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Div-6, G-12

**Assignment-14 (Observer Design Pattern)**

**Aim:**

To implement Observer Design Pattern using Accommodation management system.

**Code:**

**RoomOwner.java**

// This class is for Room Owner.

// Each object created will account for one room owner.

public class RoomOwner {

    String name;

    public RoomOwner(String name){

        this.name = name;

    }

    public void updateAboutFood(){

        System.out.println("Hey "+name+" Food is now available is the mess.");

    }

}

**Hotel.java**

//This class is for Hotel.

//Hotel can add/remove room owners to their list.

//Hotel can make food.

//Hotel can notify all room owners about food availibility in mess.

import java.util.ArrayList;

import java.util.List;

public class Hotel{

    private String food;

    public String name;

    List <RoomOwner> lst = new ArrayList<>();

    public Hotel(String name){

        this.name = name;

    }

    public void addOwnerToList(RoomOwner ro){

        lst.add(ro);

    }

    public void removeOwnerFromList(RoomOwner ro){

        lst.remove(ro);

    }

    public void notifyAllRoomOwners(){

        for (RoomOwner ro: lst){

            ro.updateAboutFood();

        }

    }

    public void makeFood(String food){

        this.food = food;

        notifyAllRoomOwners();

    }

}

**Test.java**

public class Test {

    public static void main(String args[]){

        //Creating Hotel.

        Hotel h1 = new Hotel("Krupa");

        //Creating room owners.

        RoomOwner r1 = new RoomOwner("Ravi");

        RoomOwner r2 = new RoomOwner("Dhyey");

        RoomOwner r3 = new RoomOwner("Hrishikesh");

        RoomOwner r4 = new RoomOwner("Kalp");

        //Adding room owners to the list of hotel.

        h1.addOwnerToList(r1);

        h1.addOwnerToList(r2);

        h1.addOwnerToList(r3);

        h1.addOwnerToList(r4);

        //Hotel making its food for mess,

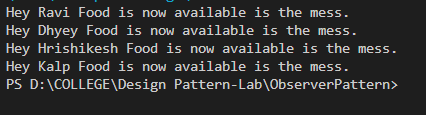
        //(which will internally call function to notify all room owners).

        h1.makeFood("Manchurian");

    }

}

**Output:**



**Class Diagram:**

