Battleship Requirements Document

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Table of Contents

Introduction

Battleship is a classic board game about sinking ships. It was added to Vermont Technical College's Knight's Party Table, although without consistent rules. The following document details the required rules and regulations necessary for Battleship to function properly on the Knight's Party Table.

Key Concepts

Battleship is a board game that is comprised of five ships of various sizes spread across a grid. Players take turns guessing locations on the grid (B4, A8). If a player guesses the correct location on the grid, the opposing battleship is hit. Otherwise, the shot misses. Once a battleship has been hit a given number of times, it is sank. There are certain rules required for Battleship to function correctly. Those rules are the following:

- Ships cannot be stacked on top of one another
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Use Cases

Starting a Game

Goal

The user will successfully start a game of Battleship.

Other Resources Needed

No other resources are needed to start a game of Battleship.

User Action

After starting the Knight's Party Table, the user will select "Battleship" from the list of games shown to them. The second user will then select the option to confirm the game.

Product Action

The product will display the list of available games to the user. After the user selects "Battleship" from the list, the product will display a confirmation window to the other player.

Playing a Game

Goal

The users will play a game of Battleship, taking each others pieces in an attempt to claim victory.

Other Resources Needed

No other resources are needed to play a game of Battleship.

User Action

The user will select a location on the grid displayed to them. Regardless of whether it is a hit or a miss, the next user will take their turn.

Product Action

The product will accept the user's input and check to see there is an opponent's battleship on that location. If there is, the product will remove a hit from the battleship on the location and notify the user. If it is a miss, the product will notify the user.

Finishing a Game

Goal

The player will either win or lose a game.

Other Resources Needed

No other resources are needed for a player to finish a game.

User Action

The user will either take the last of their opponent's pieces, or they will lose their last piece to their opponent.

Product Action

When one of the players has lost all their battleships, the game will end. The product will then ask the users whether or not they wish to play another game of Battleship, or go back to the game menu.

Functional Requirements

For further clarification, the following are requirements necessary for the Battleship game to function as designed:

- Two Players

Non-Functional Requirements

The following are non-functional requirements for the Battleship game:

Platform

Battleship will run on the Knight's Party Table. The Knight's Party Table will run the following:

Windows 10 Home Edition

Performance

Battleship will run within a reasonable amount of time, reasonable being dictated by the definition found in the project scope document.

Reliability

Any form of a system crash is unacceptable. Users are using the product to play Battleship, not constantly reboot the Knight's Party Table.