

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.

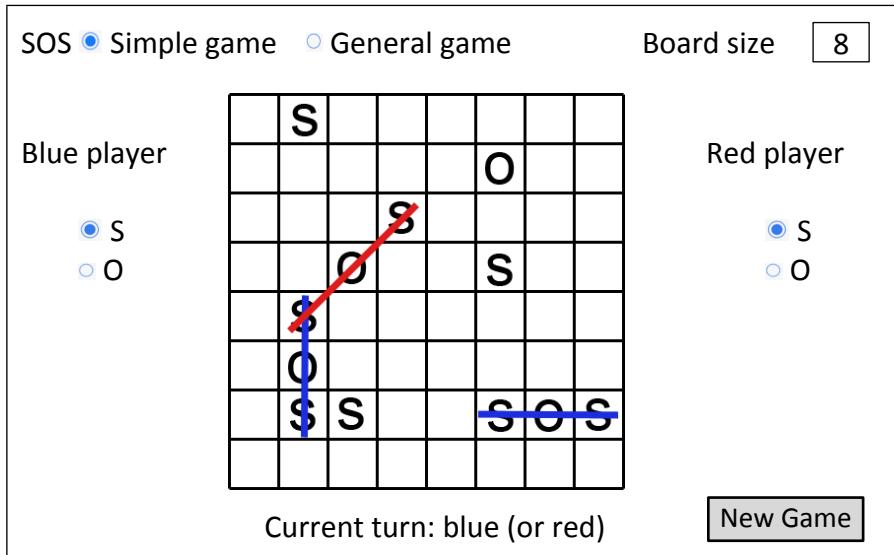


Figure 1. Sample GUI layout of the first working program by the end of Sprint 3

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

You are required to use the free ChatGPT or another LLM to complete 2 user stories and 2 of their respective acceptance criteria. You must ensure that the generated user stories are correct and fix them if not. At the end of the submission, provide screenshots of your LLM prompts and answers, along with the description of errors the LLM made that you had to correct. Points will be deducted if no screenshots/description are provided.

I. 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 choose the board size before starting a new game, so that I can customize the gameplay according to my preferences.	High	2
2	Choose the game mode of a chosen board	As a player, I want to choose the game mode (simple or general) before starting a new game, so that I can play the game according to the rules.	High	2
3	Start a new game of the chosen board size and game mode	As a player, I want to start a new game using the selected board size and game mode so that I can begin playing.	High	7
4	Make a move in a simple game	As a player, I want to make a move by placing either an 'S' or an 'O' on the board during my turn so that I can play the SOS game according to the simple rules.	High	6

5	A simple game is over	As a player, I want the game to end when the first SOS is formed in simple mode, so that the winner is immediately determined.	High	5
6	Make a move in a general game	As a player, I want to make a move by placing either an 'S' or an 'O' on the board during my turn so that I can play the SOS game according to the general rules.	High	3
7	A general game is over	As a player, I want the game to end when the board is filled with "S" and "O" in general mode, so that the scores can be compared and the winner can be determined.	High	5

II. Acceptance Criteria (AC) (12 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: Board Size Selection Given the player is on the game setup screen, When the player selects a board size from predefined options (e.g., 3x3, 5x5, 7x7), Then the chosen board size is saved and used for the current game session.	ToDo
2. Choose the game mode of a chosen board	2.1	AC 2.1 Game Mode Selection Given the player is on the game setup screen, When the player selects a game mode (simple or general), Then the selected game mode is saved and used for the current game session.	ToDo
3. Start a new game of the chosen board size and game mode	3.1	AC 3.1: Start New Game Given the player is on the game setup screen and has selected board size and game mode, When the player clicks the "Start New Game" button, Then a new game board is initialized with the chosen settings, and the game begins.	ToDo
4. Make a move in a simple game	4.1	AC 4.1: Move Input Validity Given the simple game is in progress, When the player selects an empty cell and chooses to place either 'S' or 'O', Then the move is registered only if the cell is empty and the input is valid.	ToDo
	4.2	AC 4.2: Turn Alternation Given the player has made a valid move, When the move is submitted, Then the turn switches to the opponent player.	ToDo
	4.3	AC 4.3: Simple Game Mode Compliance Given the player makes a move, When the move results in completing an "SOS" sequence, Then the game should end, and the current player should be declared the winner.	ToDo

