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**Assignment-13 (Memento Design Pattern)**

**Aim:**

To implement Memento Design Pattern using Accommodation management system.

**Code:**

**Memento.java**

// In memento class, we will basically store the name of current owner of the room

// (room is memento(object))

public class Memento{

    private String owner;

    public Memento(String owner){

        this.owner = owner;

    }

    public String getOwner(){

        return owner;

    }

}

**Originator.java**

// This class gets and sets values from current memento(object)

// also it creates new memento objects

public class Originator {

    private String owner;

    public void setOwner(String owner){

        this.owner = owner;

    }

    public String getOwner(){

        return owner;

    }

    public Memento saveOwnerToMemento(){

        return new Memento(owner);

    }

    public void getOwnerFromMemento(Memento memento){

        owner = memento.getOwner();

    }

}

**Caretaker.java**

// This class holds list of values for all versions of the mementos

// In this case, it holds the list of names of all owners of the room

import java.util.ArrayList;

import java.util.List;

public class Caretaker {

    private List<Memento> ownerList = new ArrayList<Memento>();

    public void add(Memento owner){

        ownerList.add(owner);

    }

    public Memento get(int index){

        return ownerList.get(index);

    }

}

**Test.java**

public class Test {

    public static void main(String args[]){

        Originator originator = new Originator();

        Caretaker caretaker = new Caretaker();

        originator.setOwner("Ravi");

        caretaker.add(originator.saveOwnerToMemento());

        originator.setOwner("Hrishikesh");

        caretaker.add(originator.saveOwnerToMemento());

        originator.setOwner("Kalp");

        System.out.println("Current Owner: "+originator.getOwner());

        originator.getOwnerFromMemento(caretaker.get(0));

        System.out.println("First Owner: "+originator.getOwner());

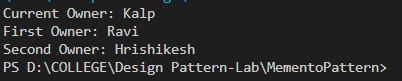
        originator.getOwnerFromMemento(caretaker.get(1));

        System.out.println("Second Owner: "+originator.getOwner());

    }

}

**Output:**



**Class Diagram:**

