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CS-172 Final Project Proposal

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Battleship-Inspire Text Adventure

For our final project we will be creating a battleship-inspired text-adventure game. It will be a single-player game where the player will be battling against the computer. The player will get to select the locations of their ships while the computer will randomly place their ships. The player and the computer will then alternate guessing where their opponent’s ships are located. If the guess is correct, the ship is hit; if the guess is incorrect, it is noted as a miss. Once an entire ship has been hit, the ship will be sunk. If the player can sink all of the computer’s ships before their own ships are sunk, then they win the game.

In order to include all of the necessary elements in our program, we will implement objected-oriented programming, files, templates, vectors and pointers. We will use object-oriented programming by creating header files for different classes, including a class Ship, and implement them. We can use vectors to hold the positions of each ship. We can use pointers to point to the positions of each guess without losing previous guesses when a new guess is made. We can use files to hold information about game plot and set-up. We can then access the files using input and output statements. If we have time after we do all of that we can add inheritance, polymorphism, and recursion.

It will be challenging to figure how to meet the requirements in a way that works. As we are starting from scratch, we will run into problems as we go on. Seeing as this is all being planned out mentally, we are more than likely going to run into aspects of the game that were not considered. We may struggle with accessing text files, as we have both had trouble with creating successful text file input and outputs. We can overcome these challenges through further reading of the textbook and trial and error