

```

1 def input_valid_coordinates(prompt):
2     while True:
3         try:
4             inputStr = input(prompt)
5             x, y = inputStr.split(" ")
6             x, y = int(x), int(y)
7             if 0 <= x < 5 and 0 <= y < 5:
8                 return inputStr
9             else:
10                print("Invalid coordinates. Please try again")
11        except ValueError:
12            print("Invalid input. Please enter two digits between 0 and 4.")
13
14
15 def print_grid(grid):
16     for row in grid:
17         print(" ".join(row))
18     print()
19
20
21 def play_game():
22
23     grid1 = [["~" for x in range(5)] for x in range(5)]
24     grid2 = [["~" for x in range(5)] for x in range(5)]
25
26     ship1_coords = input_valid_coordinates(
27         "Player 1, please enter the coordinates for your ship (e.g. 0 0):")
28     ship2_coords = input_valid_coordinates(
29         "Player 2, please enter the coordinates for your ship (e.g. 0 0):")
30
31     current_player = 1
32     hit = False
33     while hit is not True:
34         print("It's your turn, player " + str(current_player))
35
36         attack_coords = input_valid_coordinates("Coordinates for an attack:")
37         x, y = attack_coords.split(" ")
38         x, y = int(x), int(y)
39         opponent_ship_coords = ""
40         current_grid = []
41
42         if current_player == 1:
43             opponent_ship_coords = ship2_coords
44             current_grid = grid1
45         elif current_player == 2:
46             opponent_ship_coords = ship1_coords
47             current_grid = grid2
48
49         if attack_coords == opponent_ship_coords:
50             current_grid[y][x] = "X"
51             print("Hit!")
52             print("Player " + str(current_player) + " wins!")
53             hit = True
54         else:
55             current_grid[y][x] = "O"
56
57     print_grid(current_grid)
58
59     if current_player == 1:
60         current_player = 2
61     else:
62         current_player = 1
63
64
65 play_game()

```