

Success Criteria

1. The system will present a menu to the user with the following options:
 - a. play a new game
 - b. resume a game
 - c. read the instructions
 - d. quit the game
2. If you want to play a new game, the program should:
 - a. prompt the player to enter coordinates for each boat
 - b. check if a boat has already been placed there
 - c. display each boat on the grid
 - d. only allow the user to enter five locations
3. Make the program select five unique random locations for the computer's board – this shouldn't be shown to the user
4. Develop the part of the program that displays the game board to the user
5. Allow the **player** to make their turn:
 - a. prompt for target coordinates (not allowed to select same ones twice)
 - b. check if the target is a hit or a miss
 - i. if the target is a hit then H should be displayed on the game board
 - ii. if the target is a miss then M should be displayed on the game board
6. Allow the **computer** to make their turn:
 - a. randomly generate target coordinates (can't select same coordinates twice)
 - b. display chosen coordinates to player
 - c. check if hit or miss:
 - i. if hit then H should replace the B
 - ii. if miss then "miss" should be displayed to the player
7. Continue playing the game until there is a winner – the game ends when either the computer's or player's boats have all been destroyed. The winner should be displayed to the player.
8. *Challenge tasks:* allow the player to save their progress to a file (save after each turn and if the user quits the game)
9. Add a resume game option – load the game board from the file
10. *Further challenge tasks:* Add different boats:
 - a. three categories:
 - i. 2 x Destroyers (1 cell)
 - ii. 2x Submarines (2 cells)
 - iii. 1x Carrier (3 cells)
 - b. they can be placed horizontally or vertically
11. Add hit miss and sunken – only sunken if all cells have been hit