

國立雲林科技大學考試答案卷

No 0648572

第 1 頁

學年	學期	日期	考別	<input type="checkbox"/> 平時考 <input type="checkbox"/> 期中考 <input type="checkbox"/> 學期考
科目			評分	69-9
系所	資訊管理系	年級	IV	學號 B10323024
			姓名	賴育霖 Jim

```
public class Light {  
    public void on() {  
        System.out.println("Light is on");  
    }  
    public void off() {  
        System.out.println("Light is off");  
    }  
}
```

```
public class GarageDoor {  
    public void up() {  
        System.out.println("Garage Door is up");  
    }  
    public void down() {  
        System.out.println("Garage Door is down");  
    }  
    public void stop() {  
        System.out.println("Garage Door is stop");  
    }  
    public void lightOn() {  
        System.out.println("Garage Door is light on");  
    }  
    public void lightOff() {  
        System.out.println("Garage Door is light off");  
    }  
}
```

1. (cont).

```

public void off(){
    System.out.println("Garage Door is off");
}

```

}

```

public interface Command{
    public abstract void execute();
}

```

}

```

public class GarageDoorOpenCommand implements Command{
    Receiver garageDoor;
    GarageDoorOpenCommand(Receiver garageDoor){
        this.garageDoor = garageDoor;
    }
}

```

```

    public void execute(){
        garageDoor.up();
    }
}

```

}

```

public class LightOnCommand implements Command{
    Receiver receiver;
    LightOnCommand(Receiver receiver){
        this.receiver = receiver;
    }
}

```

```

    public void execute(){
        receiver.on();
    }
}

```

}

// Describe the important function of invoker

```
public void setCommand (Command command) {
    this.slot = command;
}
```

// Result

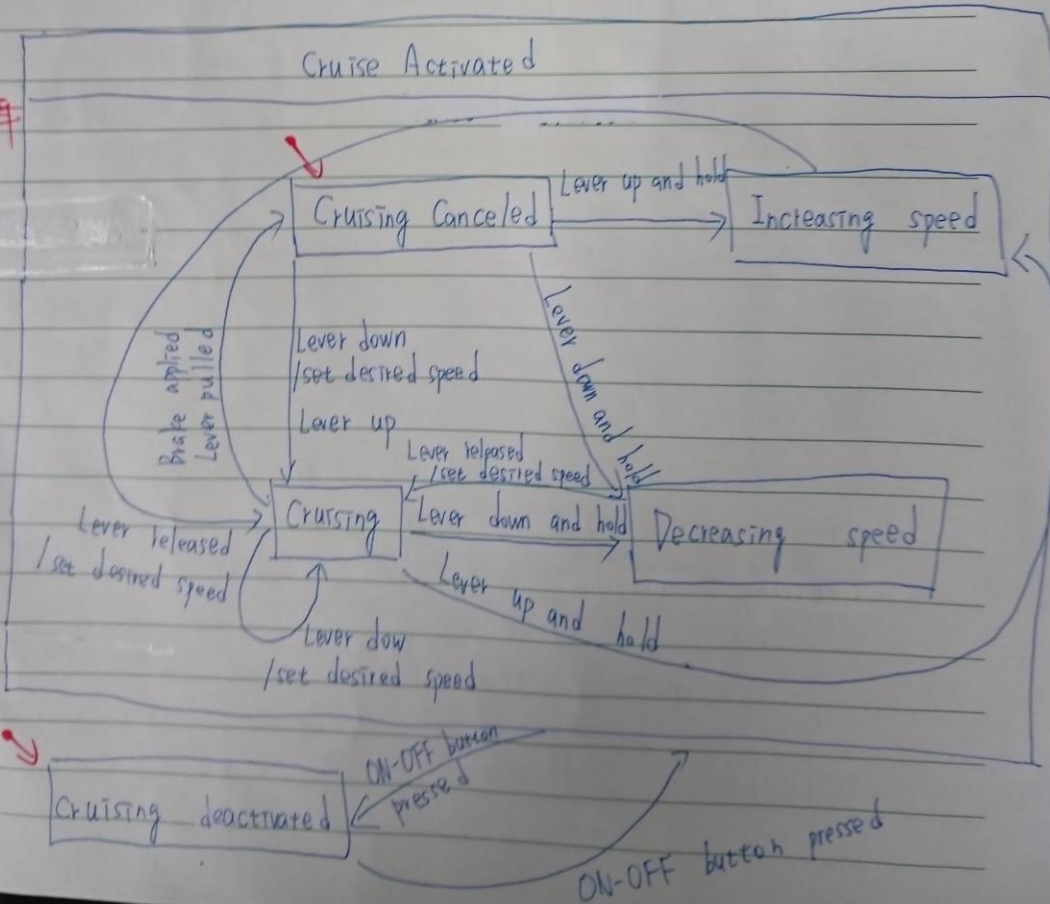
Light is on.

