Test Plan

The testing phase of our project is vitally important in the production of a high-quality product as it enables us to detect and resolve various faults in a product and it also means we can deliver a product to our client knowing there is a minimal number of faults in the system. However, the testing phase will not guarantee that our product will be fully bug-free, it will only indicate most faults that exist in our product. We intend to maximise the test code coverage of our app program code during testing to ensure that the majority of faults within our app can be detected and fixed.

The team members responsible for testing (Titas Alvikas, Will Comber and Edward Phillips) will be required to keep the testing stage on schedule and make sure that testing is carried out to a high standard.

The testing stage in our project will be carried out from the time that we create our first prototype system until we submit our final system. This is to help diagnose any faults in our product during the implementation phase and any large errors will be detected at an early stage of the project lifecycle.

To complete our testing of the system we will require the use of a PC with Windows 10 OS, Android Studio version 3.3.1 and appropriate Android devices running Android 5.0. We plan to test on different screen sizes of phones to make sure the app looks and behaves similarly on a large variety of mobile phones.

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| Test Number | Description | Expected Result | Actual Result | Improvements made |
| 1 | Download the app | App should be downloadable to an android device as an APK from the project website |  |  |
| 2 | Run the app | App should start, display a loading screen and then the home screen |  |  |
| 3 | Open side menu | Side menu should display by tapping on the hamburger icon or swiping from the left of the screen |  |  |
| 4 | Test dark mode functionality | The background and text colours should change to a darker background and appropriate text colour |  |  |
| 5.1 | Increase and decrease app text size from accessibility settings | Text size in the app should be scaled appropriately |  |  |
| 5.2 | Get a user to increase and decrease app text size from accessibility settings | Text size in the app should be scaled appropriately |  |  |
| 6 | View application information and about the developers | Application information and about the developers information should display |  |  |
| 7.1 | Load get directions screen for all tutor rooms (using stairs and elevator) | Text of directions to rooms should display |  |  |
| 7.2 | Load get directions screen for all study spaces (using stairs and elevator) | Text of directions to study spaces should display |  |  |
| 7.3 | Load get directions screen for lecture theatre and flat floor teaching rooms (using stairs and elevator) | Text of directions to rooms should display |  |  |
| 8.1 | Get directions for all tutor rooms using extended search for the rooms (select starting point from a drop-down menu) | Text of directions to rooms should display on the same screen |  |  |
| 8.2 | Get directions for all study spaces using extended search (select starting point from a drop-down menu) | Text of directions to study spaces should display on the same screen |  |  |
| 8.3 | Get directions for lecture theatre and flat floor teaching rooms using extended search (select starting point from a drop-down menu) | Text of directions to rooms should display on the same screen |  |  |
| 9 | Search for a tutor room using search button on the top right of a screen | Search results should display on screen in a list |  |  |
| 10 | Search for a tutor room from the levels screens | Search results should display on screen in a list |  |  |
| 11 | Search for a room using search button on the top right of a screen | Search results should display on screen in a list |  |  |
| 12 | Search for a room from the find a room screen | Search results should display on screen in a list |  |  |
| 13 | View enlarged floor maps on different floors | Floor plan with a darkened background of the screen should display |  |  |
| 14 | Load building information screen | Screen with building information should display |  |  |
| 15 | Run the app in the background | App should run in the background and be accessible after running in the background |  |  |
| 16 | Get a user to try and use all features of the app | The app should be usable for existing university students and prospective students based on our user requirements |  |  |