**Project Sprint #1**

The SOS game is described in CS449HomeworkOverview.docx. You should read the description very carefully.

In this assignment, you aim to specify the requirements (i.e., user stories and acceptance criteria) of the target software that allows a human player to play a simple or general SOS game against a human opponent. These requirements will be fully implemented by the end of sprint 3. The minimum features include **choosing the board size,** **choosing the game mode (simple or general)**, **starting a new game**, **making a move (in a simple or general game)**, **determining if a simple or general game is over**. The following is a sample GUI layout.

|  |  |  |
| --- | --- | --- |
| SOS Icon  Description automatically generated Simple game Icon  Description automatically generated General game Board size  8 | | |
| Blue player  Icon  Description automatically generated S  Icon  Description automatically generated O | Chart, line chart  Description automatically generated | Red player  Icon  Description automatically generated S  Icon  Description automatically generated O |
|  | Current turn: blue (or red) | New Game |

Figure 1. Sample GUI layout of the first working program by the end of Sprint 3

Use the following tables to document your user stories and acceptance criteria.

1. **User Stories (3 points)**

* **User Story Template**: As a <role>, I want <goal> [so that <benefit>]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **User Story Name** | **User Story Description** | **Priority** | **Estimated effort (hours)** |
| 1 | Choose a board size | As a player, I want to be able to choose the board size, so that the game will be created based on my preference/challenge | 1 | 1 |
| 2 | Choose the game mode of a chosen board | As a player, I want to be able to choose the game mode, so I want to increase my enjoyment/interaction with the game. | 2 | 2 |
| 3 | Start a new game of the chosen board size and game mode | As a player, I want to be able to start playing a game with my chosen board size and game, so that I can create an environment in the game where I am most comfortable to play. | 3 | 5 |
| 4 | Make a move in a simple game | As a player, I want to be able to make a move in the simple game, to get closer to my goal of winning the simple game. | 4 | 2 |
| 5 | A simple game is over | As a player, I want to be able to know when the simple game is over to decide who the winner and who the loser is. Additionally, as the player I also need to know if the game was a draw | 6 | 2 |
| 6 | Make a move in a general game | As a player, I want to be able to be able to make a move in the general game to get closer to the goal of winning the general game. | 5 | 3 |
| 7 | A general game is over | As a player, I want to be able to know when the general game is over to decide who the winner and who the loser is. Additionally, as the player I need to see if the game was a draw. | 7 | 3 |