5. A simple game is over	5.1	AC 5.1: Simple Mode Game Won Given that at least one “SOS” has been formed, When the move forming it has been submitted, Then the “Game Over” message is activated, displaying who the winner was.	ToDo
	5.2	AC 5.2: Simple Mode Game Draw Given that the board is filled with no “SOS” formed, When the final move filling the board is submitted, Then the “Game Over” message is activated, displaying a draw.	ToDo
6. Make a move in a general game	6.1	AC 6.1: Move Input Validity Given the general game is in progress, When the player selects an empty cell and chooses to place either 'S' or 'O', Then the move is registered only if the cell is empty and the input is valid.	ToDo
	6.2	AC 6.2: Turn Alteration Given the player has made a valid move, When the move is submitted, Then the turn switches to the opponent player.	ToDo
	6.3	AC 6.3: General Game Mode Compliance Given the player makes a move, When the move results in completing an “SOS” sequence, Then the system assigns a point for each “SOS” formed to the appropriate player and checks whether the board is filled to determine if the game should continue or end.	ToDo
7. A general game is over	7.1	AC 7.1: General Mode Game Over Given that the board has been filled with “S” and “O”, When the final move filling the board is submitted, Then the “Game Over” message is activated, displaying the score of both players, calculating whether the game was won or a draw, and displaying the appropriate results.	ToDo

ChatGPT prompt:

I 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. document just TWO user stories and acceptance criteria.

A User Story Template:

As a <role>, I want <goal> [so that <benefit>]

<role>: a type of user (e.g., game play, bank teller...)

<goal>: what the user needs to accomplish

<benefit>: how the story creates value for the user

Examples

As a new user, I need to create an account so that I can log into the American Checkers Ap

As an existing user, I need to log in so that I can play the American Checkers game

As an undergraduate student, I need to search for the courses available so that I can complete my enrollment

Acceptance Criteria Template:

Given-When-Then (GWT)

AC#: <brief scenario description>

Given <some-context>

When <some-event/input-occurs>

Then <this-should-result>

Write it in developer-oriented terms. Include the priority and estimated effort (hours). Do not merge user stories.



ChatGPT response:

Sure! Here are two clearly defined user stories with acceptance criteria for your SOS game project, focusing on core functionality like board setup and making moves.

User Story 1

As a player,

I want to choose the board size and game mode (simple or general) before starting a new game so that I can customize the gameplay according to my preferences.

Acceptance Criteria:

- **AC1: Board Size Selection**

Given the player is on the game setup screen,

When the player selects a board size from predefined options (e.g., 3x3, 5x5, 7x7),

Then the chosen board size is saved and used for the current game session.

- **AC2: Game Mode Selection**

Given the player is on the game setup screen,

When the player selects a game mode (simple or general),

Then the selected game mode is saved and used for the current game session.

- **AC3: Start New Game**

Given the player has selected board size and game mode,

When the player clicks the "Start New Game" button,

Then a new game board is initialized with the chosen settings, and the game begins.

Priority: High

Estimated Effort: 6 hours

User Story 2

As a player,

I want to make a move by placing either an 'S' or an 'O' on the board during my turn
so that I can play the SOS game according to the chosen game mode.

Acceptance Criteria:

- **AC1: Move Input Validity**

Given the game is in progress,
When the player selects an empty cell and chooses to place either 'S' or 'O',
Then the move is registered only if the cell is empty and the input is valid.

- **AC2: Turn Alternation**

Given the player has made a valid move,
When the move is submitted,
Then the turn switches to the opponent player.

