

INST326

Prof. Bills

Final Project - README

Group Members: Endrias Alamerew, Jishan Farazi, An-Zhi Lu, Natalie Siliezar

Group Name: 4Ships

Files In Repository

.DS_Store

This file contains no text or code, it is an added file for the earliest testing in GitHub.

326 final first deliverable.py

Early code and function for lucky reset, was created as part of the first deliverable assignment.

Main.py

This is our main code.

P_4_CheckingGrid.py

Early code and function for checking the grid, was created as part of the first deliverable assignment.

README.md

Filing containing out readme

Ship_Testing.py

Only testing code does not matter to the project.

Ship_teasting2.py

Only testing code does not matter to the project.

P2_function.py

Early code and function for ship direction, was created as part of the first deliverable assignment.

Text_file.py

This file has nothing to do with the code

text_file_2.py

This file has nothing to do with the code

Run the Program

1. Clone the repository from GitHub.
2. Open the Terminal.
3. Navigate to the project directory.
4. Run the program using: `python main.py`

This program does not take any command-line arguments.

All user input is handled interactively during gameplay.

Using Program

Setup Phase

Each player places Ship 1 and Ship 2 on their board. You will be prompted to:

- Enter starting coordinates (row col), example (2 3)
- Choose a direction: horizontal (h) or vertical (v)

Mines and a lucky cell are placed automatically.

Turn Phase

On your turn:

- Move your ships (up, down, left, right) or skip movement with s.
- Fire at enemy coordinates (row col).

Game Rules

- A ship hit increases your score by 1. Sinking a ship increases your score by 5.
- Hitting the lucky grid resets the enemy ship's positions.
- Ships immobilized by mines cannot move.
- The first player to sink all enemy ships wins.

End of Game

- The game ends when all enemy ships are sunk or a player types quit when prompted.

Board Symbols

- . : empty cell
- S : ship (shown only when revealed)
- H : hit
- M : miss

Annotated bibliography

Brown, S. (2024, July 19). *How to play the Battleship board game*. The Spruce Crafts.
<https://www.thesprucecrafts.com/the-basic-rules-of-battleship-411069>
 This source was used to understand Battleship rules and guide the design of ship placement, firing, scoring, and movement mechanics in our text-based game.

Attribution

Method/Function	Primary Author	Techniques Demonstrated
display_board	Jishan	keyword arguments
Main	Jishan	composition of two custom classes
get_avaliable_positions	Natalie Siliezar	comprehensions or generator expressions
play_turn	Natalie Siliezar	sequence unpacking
validate_ship_position	Endrias	Regular expressions
check_special_cells	Endrias	f-strings containing expressions
fire	Anzhi	Optional parameter
lucky_reset	Anzhi	set operations