## **JOURNAL**

The program Columbus Ship has a total of four classes namely OceanExplorer, OceanMap, Ship and PirateShip. The program uses the observer pattern to notify the pirate ships about the movement of the Columbus ship. The ship class to be observed extends the observable and the pirate ships which observes the movement the movement of the ship implemented by the observer. Creating the 10x10 grid, location of the ships, pirate ship and the island in done by the OceanMap class. Whereas the graphical user interface (GUI) operations are handled in the OceanExplorer class which has the main class. Ship class is responsible for the movement of the ship in all the directions of the grid, it checks and updates all the changes in position of the ship giving the observer all the notifications. Finally, PirateShip class uses update method in it to get the ship location in the Ship class.