**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 Game Mode | As a User, I want to be able to select the game mode, so that I can play the game of my choice that I want too. | 1 | Less than an hour |
| 2 | Choose the Board Size | As a User, I want to be able to the select the size of the game board, so that I can play a bigger/longer game or smaller/shorter game based on the board size. | 2 | One hour |
| 3 | Setup New Game | As a User, I want to be able to setup and start a new game whenever, so that I can restart a new game and play from scratch whenever I need to such as if the game is over. | 3 | One to two hours |
| 4 | Make a Move Simple Game | As a User, I want to be able to place an S or an O on an unoccupied square, so that I can make a move and play the game until the game is over within a Simple Game selected. | 4 | One hour |
| 5 | Make a Move General Game | As a User, I want to be able to place an S or an O on an unoccupied square, so that I can make a move and play the game until the game is over within a General Game selected. | 5 | One hour |
| 6 | Determine if Simple Game is Over | As a user, I want to be able to know when the game is over, so that I can determine who the winner of the game is and how. For a simple game, it’s when the first S-O-S connected by a user. | 6 | Two hours |
| 7 | Determine if General Game is Over | As a user, I want to be able to know when the game is over, so that I can determine who the winner of the game is and how. For a general game, its whoever has the most S-O-S’s on the board when all the squares are filled up. | 7 | Two hours |

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 Game Mode | 1.1 | AC 1.1 <Option Game Mode: Simple>  Given User selects game mode  When User selects “Simple Game” option  Then the System Starts a new game under the mode Simple with a clear game from scratch. | toDo |
| 1.2 | AC 1.2 <Option Game Mode: General>  Given User selects game mode  When User Selects “General Game” option  Then the System Starts a new game under the mode General with a clear game from scratch. | toDo |
| 2 Choose the Board Size | 2.1 | AC 2.1<Board Size>  Given User selects the board size  When User enters “Board Size”  Then the System starts with an adjusted size of the board for the game to match the value of the board size. | toDo |
| 3 Setup New Game | 3.1 | AC 3.1 <New Game >  Given User in middle of Game or Game Over, wants new game  When User selects the “New Game” option  Then the system starts clears the board and has user to select a game mode. | toDo |
| 4 Make a Move Simple Game | 4.1 | AC 4.1 <User wants to place an S or O on the board >  Given User is in a current game and it is there turn  When User Selects an empty square and places an S or an O  Then System adds an S or an O onto the empty square the user selected and inputs. Next Users turn. | toDo |
|  | 4.2 | AC 4.2 <User wants to place an S or O on the board and selects invalid placement outside of board or tries to place on occupied cell>  Given User is in a current game and it is their turn, if user selects a position outside the board or on a cell that is already occupied, then nothing will happen and it will remain same User’s turn. |  |
| 5 Make a Move General Game | 5.1 | AC 5.1 <User wants to place an S or O on the board >  Given User is in a current game and it is there turn  When User Selects an empty square and places an S or an O  Then System adds an S or an O onto the empty square the user selected and inputs. If SOS created, keep users turn, else, next Users turn. | toDo |
| 5.2 | AC 5.2 <User wants to place an S or O on the board and selects invalid placement outside of board or tries to place on occupied cell>  Given User is in a current game and it is their turn, if user selects a position outside the board or on a cell that is already occupied, then nothing will happen and it will remain same User’s turn. |  |
|
| 6 Determine if Simple Game is Over | 6.1 | AC 6.1 <Check Game Over: Simple>  Given User is in the middle of a Simple Game  When A User has an S-O-S connected together  Then the System ends the game and determines winner. If same number, then it’s a draw. | toDo |
| 7 Determine if General Game is Over | 7.1 | AC 7.1 <Check Game Over: General>  Given User is in the middle of a General Game  When all the squares are filled.  Then the System ends the game and determines the winner based off who has the most S-O-S’s connected. If same number, then it’s a draw. | toDo |