

**Journal- Assignment 2**

The present problem deals with a ship and the response of two or more pirate ships to the movement of the ship. There are different ways to solve the problem and one of the ways is to constantly check for updates in ocean grid and any change in the location of the Columbus ship is to be updated among other classes. This can be easy to work with but incredibly resource consuming for checking the grid continuously and moreover, the data will have to be shared among classes and this is really bad in terms of design. With observer pattern, the ship notifies of any changes in its current location and in this case, the observer sends the new location of the ship to the pirate ships using the `setchanged()` method. After receiving the new coordinates of the Columbus ship, the pirate ships then compare the distance between them and the ship, and they themselves chooses the best path to reach the target using Manhattan distance calculation.