create_board

takes an input parameter size, which determines the dimensions of the square board to be created. It returns 2D list representing a square board filled with "O" characters.

display_board

is responsible for visually representing the contents of the game board on the console. It creates a string representation of the row with spaces between each character. Then, it prints each row of the board, creating a visual representation

place_battleship(board, ship_size)

takes in a game board (board) and a ship size (ship_size). It randomly selects a position on the board and places a battleship of the specified size either horizontally or vertically, depending on the random choice

play_battleship(board, user_board,ship_size,attempts)

function takes a game board, a user's view of the board, the battleship size, and the number of attempts as inputs, simulating a Battleship game. It iterates through the user's attempts to guess the battleship's location, providing feedback on each guess, displaying the updated user board, and concluding the game either when the battleship is successfully sunk or when the attempts are exhausted

main()

serves as the entry point of the program. It sets up initial variables (ship_size, attempts, board_size) needed to play the battleship game. It calls the create_board() function twice to generate two game boards: solution_game_board (containing the hidden battleship) and user_game_board (where the user makes guesses). Finally, main() calls the play_battleship() function, passing in the solution game board, user game board, ship size, and attempts as arguments to begin the battleship game.