System Testing

# Player count dialogue box

For this test I changed the value of the “Player Count:” combo box and clicked “OK”. The functionality of all the buttons and the consequential actions of the player count being correct all work as they should without errors. For video evidence see “Player and token dialog box”.

# Token selection dialogue box

The two combo boxes are interactable as they should be, and the “OK” button works as it should too by brining the players to the game screen. The only issue is that it allows more than one player to use any one token. In the test, I tried Player 1 and Player 2 with token “Cat”. This either should not be an option for Player 2, presuming they chose after Player 1, or an error should be thrown to ask the players to choose different tokens. For video evidence see “Player and token dialogue box”.

# Players screen

The right-hand side of the screen shows a box labelled “Players:”. This is placed appropriately and shows the number of players in the game with each player individually labelled. The currently active player has their label highlighted in blue with the other players labels having a white background. This all works in conjunction with the “Next Turn” button and works as it should. . For video evidence see “roll dice next turn and players screen”.

# Roll dice/Next Turn button

The roll dice button correctly moves the active player, shown in the “Players” side of the screen, and their sprite to the square that the Game Master’s dice functionality has decided the player has landed on. Pressing the “Roll dice” button causes the window to hang for approximately 8 seconds every time it is pressed, which can cause the window to not respond if a user clicks on the window again whilst it is hanging. If a user repeatedly clicks the button whilst the window is hanging, it will cause these actions to still take place but with a severe lag.

The “Next Turn” button is the same button as the “Roll Dice” but the label with text changes depending on which action is appropriate. Clicking the button in “Next Turn” mode does not usually cause any lag though it has occurred. It correctly changes the display of the players screen mentioned above. For video evidence see “roll dice next turn and players screen”.

# Money/purchasing property/selling

In the video evidence you can see that the prompt to purchase a property successfully appears when a player land on a free tile after the first revolution of the board. The money amount starts at the correct amount and increases by £200 when a player passes GO as it is supposed to and also is deducted when a player purchases a property like it should do. The properties owned pop up box is also shown to work and update when players purchase a property. This is the same for the Tile Information screen that appears when a tile is clicked on. The function to sell owned property works as intended with the previous owner gaining money and losing the options to mortgage or sell the property, and the properties owned popup now reflecting this change.

# Mortgaging

If the player owns a tile they can choose the options for mortgage or sell the tile or sell a house. On the first test, this did not work properly as the player did not gain any money from the action. After a bug fix, this was shown to work in the video “mortgage test working”.

# Card draws

Opportunity knocks worked as shown in the associated video. It increased the players money by 150 as the card text said it would. I tested pot luck and there were no java errors but the intended effect of negating money from the player did not happen but instead the reverse did, with the player gaining money when they should be losing it. On a second test of the same card, the card worked as intended with no issues. Other tests have shown certain cards to work, such as the birthday card which successfully takes money from other players and gives it to the current player.

# Jail

The jail functionality works with the player that is sent to jail, either through card draw or from landing on “Go To Jail”, as they cannot take their turn and instead have to wait three turns to move again.

# Auctioning

On an attempt to auction a property with 3 players, an error was thrown and the feature did not work, however when I tried it with two people it worked exactly as it should (shown in Auction test working video).

# Rent

The video of rent testing shows that rent sometimes applies to the player that owns the property, which should not happen and also results in the player paying double the amount of the rent for their own property. The same video also shows that if a player lands on another players property, it takes money away from BOTH players rather than taking it from the payer owing rent and giving it to the owner.

# Losing/winning the game

Players are supposed to lose the game when their money goes below 0 and they are bankrupt, this does not properly work as the game stops working when a player loses and a null pointer exception is thrown. This bug has since been fixed and now allows for players to lose when their money goes below 0, if there are only two players this results in the remaining player winning.

# Abridged version

On the start screen users are given the option to enter an abridged version of the game and enter how many rounds they would like to play. This runs as expected with the game lasting however many turns and leads to the game ending earlier.

# AI players

The AI feature of the game has been fixed so it now works as shown in the AI working video which shows a full game of two AI players against each other until one loses, which crashes the game as mentioned above.