# Smart Home Model Case Study

## 1.User.java

```java
package com.smarthome.model;

import org.springframework.stereotype.Component;

@Component
public class User {
    private String name = "Alice";
    private String homeId = "H123";


    public String getName() { return name; }
    public String getHomeId() { return homeId; }
}
```

## 2.Device.java

```java
package com.smarthome.model;


import org.springframework.stereotype.Component;


@Component
public class Device {
    private String deviceType = "AC";
    private String status = "OFF";

    public void turnOn() {
        status = "ON";
        System.out.println(deviceType + " is now ON.");
```

```java
    }
}
```

# 3.AutomationService.java

```java
package com.smarthome.service;

import com.smarthome.model.Device;

import com.smarthome.model.User;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

@Service

public class AutomationService {


    @Autowired

    private User user;


    @Autowired

    private Device device;


    public void controlDevice() {

        System.out.println(user.getName() + " is turning on the device.");

        device.turnOn();

    }

}
```

# 4.AppConfig.java

```java
package com.smarthome.config;


import org.springframework.context.annotation.ComponentScan;
```

```java
import org.springframework.context.annotation.Configuration;


@Configuration
@ComponentScan(basePackages = "com.smarthome")
public class AppConfig {
}
```

## 5.MainApp.java

```java
package com.smarthome.main;

import com.smarthome.config.AppConfig;

import com.smarthome.service.AutomationService;

import org.springframework.context.annotation.AnnotationConfigApplicationContext;

public class MainApp {
    public static void main(String[] args) {
        AnnotationConfigApplicationContext context =
            new AnnotationConfigApplicationContext(AppConfig.class);


        AutomationService service = context.getBean(AutomationService.class);
        service.controlDevice();


        context.close();
    }
}
```