Battleship

Project Backlog

Tejesh Priyatham

Kamran Pirwani

Kritin Gokharu

Udbhav Sahai

Mikhail Kim

David Zinn

Project Backlog

Battleship Overview

Our team has decided to create a game that would appeal to the ages of both old and new. As such, we have decided to reinvent an old game for the modern times. Battleship was chosen because of its popularity.

Environment and System Models

This game would be made using Java. This is because it provides us with the swing libraries that will enable us to utilize its graphics. Since the game is being developed using Java, the running version of the game will be a JAR file. The JAR format is accessible on all platforms, thus allowing our game to be played on any platform.

System Requirements

The game will require a graphics-based operating system. It will also require a graphics card that can handle basic animation.

Process Requirements

Project development will be done based on the SCRUM development model. There will be three cycles of build whereby we will have an assessment of where our project stands, and how much we can accomplish in the given period of time without compromising the usability of the application. These will accordingly then be increased or decreased.

General Structure

2 instances

Game Move

UI input

Game Move

AI input

UI\_OBJECT

AI\_OBJECT

Artificial

Intelligence

Engine

GameBoard

GameDesign

User Interface

Functional Requirements

The game is designed in 3 levels.

**Level 1** – The Game Board has all the functions and the objects required to play the game.

**Level 2** – Two GameBoard instances are instantiated. One board is for the User and the other for the Artificial Intelligence Engine. The Game Design takes the input from the User Interface (player) or the Artificial Intelligence and calls the respective function from the GameBoard package.

**Level 3** – The User interface passes the moves of the user to the Game Design and the artificial intelligence engine passes the moves to the game design whenever its called on its turn.

Rules of the Game

**Goal**: To sink all of your opponent's ships by correctly guessing their location.

**Setup**: Place your ships on the lower grid. Each ship must be placed horizontally or vertically across grid spaces, and can't hang over the grid. Ships can touch each other, but can't both be on the same space.

**Play**: Player take turns firing a shot to attack enemy ships.There are two grids. One is your grid and the other is your opponent’s grid. On your turn, click on the opponent’s grid where you think a ship exists. If it’s "miss" if there are no ships there, or "hit" if you guessed a space that contained a ship.

**Victory**: The first player to sink all his opponents ships will be declared the winner of the match.