1. **Acceptance Criteria (AC) (12 points): Add/delete rows as needed.**

|  |  |  |  |
| --- | --- | --- | --- |
| **User Story ID and Name** | **AC**  **ID** | **Description of Acceptance Criterion** | **Status (completed, toDo, inPprogress)** |
| 1. Choose a board size | 1.1 | AC 1.1 Player inputs a valid board size.  **Given** an input box for the player which takes in board size options.  **When** the player selects a valid board size n>2  **Then** the selected board size will first be stored in the bsize variable and then it will display a board of that size once the game starts | inProgress |
| 1.2 | AC 1.2 Player inputs an invalid board size  **Given** an input box for the player which takes in board size options.  **When** the player inputs a invalid board size, n<=2, or a string  **Then** the input will be stored and when the player goes to start the game, it will give them an error stating something like “Invalid board size, try again ” | toDo |
| 1.3 | AC 1.2 Player does not input anything in the board size section  **Given** an input box for the player which takes in board size options.  **When** the player DOES NOT input anything in the box where it asks input board size  **Then** the input will be stored as nothing/blank or null and when the player goes to start the game, it will give them an error stating something like “No board size given, try again” | toDo |
| 2. Choose the game mode of a chosen board | 2.1 | AC 2.1 Player chooses simple game  **Given** radio button to choose between the modes for the game.  **When**  the player is choosing the board size they will also choose the game mode. And select simple game.  **Then** the after hitting start the game will load the board with the simple game logic working | toDo |
| 2.2 | AC 2.3 Player forgets to choose a game mode  **Given** radio button to choose between the modes for the game.  **When**  the player is choosing the board size, they will also choose the game mode. And they forget to fit either radio button  **Then** the default will be starting with the simple game | toDo4 |
| 2.3 | AC 2.3 Player chooses general game  **Given** radio button to choose between the modes for the game.  **When the** player is choosing the board size, they will also choose the game mode. And select general game.  **Then** the after hitting start the game will load the board with the general game logic working | toDo |
| 3. Start a new game of the chosen board size and game mode | 3.1 | AC 3.1 The player has chosen the correct board size and their desired game mode.  **Given** the gui filled with the player’s desired values  **When** the player hits new game or start game  **Then** the board of the player’s size is created, with that the game logic for the player’s chosen game mode is placed into effect. | toDo |
| 3.2 | AC 3.2 Player hits the new game or start game button after finishing a game  **Given** that a game was player recently on the board  **When** the player hits new game  **Then** the board, game mode, game logic setting, everything should be erased | toDo |
| 4. Make a move in a simple game | 4.1 | AC 4.1 The player makes a move, in a valid section of the board  **Given** the game board, ready for the player to make a move  **When** the player makes a move in a valid section of the board  **Then** that player’s move is shown on the board, the next player gets their turn and it checks weather the game logic conditions are met, (SOS formed / game won) | toDo |
| 4.2 | AC 4.2 The player makes a move, to an invalid section of the board  **Given** the game board, with all the previous markers or if its a new game an empty board  **When** the player makes a move to a section that is covered by their own marker or their opponents marker or they are trying to make a move outside of the game board edges  **Then** a message will be shown to the player making the invalid move that they have to make a valid move and make sure that the move they are trying to make is not doable | toDo |
| 5. A simple game is over | 5.1 | AC 5.1 A player wins  **Given** the board that has the SO on it  **When** the player with the SO puts the last S on the board  **Then** that player will win, it will show the player (insert color) has won, prevent additional moves | toDo |
| 5.2 | AC 5.2 The other player losses  **Given** the board that has the SO on it  **When** the other player places the last S on the board  **Then** that player will win and it will show a second message after the winning message that player (insert color) has lost the game, prevent additional moves | toDo |
| 5.3 | AC 5.3 The game has ended in either a win, loss or tie, and message has been displayed, player wants to start a new game  **Given** a win loss or ties in the game  **When** the player wants to start a new game  **Then** the new game button is pressed and the whole board is reset | toDo |
| 5.4 | AC 5.4 The game has ended in either a win, loss or tie, and message has been displayed, player does not wants to start a new game  **Given** a win loss or ties in the game  **When** the player wants to does not start a new game  **Then** the new game exit button is pressed and the game board does not exist | toDo |
| 5.5 | AC 5.5 A game is a tie  **Given** both player have evenly distributed their s and o’s and there is only one spot left on the board, where it won’t matter what is put  **When** a player puts an s or a o in that one spot  **Then** the game will be concluded as a tie and a message will be displayed stating this , prevent additional moves | toDo |
| 6. Make a move in a general game | 6.1 | AC 6.1 The player makes a move, in a valid section of the board  **Given** the game board, ready for the player to make a move  **When** the player makes a move in a valid section of the board  **Then** that player’s move is shown on the board, the next player gets their turn and it checks weather the game logic conditions are met, (SOS formed and counter is updated on who is holding the most SOS sequence) | toDo |
| 6.2 | AC 6.2 The player makes a move, to an invalid section of the board  **Given** the game board, with all the previous markers or if its a new game an empty board  **When** the player makes a move to a section that is covered by their own marker or their opponent's marker or they are trying to make a move outside of the game board edges  **Then** a message will be shown to the player making the invalid move that they have to make a valid move and make sure that the move they are trying to make is not doable | toDo |
| 7. A general game is over | 7.1 | AC 7.1 A player wins  **Given** the board keeping track of all of the SOS’s done by each player in the game  **When** the last spot is filled and a player’s sos’s are higher in quantity that the other player  **Then** that player will win, it will show the player (insert color) has won, prevent additional moves | toDo |
| 7.2 | AC 7.2 The other player losses  **Given** the other player’s sos’s are at a lower quantity than the winning player  **When** the last spot is filled and the other player’s sos’s are tallied and they are lower  **Then** it will show a second message after the winning message that player (insert color) has lost the game, prevent additional moves | toDo |
| 7.3 | AC 7.3 The game has ended in either a win, loss or tie, and message has been displayed, player wants to start a new game  **Given** a win loss or ties in the game  **When** the player wants to start a new game  **Then** the new game button is pressed and the whole board is reset | toDo |
|  | 7.4 | AC 7.4 The game has ended in either a win, loss or tie, and message has been displayed, player does not wants to start a new game  **Given** a win loss or ties in the game  **When** the player wants to does not start a new game  **Then** the new game exit button is pressed and the game board does not exist | toDo |
|  | 7.5 | AC 7.5 A game is a tie  **Given** both player have the same number of sos on the board d  **When** the last spot if filled and both player ahve the smae number of sos on the board  **Then** the game will be concluded as a tie and a message will be displayed stating this , prevent additional moves | toDo |