设计模式测试

表格

编号	设计模式	Class/interface API	framework 完成分	Sample program	备注说明
1	Visitor	CommentsVisitor.visit(ScenicSpot scenicspot); CommentsVisitor.visit(ThemeDistrict themeDistrict); RecordVisitor.visit(ScenicSpot scenicspot); RecordVisitor.visit(ThemeDistrict themeDistrict);	70	30	
2	Command	AlarmShort.execute() AlarmLong.execute()	70	30	
3	Memento	undo() redo()	70	30	

测试

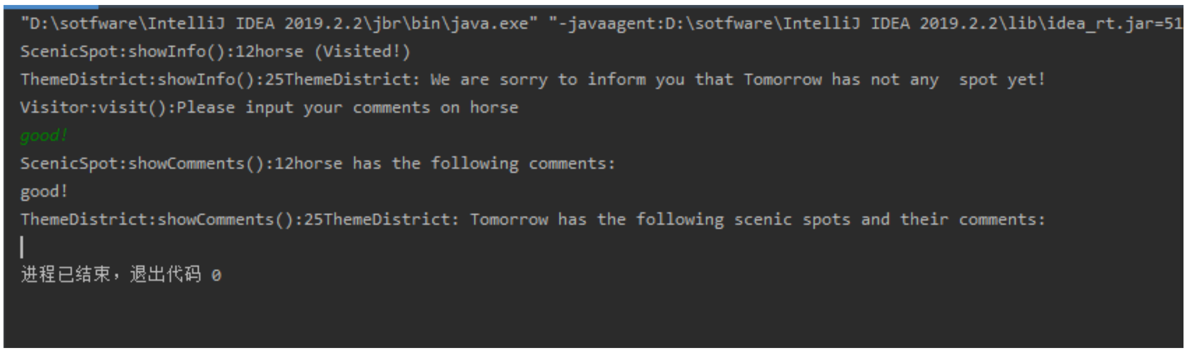
Visitor

测试代码

```
import CompositeAndVisitorAndIterator.*;

public class Main {
    public static void main(String[] args) {
        ScenicSpot scenicSpotA=new ScenicSpot("horse",false,"12") ;
        RecordVisitor recordVisitor=new RecordVisitor();
        recordVisitor.visit(scenicSpotA);
        ThemeDistrict themeDistrictB =new ThemeDistrict("Tomorrow",false,"25");
        recordVisitor.visit(themeDistrictB);
        CommentVisitor commentVisitor=new CommentVisitor();
        commentVisitor.visit(scenicSpotA);
        commentVisitor.visit(themeDistrictB);
    }
}
```

测试截图



```
"D:\sotfware\IntelliJ IDEA 2019.2.2\jbr\bin\java.exe" "-javaagent:D:\sotfware\IntelliJ IDEA 2019.2.2\lib\idea_rt.jar=51
ScenicSpot:showInfo():12horse (Visited!)
ThemeDistrict:showInfo():25ThemeDistrict: We are sorry to inform you that Tomorrow has not any  spot yet!
Visitor:visit():Please input your comments on horse
good!
ScenicSpot:showComments():12horse has the following comments:
good!
ThemeDistrict:showComments():25ThemeDistrict: Tomorrow has the following scenic spots and their comments:
|
进程已结束，退出代码 0
```

评价

对于Visitor设计模式的使用十分熟练。其将算法visit与其操作对象ScenicSpot和ThemeDistrict隔离开进行操作，将Visitor设计模式应用于乐园的不同景点以及次级主题公园的打卡评论功能。且其与Composite和Iterator两种设计模式的组合使用，能让其对整个组合模式树执行操作，同时极为方便的遍历复杂数据结构， 并对其中的元素执行所需操作。

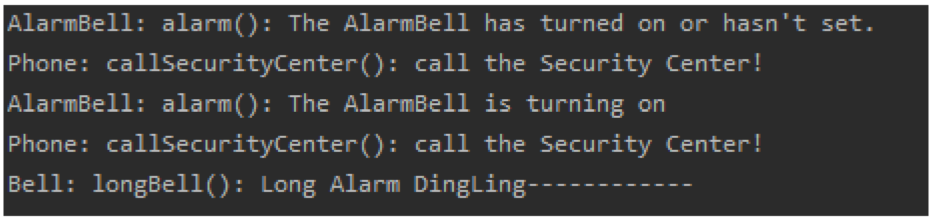
Command

测试代码

```java
import ObserverAndCommand.*;

public class testCommand {
    public static void main(String[] args) {
        AlarmSystem alarmSystem=new AlarmSystem();
        alarmSystem.addAlarmBellCommand("longBell");
        alarmSystem.open();
    }
}
```