Garage Door is up.

2.

Cruise Activated

19



MZS

+2/
3-

1) Dead state

+4

We change table for ON-OFF button pressed of Cruise deactivated
is null. follow below.

Cruise deactivated	NA	NA	NA	NA	NA	NA	NA	NA	NA
--------------------	----	----	----	----	----	----	----	----	----

And Cruise deactivated can't convert to other state.
It's a dead state.

2) Unreachable state.

+4

We change table for ON-OFF button pressed of Cruise Activated.
is null. follow below.

C r u i s e A c t i v a t e d	Cruising canceled (init)								Cruise activated
	Cruising								
	Increasing speed								NA
	Decreasing speed								

Enter Cruise Activated, And then it will not enter
Cruising canceled, Nobody can go there.
Cruising canceled will be unreachable state.

國立雲林科技大學考試答案卷

No 0648573

第 1 頁

學年	學期	日期	考別	<input type="checkbox"/> 平時考	<input type="checkbox"/> 期中考	<input type="checkbox"/> 學期考
科目			評分			
系所	資訊管理系	年級	四	學號	B/0323024	姓名
				賴育熊 Jim		

is neglected event.

We change table for Lever up event. follow below.

Lever up
NA
NA
NA
NA
NA

It can't convert to other state.

It doesn't do everything.

So we can neglected.

And Lever up will be neglected event.

(4) impossible transition

We change table for Lever pulled event of Decreasing speed

Decreasing speed	NA	NA	NA	[speed > 100]	NA	NA	NA
				Crusing / set desired speed			

Assumed speed that max is 100.

We add condition for Lever pulled event of Decreasing speed. It over 100 speed, and it will decrease.

But max speed is 100, so condition never convert to true.

This transition will be impossible transition.

(5) Non deterministic transitions. +5

第 2 頁

We change Lever released event of Decreasing speed.
Add one state to there. Follow below.

Decreasing speed	NA	NA	NA	Cruising/ not desired speed	NA	NA	NA
				Increasing speed			

If We lever released in decreasing speed state.
We don't know where are we go. No matter go Cruising
or Increasing state it's sure.
So this transitions is non deterministic.

(6) redundant transitions. +0

We change Lever down event of Decreasing speed.

Decreasing speed	Decreasing Speed	NA	NA	Cruising	NA	NA	NA	Cruise deactivated
------------------	---------------------	----	----	----------	----	----	----	-----------------------

We lever down and the state will convert to itself.
It's not necessary.

This transition is redundant transitions.

(7) inconsistent transition +0

We change Lever down event of Decreasing speed.

Decreasing speed	[lastState = 1] Cruising	NA	NA	Cruising	NA	NA	NA	Cruise deactivating
	[lastState = 2] Increasing speed							

The same Decreasing speed state is different convert to lever down event.

It's a inconsistent transitions.

4.

class adapter's pros

We can choice adapter at the compile time.

class adapter's cons

In java can't use multi-inheritance.

It's not flexible to use. Because we don't change adapter at run time.

Objects adapter pros.

We can easy to change adapter at run time.

Objects adapter cons.

Maybe we use wrong adapter.