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## Project Sprint #1

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

Your submission must include the GitHub link to your project and you must ensure that the instructor has the proper access to your project. You will receive no points otherwise.

GitHub link:

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.

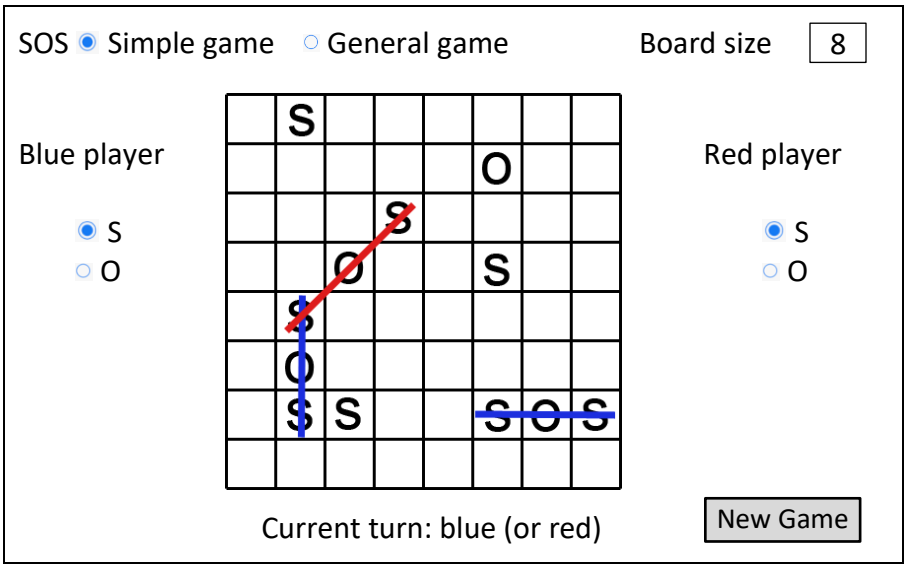
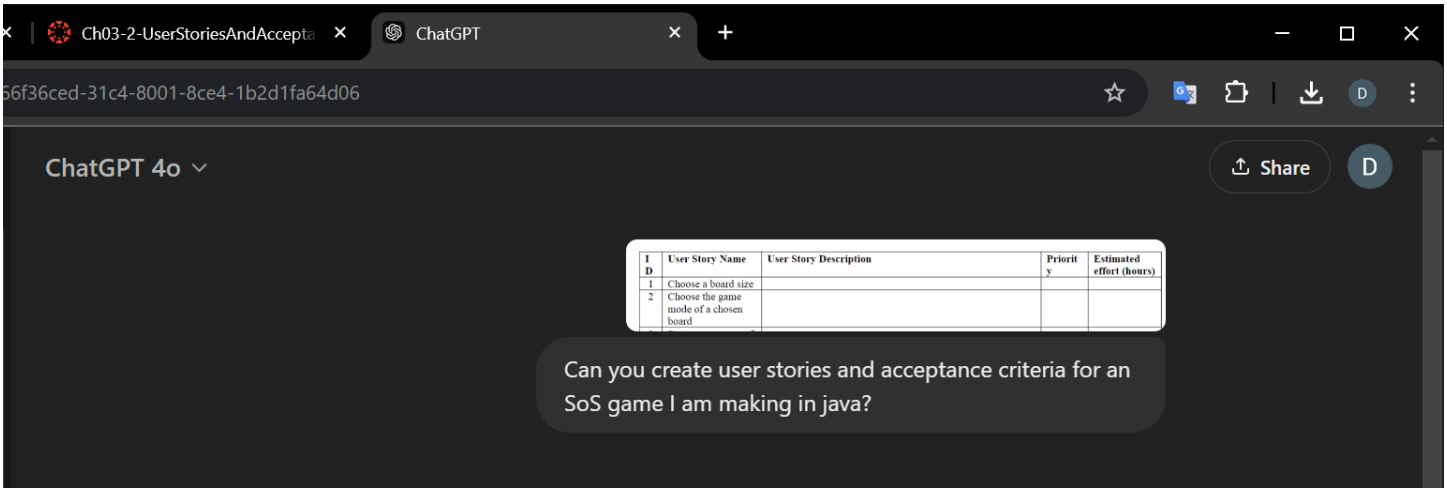



