

Top Right Corner

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.

When in phase 1, 3, and 4 you will see the game board that contains 3 university landmarks: the sports centre, heslington hall and central hall, fulfilling requirement 3.2. The game board contains well over 16 plots (fulfilling requirement 1.3). The game board is 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 are displayed so the player can stay informed about their inventory, this relates to requirement 1.5 as the game must maintain an inventory for each player and requirements 1.12 - 1.20, 1.22 and 1.24 as all these requirements require the use of the player's inventory and by letting players see the contents of their inventory we've made it easier for them to make informed decisions and improved playability as a result. The current player and phase will also be displayed so the player knows which section the game is in. There is a "next phase" button to allow the player to end the phase and move on manually, this lines up with requirements 1.21 as players must be able to state that they've finished with using the market in order to move and stops players from having to wait until the timer has run out to move on from the roboticon purchasing, customising and placing stages (which would be frustrating and reduce the quality of the overall experience).

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/1.png>

Depending on the phase you are in 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 1.11. Once a plot has been bought by a player it will have a coloured outline around it making it clear that it belongs to them, this makes it easy for players to easily see if a given plot is owned by themselves or another player or not yet owned by anyone increasing the ease of use of the system and fulfilling requirement 4.1. This is simple and lets the player easily select any land plot to purchase. In phase 3 a drop down menu that allows players to select what type of roboticon they wish to place on a plot is opened. This is in line with requirement 1.15 that states that the player must be able to install roboticons on land plots they own. Only allowing players to perform to access menus and buttons that correspond to actions relevant to the given phase of the game improves playability as players will not be left confused as to why certain buttons/menus don't appear to do anything and it will be easier to tell what action to take at any point (which is in line with requirement 2.2).

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/2.png>

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/3.png>

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/4.png>

The 2 market screens, roboticon and resources, are only accessible in phases 2 and 5 respectively, which lines up with requirements 1.12 and 1.17 that make it clear that these aspects of the market should only be accessible at these times. Whenever a numerical input is needed it is given using increment and decrement buttons, this makes it easy for the player to choose a number to buy and allows us to protect the input, which would be harder if we allowed them to type in an amount. Using this method also allows us to, for example, stop players from trying to sell more of a given resource than they actually have in their possession (as players can't make the number displayed larger than this value) helping to improve playability by making it clear to them that these kinds of

actions are not allowed.

The roboticon market screen contains a drop down menu to select roboticon customisations to purchase and a button to make the market produce another roboticon fulfilling requirements 1.15 and 1.27.

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/5.png>

The resource market screen contains widgets that facilitate player to player sales (fulfilling the alternative requirement for 1.18), transactions involving a player and the market (fulfilling requirements 1.19 and 1.20) and gambling (requirement 1.24). The resource market is designed to be accessed by both players simultaneously and is displayed once per round after both players have had their turn (as per requirements 1.17).

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/6.png>

Pop up messages are deployed whenever a player tries to perform an incorrect action making it clear to them that they can't perform a given action. A message at the top of the screen that gives the user a hint as to what they should be doing in any given phase. Both of these elements help to increase the ease of use of the system (requirement 2.1). Similarly pop up messages are also deployed when a random events occurs so that the user knows what's happened (requirement 1.25).

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/7.png>

Once all plots have been acquired and both players have finished using the market the game over screen is opened that displays both players scores and states who has won. Fulfilling requirements 1.22 and 1.23.

<https://sepr-topright.github.io/SEPR/documentation/assessment3/images/8.png>

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.