Structure: Model, View, File -> Controller

- Class Controller
    - UserInputSetUp - check if ship fits
    - UserInputCoordinates() - check if already fired, if valid coordinate
    - ShowResult()
    - ShowGrid()
    - SaveBoard() - if board changes
    - CollectPlayerData() -

- Class Model (Calculations)
    - Class PlayerData
        - String PlayerName
        - Int NumberHit
        - Int NumberMiss
        - Int NumberGamePlayed
        - Int NumberGameWon
        - Class Grid
            - Const int gridSize = 8;
            - Int row [ ]
            - Int col [ ]
            - outputGrid()
            - Class CellState
                - Bool Ship (1 - ship, 0 - no ship)
                - Bool Hit (1 - hit, 0 - miss)
    - Class Ship
        - Int type
        - Int coordinates [ ]
    - CheckHit()
    - Turns()
- Class View(Display)
    - displayGrid (depending on index of class array)
    - Menu
        - displayRules()
        - displayLeaderboard()

    - LeaderboardData
        - displayPlayerStats()
        - displayLeaderBoard() - sort best results
- Class File
    - SavedGrid
        - Int col[ ]
        - Int row[ ]

Pseudocode

1. Display StartMenu
    - Play - if save file exists, Play == Continue
    - Rules - display list of rules
    - Stats - go into PlayerData and display (input playerName)
    - Leaderboard - go into List PlayData (bubble sort of top performers)
2. Play
    a. 2 Player Mode, Computer AI, Back to Menu

    2.5 Continue

    Continue Game, New Game, Back to Menu
3. Computer AI
    a. Ask For Player Name
    b. Random Numbers
4. 2 Player Mode (Set up)
    a. Ask for Player Name (x2, opposing sides - Class Grid[0] == Player 1, Class Grid[1] == Player 2) (State that player 1 goes first)
    b. Display grid and update every placement (Player 1 places all ship, then Player 2)
    c. Asking where to put ships (coordinates and direction facing)
        i. Aircraft Carrier - size 5
        ii. Battleship - size 4
        iii. Battlecruiser - size 3
        iv. Submarine - size 3
        v. Destroyer - size 2
5. 2 Player Mode Game
    a. Rand value to decide which player goes first

b.