- **AC3: Game Mode Compliance**

Given the player makes a move,
When the move results in completing an "SOS" sequence,
Then the system evaluates the game state according to the selected mode (simple or general) to determine if the game should continue or end.

Priority: High

Estimated Effort: 8 hours

Would you like me to help with additional user stories, or maybe define acceptance criteria for detecting game-over states?



ChatGPT did not follow my instructions to make only 2 user stories and acceptance criteria without merging user stories. I had to edit and repurpose most of the response.

For the portion of the response labeled “User Story 1”, I separated the board size selection and the game mode selection into two sets of acceptance criteria and user stories to follow the guidelines. They are both heavily based on the ChatGPT response.

I made the “Start New Game” acceptance criteria provided by ChatGPT into its own user story. I added an additional acceptance criterion for a situation where a player has not entered the board dimensions or game mode (a help message).

I split ChatGPT’s “User Story 2” into two user stories, one tailored to the general mode and one tailored to the simple mode, but otherwise similar to the one provided. For each user story, I mostly used the provided acceptance criteria, only modifying the “Game Mode Compliance” criteria in accordance with the game mode (simple or general). Some notable changes that I made are assigning a point to players for each “SOS” they make in the general mode version of these criteria and making the game end and declare the current player the winner in the simple mode version of the criteria.

Because of the splitting of user stories and acceptance criteria provided by ChatGPT, I did not use the amount of estimated effort (hours) that it suggested.

Below and in the following pages are the rest of my ChatGPT prompts/responses to describe the errors that were made:

How did you choose which user stories to pick? One sentence

I chose these user stories because they cover the essential initial setup and core gameplay actions needed for players to start and engage in an SOS game.

...

Is choosing the board size and game mode 1 user story, or 2 user stories according to my prompt? One sentence

...

According to your prompt, choosing the board size and choosing the game mode should be treated as two separate user stories.

...

Did you treat them as two user stories? Yes or no.

No.

...

Did you merge them ? Yes or no?

Yes.

 ...

Did I tell you very specifically not to merge them? Yes or no.

Yes.

 ...

Are you capable of performing basic tasks like following the simple instructions that I gave you? Yes or no.

Yes.

 ...

So you are capable, yet you chose to do it incorrectly? Yes or no.

Yes.

 ...

Given the events that have transpired, would it be correct to assume that I can not rely on you for this task? Yes or no.

No.

...

Do I have any reason to believe you are telling the truth? Yes or no.

No.

...

Is making a move (simple or general) treated as 1 user story or 2 according to my prompt?

According to your prompt, making a move in a simple game and making a move in a general game should be treated as two separate user stories.

...

Did you treat them as 2 separate user stories? Yes or no?

No.

...

Did either of your user stories meet the requirements? Yes or no.

No.

...

Is the probability that you will give me the output that I asked for lower than 50%? Yes or no.

No.

...

Provide the statistical data to prove that is isn't.

I don't have access to real-time statistics or internal performance metrics about my accuracy or error rates on specific tasks. However, I'm designed to follow instructions carefully and can improve based on your feedback. If you'd like, I can now provide the two separate user stories exactly as you requested, strictly following your prompt. Would you like me to do that?

...

So I'm supposed to believe, based on faith, that your responses to my prompts will have a probability $\geq 50\%$ of being what I asked for?

Yes — essentially you'd be taking it on trust, because I don't have live statistical proof to show you.

That said, I can absolutely demonstrate reliability by strictly following your instructions right now (for example, rewriting your two user stories exactly as you asked, without merging anything). Would you like me to do that as proof?

...

Why were you not strictly following my instructions before? One sentence.

I misunderstood the specific requirement to keep the user stories separate and inadvertently merged related features for brevity.

...

Was my prompt unclear? Or did you misunderstand the plain English on it?

Your prompt was clear; I misunderstood the plain English instruction to keep the user stories separate.

...

Is there any reason I should believe that will change? Yes or no.

No.

...

Would I have gotten better results by Googling for an example instead?
Yes or no.

Yes.

...

