**PROGRAM:**

import java.util.Scanner;

public class BattleshipGame {

static char[][] board = new char[10][10];

static boolean[][] shipLocations = new boolean[10][10];

static int shipsRemaining = 5;

public static void main(String[] args) {

initializeBoard();

placeShips();

while (shipsRemaining > 0) {

printBoard();

makeMove();

}

System.out.println("Congratulations! You sank all the ships!");

}

public static void initializeBoard() {

for (int i = 0; i < 10; i++) {

for (int j = 0; j < 10; j++) {

board[i][j] = '~';

}

}

}

public static void placeShips() {

// Randomly place ships (you can customize this)

// ...

}

public static void printBoard() {

System.out.println(" A B C D E F G H I J");

for (int i = 0; i < 10; i++) {

System.out.print(i + 1 + " ");

for (int j = 0; j < 10; j++) {

System.out.print(board[i][j] + " ");

}

System.out.println();

}

}

public static void makeMove() {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a coordinate (e.g., A1): ");

String input = scanner.nextLine().toUpperCase();

int row = input.charAt(1) - '1';

int col = input.charAt(0) - 'A';

if (shipLocations[row][col]) {

board[row][col] = 'X';

shipsRemaining--;

System.out.println("Hit!");

} else {

board[row][col] = 'M';

System.out.println("Miss!");

}

}

}