Figure 1. Sample GUI layout of the first working program by the end of Sprint 3




**Here is me testing out ChatGPT for the first two parts. It output it in text so I put it in a table:**

| ID | User Story Name | User Story Description | Priority | Estimated effort (hours) | Acceptance Criteria |
|---|---|---|---|---|---|
| 1 | Choose a board size | As a player, I want to select the size of the board so that I can play on different board dimensions. | High | 2 | - The player is prompted to select the board size before the game begins. |
| 2 | Choose the game mode of a chosen board | As a player, I want to choose between single-player and two-player mode. | High | 3 | - The player can select between single-player (against AI) or two-player mode. |

- **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 choose the size of the game board so that I can control the complexity of game. | Medium | 1 |
| 2 | Choose the game mode of a chosen board | As a player, I want to select between simple and general game modes to play a specific type of SOS game. | Medium | 3 |
| 3 | Start a new game of the chosen board size and game mode | As a player, I want to start a new game with my chosen board size and game mode so that I can start the game. | High | 3 |
| 4 | Make a move in a simple game | As a player, I want to make a move in a simple game by placing 'S' or 'O' on the board. | High | 4 |
| 5 | A simple game is over | As a player, I want to know when a simple game is over so that I can see the result. | High | 3 |
| 6 | Make a move in a general game | As a player, I want to make a move in the general game so that I can play based on the general rules. | high | 2 |
| 7 | A general game is over | As a player, I want to know when a general game is over so that I can see the ending results. | high | 2 |

## II. Acceptance Criteria (AC) (8 points): Add/delete rows as needed.

| User Story ID and Name | AC ID | Description of Acceptance Criterion | Status (completed, toDo, inProgress) |
|---|---|---|---|
| 1. Choose a board size | 1.1 | AC 1.1 Choosing board size from menu<br>**Given** the player is on the settings screen<br>**When** they open the board size dropdown menu<br>**Then** the dropdown menu shows available sizes of 3x3 up to 12x12 | **inProgress** |
| | 1.2 | AC 1.2 Locking in the board size menu choice and showing it<br>**Given** the player is on the settings screen and has selected the dropdown board size<br>**When** the selection is confirmed<br>**Then** the dropdown menu closes and displays the chosen board size | **inProgress** |
| 2. Choose the game mode of a chosen board | 2.1 | AC 2.1<br>**Given** the player is on the settings screen<br>**When** the player selects one of the game mode option boxes<br>**Then** the available modes (simple or general) should be displayed and the corresponding box filled in to show it is choosen | **inProgress** |
| 3. Start a new game of the chosen board size and game mode | 3.1 | AC 3.1<br>**Given** the player has selected both board size and game mode<br>**When** they press the "Start Game" button<br>**Then** the game should initialize with the correct settings | **inProgress** |
| | 3.2 | AC 3.2<br>**Given** the game initialized<br>**When** another window appears with the game board<br>**Then** the player can start the first round of the game | **inProgress** |

| | | | |
|---|---|---|---|
| 4. Make a move in a simple game | 4.1 | AC 4.1 A player moves<br>**Given** a player is playing a simple game<br>**When** they click a cell for their turn<br>**Then** the player should be able to place 'S' or 'O' based on turn order | **toDo** |
| | 4.2 | AC 4.2 A player does an invalid move<br>**Given** a player is playing a simple game<br>**When** they click an occupided cell or outside the game board<br>**Then** the turn does not change and the cell does not change | **toDo** |
| 5. A simple game is over | 5.1 | AC 5.1<br>**Given** a player has made their last move and all cells are filled or no more SOS can be made.<br>**When** the player has finished the last move<br>**Then** the game should declare the winner and end | **toDo** |
| 6. Make a move in a general game | 6.1 | AC 6.1<br>**Given** a player is playing a general game<br>**When** they click a cell<br>**Then** the player should be able to place 'S' or 'O' in accordance with the general game rules | **toDo** |
| | 6.2 | AC 6.2<br>**Given** a player is playing a general game<br>**When** they click a cell that is filled in or an area out of the game board<br>**Then** the turn does not change and the cell does not change | **toDo** |
| 7. A general game is over | 7.1 | AC 7.1<br>**Given** the game board is almost out of playable spots<br>**When** the board does fill up leaving no remaining moves<br>**Then** the game should declare the winner or tie and present the result screen | **toDo** |

## III. Data flow diagram (DFD) (4 points):

Consider a web-based SOS game that allows players from all over the world to play SOS games against each other (similar to chess.com for chess). Using data flow digram examples presented in class, draw the data flow diagram for your global SOS game. You may use the tool of your choice, but it is a good idea to get familiar with draw.io (https://app.diagrams.net/) or other similar tools.

This is the diagram I made. I kept adding more boxes and realized that for an online game it could be a massive flow chart, so I tried to make a reasonable sized one that points out the most important ideas that makes sense.

## SOS Online Game Flow Chart