

## State Pattern

객체를 상태로 표현하여 그 상태를 변화시켜 행위를 변경.

[Architecture](#), [Modeling](#), [DesignPattern](#), [Behavioral](#)

전등을 On, Off 상태로 전환한다고 가정.

### State

```
public interface State {  
    void turnOn(Light light);  
    void turnOff(Light light);  
}
```

### ConcreteState

```
public enum OnState implements State {  
    INSTANCE; // Singleton  
  
    @Override  
    public void turnOn(Light light) {  
        System.out.println("Already turned on.");  
    }  
  
    @Override  
    public void turnOff(Light light) {  
        light.setState(OffState.INSTANCE);  
        System.out.println("Turned off!");  
    }  
}
```

```
public enum OffState implements State {  
    INSTANCE;  
  
    @Override  
    public void turnOn(Light light) {  
        light.setState(OnState.INSTANCE);  
        System.out.println("Turn on!");  
    }  
  
    @Override
```

```
public void turnOff(Light clock) {  
    System.out.println("Already turned off.");  
}  
}
```

## Context

State 전환을 하는 주체

```
public class Light {  
    private State state;  
  
    public Light() {  
        setState(OffState.INSTANCE);  
    }  
  
    public void setState(State state) {  
        this.state = state;  
        System.out.println(state.getClass().getName());  
    }  
  
    public void turnOn() {  
        this.state.turnOn(this);  
    }  
  
    public void turnOff() {  
        this.state.turnOff(this);  
    }  
}
```

## Client

```
public class Client {  
    public static void main(String... args) {  
        Light light = new Light();  
        light.turnOff();  
        light.turnOn();  
        light.turnOn();  
        light.turnOff();  
    }  
}
```

```
designpattern.flyweight.OffState  
Already turned off.  
designpattern.flyweight.OnState  
Turn on!  
Already turned on.  
designpattern.flyweight.OffState  
Turned off!
```

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