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**Assignment-7 (Adapter Pattern)**

**Aim:**

To implement Adapter Design Pattern using Accommodation management system.

**Code:**

**Hotel.java**

//Hotel class that only works with objects of class GeneralRoom

public class Hotel{

    public GeneralRoom gr;

    public GeneralRoom getGeneralRoom(){

        return gr;

    }

    public void setGeneralRoom(GeneralRoom gr){

        this.gr = gr;

    }

    public void allotRoom(String r){

        gr.allot(r);

    }

}

**GeneralRoom.java**

public class GeneralRoom{

    public void allot(String s) {

        System.out.println(s+": General");

    }

}

**LuxuryRoom.java**

//new class that is NOT compatible with Hotel class and its methods.

public class LuxuryRoom{

    public void allot(String s){

        System.out.println(s+": Luxury");

    }

}

**AdapterRoom.java**

//Adapter class to make the LuxuryRoom class compatible with the Hotel class

public class AdapterRoom extends GeneralRoom{

    LuxuryRoom lr = new LuxuryRoom();

    @Override

    public void allot(String s) {

        lr.allot(s);

    }

}

**Test.java**

public class Test {

    public static void main(String args[]){

        Hotel h = new Hotel();

        /\*  below code works perfectly fine, because object of type GeneralRoom

        is an attribute of the Hotel class.

        \*/

        GeneralRoom gr = new GeneralRoom();

        h.setGeneralRoom(gr);

        h.allotRoom("Room alloted");

        /\*  But below code cannot work because object of type LuxuryRoom

            is not an attribute of Hotel class.

        \*/

        // LuxuryRoom lr = new LuxuryRoom();

        // h.setGeneralRoom(lr);

        // h.allotRoom("Luxury Room alloted.");

        //  To solve this issue, we create and use the Adapter class

        AdapterRoom r1 = new AdapterRoom();

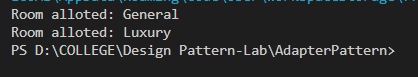
        h.setGeneralRoom(r1);

        h.allotRoom("Room alloted");

    }

}

**Output:**



**Class Diagram:**

