

Final Project Proposal
Battleship: Human vs Computer

For our final project, we will be attempting to program the popular board game, Battleship. Now of course, this is a 2 player game, but there is only one screen. Because of this, we think it would be better to attempt to program an AI to be the second player. There will also be 2 different difficulty levels as well. The beginner difficulty will be a very basic AI. The computer will basically guess a random coordinate everytime. Not efficient at all but hey, it's for beginners. The main bulk of the program that will most likely take the most time is the second difficulty. This AI would be for smarter players that have a grasp of the game. This AI will use an actual strategy to try and win. The main part of the strategy would be to look at the gameboard as a checkerboard pattern. Also, once they hit a ship, they will attack the surrounding area until the ship they hit sinks.

All of that above is of course just the gameplay. The setup is just as important. We plan on placing the ships using a "head-direction" method. Basically, the player would indicate the coordinate in which the head of the ship will lie. After that, the player will be asked if he wants the ship to be vertical or horizontal. There will be a diagram to better picture this in the actual program.