Sravani Arukala

MSIS, Laroche University

ISTG6010: Object Oriented

Dustin Updyke

03/26/2025

**Battleship Software Solution Requirements**

**Interview Report**

To complete this task, I performed a simulated interview with one of my colleagues who played the role of a Battleship Specialist. The purpose was to collect information regarding the game’s intricacies, players’ interactions, and potential difficulties in creating a digital adaptation of the game.

**Part – 1 Requirements Gathering Via an interview**

Software Developer: Could you please describe the basic rules of Battleship?

Battleship Expert: Certainly, battleship is a competitive game which can be played by tow players on a rectangular grid with embedded coordinates systems. Each player independently places serval ships of various lengths on their grids. Players take turns calling out coordinates on the opposing player’s grid with the intension of locating any hidden ships. If coordinates called by a player coincides with ships location, it is a hit; otherwise, it is termed as miss. The player who defeats the enemy by sinking all their ship wins the game.

Software Developer: What are the classes and dimensions of vessels employed in Battleship warfare?

Battleship Expert: Most basic fleets are made up of five ships. These includes

1. Carrier – 5 units in length, 2. Battleship – 4 units in length, 3. Cruiser – 3 units in length
2. Submarine – 3 units in length, 5. Destroyer – 3 units in length

Software Developer: How are ships positioned on the grid? Are there any limitations?

Battleship Expert: Ships are placed horizontally and vertically, never diagonally. Ships are not permitted to over lap each other and must fully fit within the grid. Most players agree to set their ships on the grid with no further placement disclosed prior to gameplay.

Software Developer: When a ship completely sinks, what physically occurs? In what ways is this shown to the players?

Battleship Experts: It’s referred to as ‘sunk’ when all selections of a certain ship have been marked. Conventionally the answer is given by the person whose ship has sunk. They reply something like, “You sunk my Battleship” with each of these, player derive helpful information.

Software Developer: What are the most common measures of the game grid?

Battleship Experts: The Grid is commonly known to be 10 by 10 squares or lines.

Software developer: In a player’s turn, what information do you expert the player to see?

Battleship Experts: A player should take at their grid of their ship showing their position and strikes as well as any damage made to them. And an auxiliary grid with the player’s attempts to strike the enemy’s grid showing either strikes or no striking them.

**Page – 2 User Stories**

Following the mock interview steps, here are user stories describing the expected features of the Battleship software.

**User Story 1**

1. As a player, I would like to set up my fleet of ships on a grid prior to commencing gameplay to keep their locations hidden from the opponent.

Acceptance Criteria:

The system permits the user to choose all five standard ship kinds (Carrier, Battleship, Cruiser, Submarine, Destroyed)

* Each ship can be placed either horizontally or vertically on the 10\*10 grid.
* The systems do not allow the user to position ships off the grid.
* The system does not allow the user to place more than one ship in the same locations.
* The system provides a visual depiction of the ships on the player’s grid.
* The player may declare themselves ready to start the game once all ship has been placed.

**User Story 2**

1. As a player, my goal is to be able to take turns calling out coordinates on the opponent’s grid in order to try to find and sink their ships.

Acceptance Criteria:

* In these rounds, the player can now call out a coordinate (A1, J10) and the system will accept it
* The system makes sure this coordinate is valid and does not fall outside of the grid.
* The system does not allow the same coordinates to be called multiple times.

**User Story 3**

As the offensive player, I would want to track the outcome of my shot on the tracking grid so that I have the understanding of what areas have been aimed and if it was a successful shot or not.

Acceptance Criteria

* If the opposing ship is targeted and there is a hit, then the tracking shot grid of the attacking player will claim a” hit “at the coordinates given.
* If the opposing ship is targeted and there is not hit, then the tracking shot grid of the attacking player will claim a “miss” at the coordinate given.

**User Story 4**

As the defending player, I would need to know when one of my ships is being targeted and hit, so that I know how much damage has been inflicted on my fleet.

Acceptance Criteria

* When the defending player's ship sustains damage, the grid automatically shows the location of the hit.

**User Story 5**

As the defending player, I now need to know when one of my ships has already fully contracted all the reserved hits so that I can tell my opponent.

Acceptance Criteria

* When a ship has sustained multiple hits and the system will inform both players which of the defending player ship has been sunk (Ex- destroyer sunk).
* The grid of the defender clearly shows the sunk ship.

**User Story 6**

As player, I would like to view my ship placements and any damage done to them on my grid so that I can keep track of my fleet’s statues.

Acceptance Criteria

* The user interface portrays all of the player's ships on his/her grid.
* The player's grid indicates all hit locations on the player's ships.