

What is battleships?

Battleships is a strategy game for two players, it is played on ruled grids, on which each players ships are marked, the location of the fleets are hidden to the opposing player, and each player must guess a coordinate, as to where they think the other players ships are, if the player guesses the ships location correctly, it is considered as a hit, if the player has hit all of the parts of a ship, then it is considered a sink, and that ship is now considered eliminated from the game.

How to play?

You will first start the game by pressing the black reset button on the f103rb, and then the 7 segment display will show you entering the game by displaying E. then it will give you a signal to enter a certain coordinate, which you will do via the 4 way switch. The 4 way switch is setup in binary bits, ex, switch 1 on, switch 2, 3, 4 off, will display 1 on the 7 segment display, then after entering a coordinate, you will then proceed to press the blue button to signal “firing” your missile to their coordinate, if you get a hit, it will signal that you have a hit, if you miss, the it will signal a miss, if you hit all the parts of a ship, it will be considered a sink, meaning you sunk their ship then it will display an S for sunk. After that it will continue going until all the ships are sunk, which then you will be greeted with the game closing message of FF.

Output signals and what they mean?

- The lines going vertically symbolize row
- Line going vertically symbolize column
- H means hit
- 0 means miss
- FF means game over

Problems encountered?

- When initially setting up the board figuring out what pins to use was the hardest part for the 7 segment display.
- Making sure and relentlessly testing the hardware to make sure that it was setup correctly was a big part of the challenges encountered.

Configuration options?

- No custom configuration options