

# 1. Start Game

□ call `setUpBoard()`

- create the `10x10 (2D list)` filled with `(.)`
- Randomly place `NUM_SHIPS = 5 (5)` in chosen positions

□ call `drawBoard(board)` to display the board

2. Game loop (need to repeat until all ships sunk)  
while `isGameOver(board)` is false:

↳ prompt user input

- Ask user to enter a column number (`x`)
- if `x` is out of range `x < 0` or `x >= 10`  
print "Invalid column" and re prompt

repeat for `y`

except if out of range:  
print "Invalid Row"

3. Check if guess is hit or miss:

↳ call `checkHitOrMiss(board, y, x)` which:

- if `board[y][x] == S` replace w/ `x` return `HIT`
- if `board[y][x] == X` return "HIT" (already sunk)
- otherwise, replace `board[y][x]` with 'O' and return "Miss"

4. Display the result ("HIT" or "MISS")

5. update the board:

- call `drawBoard(board)` to show new board state

6. Check if the game is over:

□ call `isGameOver(board)`, which:

- loops through the board
- if any `S` is found, return false (game continues)
- if no `S` remains, return True (all ships are sunk)

7. if the game is over, print "Game over!" and exit

loop