Arduino Battleship

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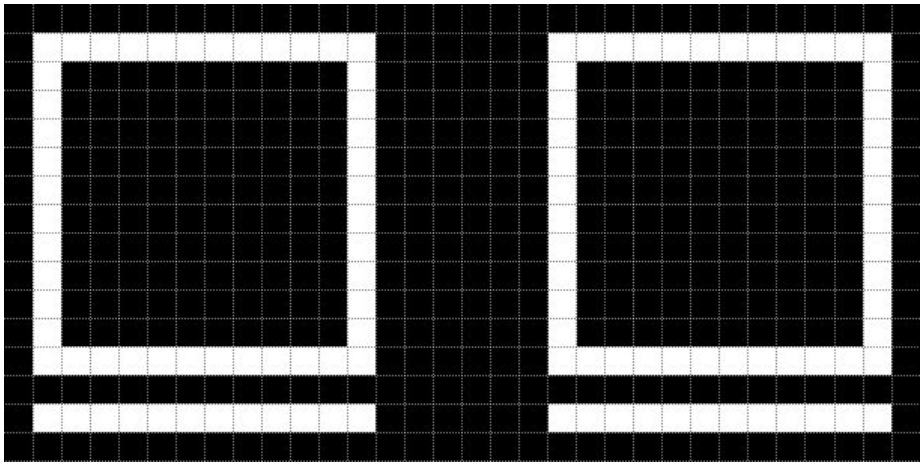
www.github.com/Cryptogenic/Battleship-Arduino

Summary

Battleship for Arduino UNO is a battleship game coded with Arduino/C++ using an Arduino UNO and a 32x16 LED RGB Matrix. The game consists of the end-user, a CPU as the second player, and each player with an 11x11 grid.

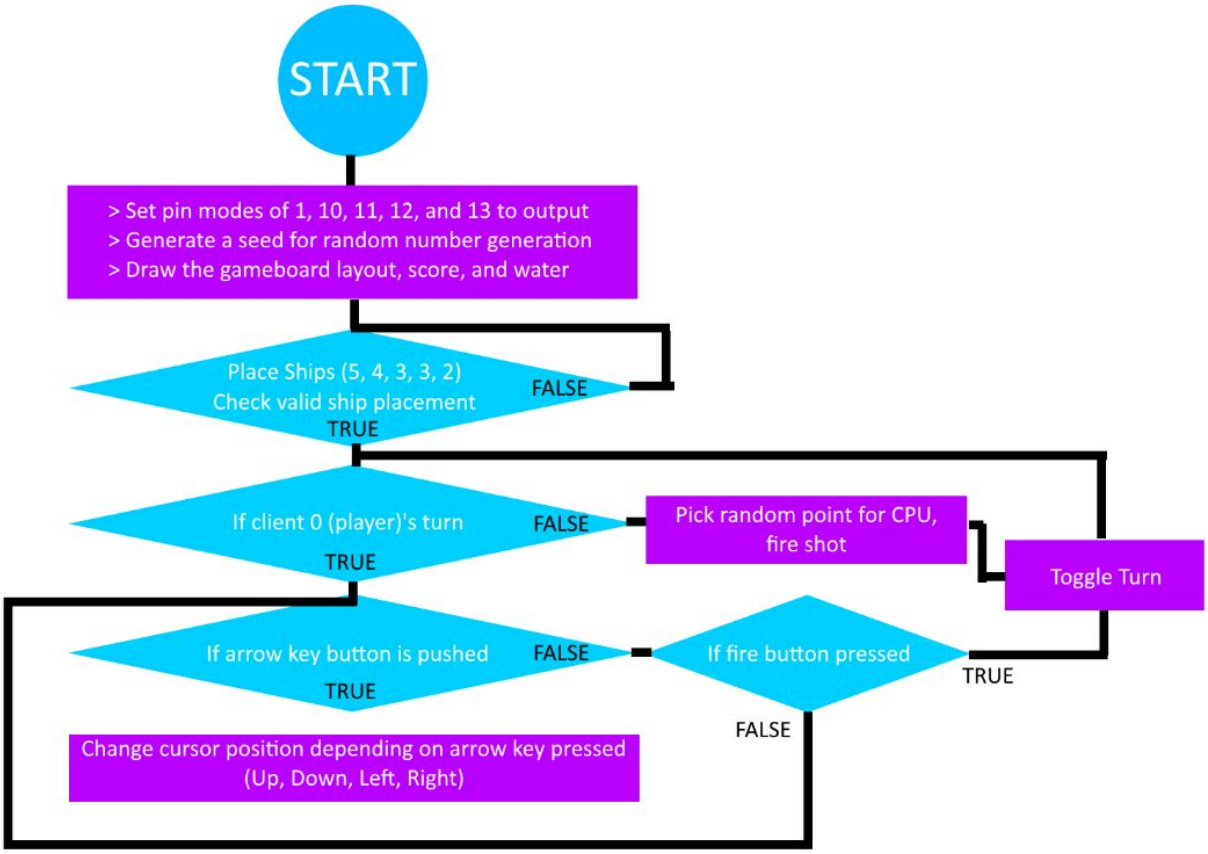
The Circuit

The circuit will consist of four buttons connected to the Arduino via digital I/O pins 1, 10, 11, 12, and 13. The rest of the digital pins as well as the first three analog pins will be used for communicating with the board via the library.



When the arduino receives the program, power, and the 32x16 LED Matrix receives power, the program will first draw the layout (such as the divider, player areas, etc.). It will proceed to draw the water for visual effect, shortly before placing the ships for both players. Turns will be passed back and forth via an integer and the player will have button control to place their target, while the CPU uses RNG (Random Number Generator) via the analog pin 5 to determine a point to target.

Flow Chart



Parts List

- 1x Arduino UNO
- 1x 5V DC Power Supply
- Misc. Wires
- 5 Default-Open Buttons
- 1x 32x16 LED RGB Matrix
- 1x Breadboard

Requirements

To run this project properly, you will require an Arduino UNO board, and a 32x16 RGB LED Matrix, specifically this one. You will need to set this up using the documentation provided on the website, and install the libraries needed for Arduino.

Circuit Diagram