User must be logged in if they want to save locations.
3. Post-Conditions
   1. A Location will be saved to the user’s profile.

2.2 View Saved Location

1. Description: The NavUP system must allow users to view locations that the user has saved to their profile.
2. Pre-conditions
   1. The user must be logged in.
3. Post-conditions
   1. None.

2.3 View History

1. Description: The NavUP system should be able to allow users to view their history of locations.
2. Pre-conditions
   1. The user must be logged in.
3. Post-conditions
   1. None.

2.4 Share Location

1. Description: The NavUP system should provide the users with a means to share their current location so as to allow other users to know where they are.
2. Pre-conditions
   1. The user must be logged in.
3. Post-conditions
   1. User location is broadcasted for other users to see.

2.5 View Most Visited Locations

1. Description: The NavUP system should have a favourite location section which can then be accessed by the user to view their most visited areas.
2. Pre-conditions
   1. The user must be logged in.
3. Post-conditions
   1. None.

3. User Account Management Subsystem

3.1 Create Profile

1. Description: The NavUP system must be able to provide the user with a means to create their profiles which will then allow them to login to the NavUP application.
2. Pre-conditions
   1. None.
3. Post-conditions
   1. A new user account is created.

3.2 Login function

1. Description: The NavUP system must allow users with a profile to be able to login to said profile and use the NavUP system to the fullest.
2. Pre-conditions
   1. The user must have a profile.
3. Post-conditions
   1. User is logged in.

3.3 Manage Profile

1. Description: The NavUP system must allow users to manage their own profiles as well as allow administrators to keep track of user profiles.
2. Pre-conditions
   1. The user must be logged in (for user).
   2. None (for admin).
3. Post-conditions
   1. None or user profile is altered.

3.4 Create Timetable

1. Description: The NavUP system should be able to allow users to create their personal timetables.
2. Pre-conditions
   1. The user must be logged in.
3. Post-conditions
   1. A Timetable is created on the user’s profile.

3.5 Manage Timetables

1. Description: The NavUP system must allow users to edit or manage their existing timetables so as to fit their needs. It must also allow administrators to keep track of the user’s timetable.
2. Pre-conditions
   1. The user must be logged in.
   2. There must exist at least one timetable on the users profile
3. Post-conditions
   1. A timetable is edited on the users profile.