

Conclusions and Recommendations

What went well:

- It was easy to develop the grids and fill in different locations of the grid with different colors
- It was easy to describe the grid in terms of a matrix
- Displaying text and information to the screen was easy to do
- Though the logic was complicated, comparing the grids of the game boards to the opposite player's ship board was not difficult to code
- Although tedious, it was easy to use the touch function to return the x and y locations of different text displays on the screen

What did not went well:

- Figuring out how to make the game play again
- Using sleep functions so that the LCD.Touch() reacts at human speed rather than computing speed
- Declaring matrices in C++
- Using break statement to properly break out of program when quitting
- Aligning grids directly with the size of the board since drawing the rectangles needs an integer input

What you wish you could have done:

- Design the grids to perfectly fit on Proteus board
- Have signal player functionality to face both a "dumb" and "smart" computer
- Scale grid down so that there is space on the game screen to display live statistics
 - Display type of ships both sunk and afloat
 - Display number of hits each player has
 - Display player accuracy
- Make ships in their shapes rather than light up square
- Make user place one type of ship at a time
- Have sound effects
- Have random selection be generated by a random number selector

How you would change the software:

- Implement the smart computer
- Implement graphics
- Track and display more types of statistics, like the accuracy
- Enlarge the regions where touch causes a new screen to appear