测试截图



```
AlarmBell: alarm(): The AlarmBell has turned on or hasn't set.
Phone: callSecurityCenter(): call the Security Center!
AlarmBell: alarm(): The AlarmBell is turning on
Phone: callSecurityCenter(): call the Security Center!
Bell: longBell(): Long Alarm DingLing------------
```

评价S

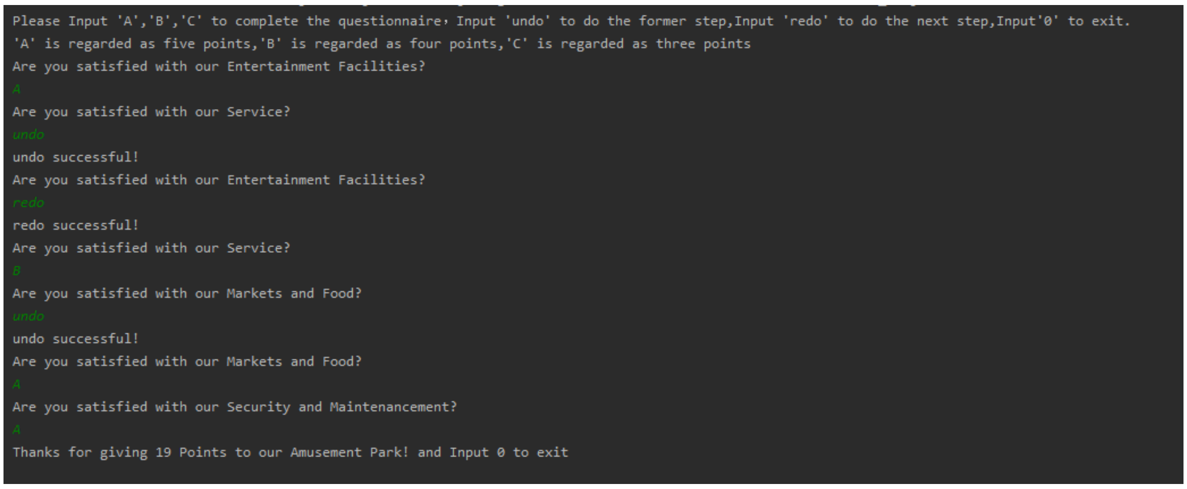
AlarmLong和AlarmShort命令继承自响铃命令抽象类BellCommand，响铃命令继承自命令抽象类Command。与Observer设计模式组合使用，可以动态地订阅或取消接收请求，并根据请求不同将方法参数化、 延迟请求执行或将其放入队列中。

Memento

测试代码

```java
import StateAndMemento.*;
public class testMemento {
    public static void main(String[] args) {
        Questionnaire questionnaire=new Questionnaire();
        questionnaire.fillInQuestionnaire();
    }
}
```

测试截图



```
Please Input 'A','B','C' to complete the questionnaire, Input 'undo' to do the former step,Input 'redo' to do the next step,Input'0' to exit.
'A' is regarded as five points,'B' is regarded as four points,'C' is regarded as three points
Are you satisfied with our Entertainment Facilities?
A
Are you satisfied with our Service?
undo
undo successful!
Are you satisfied with our Entertainment Facilities?
redo
redo successful!
Are you satisfied with our Service?
B
Are you satisfied with our Markets and Food?
undo
undo successful!
Are you satisfied with our Markets and Food?
A
Are you satisfied with our Security and Maintenancement?
A
Thanks for giving 19 Points to our Amusement Park! and Input 0 to exit
```

评价

将Memento模式应用于问卷调查，每回答一次问题会更新问卷的状态，并会把状态记录在Memento中。使用undo和redo来获取问卷的上一步/下一步状态。符合Memento设计模式的预期。