## **GUI Report**

Since the game is made with the libgdx framework, we will be creating the GUI by using the advantage of the libgdx components with custom styling.

When first entering the game the player is presented with the home screen, this will allow them to choose how to play the game i.e. number of human or AI players. Then they will be able to enter the actual game with one button and exit with another, as necessitated by requirement 4.1.1.

When in phase 1, 3, and 4 you will see the game board GUI representing the University of York, fulfilling requirement 1.2.1. The game board will be made with "Isometric Staggered Tiled Maps" to provide a 3D looking game. The Player will be able to move around the map by dragging it, fulfilling requirement 1.1.1. At the top of the screen the player's current resources will be displayed so the player can stay informed about their inventory. The current player and phase will also be displayed so the player knows which section the game is in. There will be a "next phase" button to allow the player to end the phase and move on manually.

Depending on the phase you are clicking on a tile will bring up a different widget. In phase 1 a button will be brought up, where you click, to allow you to buy the land plot, facilitating Requirement 2.1.1. This is simple and lets the player easily select any land plot to purchase. In phase 3 a label, a drop down box and 2 buttons are generated (confirm, cancel). Requirement 6.1.4 states that the player must be able to install roboticons on land plots they own, therefore the player can select which type of roboticon to install and then confirm or cancel the purchase. This implementation allows the player to look through their options and not have to worry about clicking anything else on the screen as nothing will happen until they press confirm or cancel.

The 2 market screens, roboticon and resources, are accessed in phases 2 and 5 respectively. The roboticon market screen allows you to select the number of roboticons with increment and decrement buttons, makes it easy for the player to chose a number to buy and allows us to to protect the input, which would be harder if we allowed them to type in an amount. You can then view your roboticons on the right hand side of the screen and scroll through them, this allows a player to see which roboticons have been modified and how many they have. You can modify the displayed roboticon by selecting a customisation from the drop down and confirming it. The drop down makes it easy to see all options for customisations available and fulfills requirement 6.1.4

The resource market screen is similar, it allows the player to increment the amount of ore and energy to be bought on the left hand side and to be sold on the right. This makes it easy for the user to choose how much to sell and allows us to make sure their input is valid and fulfills requirement 8.1.3.