CSE 102 Assigment V

In this code, we create a simple battleship game. The code has some parts.

First part is generating board part. In this part I created two board array. One of it created to print on console. Other one is created to store ships place correctly.

The next part is creating ships randomly. I used three function to do that. One of them is 'isValidShipPlace()' function. This function checks if we create ships in this place, the other parts of ships will be out of bound or maybe there were already have ship. If this function return 0 that means you cant generate a ship in this place use random function again and generate new place. The other function is 'generateShips()' function. This function generates places of ships that in which row and column. Also generate that ship will be vertical or horizantal via using rand() % 2. The last function is 'shipsPlaces()'. In this function we open ships.txt file and call generateships() function four times with determinaning size of ships like that generateShips(4, file, board).

The next part is taking input from user as row and col. According to users input code checks can user hit or miss to ship. If inputs are wrong the program also check it.

The other part is checking that does the ship sank. While doing that firstly generate sank_status at the start of code as [0, 0, 0, 0], then call isShipSank() function. In this function we take places of the ships from ships.txt according to size of ships. Then checking printing board and board arrays is ship hit. If yes, hit count increases by 1 and if hit count equals to size of ship that mean has the ship sank. sank_status of ship changes with 1 and print console the information about is ship sank.

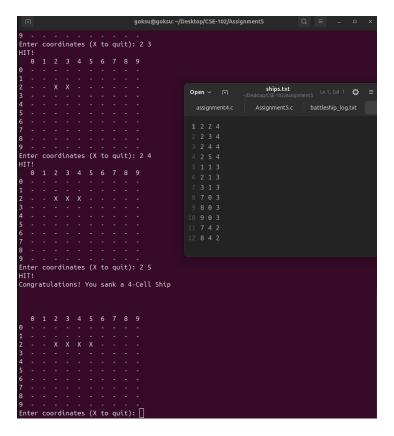
And the last part of the game is game_over part. In this part code checks that are all ships sank. If yes ask to user play again or not. If user wants to play again generate board and ships again and start game. If user does not want to play again leave from game.

In this code the most difficult part is that if user wants to quit game press X part for me. Because we take inputs as integer and I cant check user press X or something that except integers. Every time scanf returns 0. So I used extra one checking mechanism. I did not want to use fgets or something else because of I dont know is it permitted or not.

• Start part of the game.

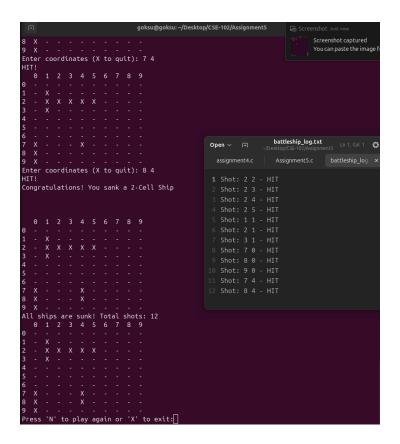
• Error outputs.

• Sank ship and ships.txt part.



• End part of the game.

• Battleship log.txt



• Play again.



• Press X to quit



