

```
import 'dart:io';

void main() {
  const int minTemp = 15;
  const int maxTemp = 30;

  bool lightsOn = false;
  int thermostat = 20;
  bool securityArmed = false;

  print('Welcome to the Smart Home System!');

  while (true) {
    print('\nPlease choose an action:');
    print('1. Toggle lights');
    print('2. Set thermostat temperature');
    print('3. Arm/disarm security system');
    print('4. View system status');
    print('5. Exit');
    stdout.write('\nEnter your choice: ');
    String? choice = stdin.readLineSync();

    if (choice == null) continue;

    switch (choice) {
      case '1':
        lightsOn = !lightsOn;
        print('Lights are now ${lightsOn ? "ON" : "OFF"}');
        break;

      case '2':
        stdout.write('Set thermostat temperature ($minTemp°C - $maxTemp°C): ');
```

```
String? input = stdin.readLineSync();
```

```
if (input == null) break;
```

```
int? newTemp = int.tryParse(input);
```

```
if (newTemp == null) {
```

```
    print('Invalid input! Please enter a number.');
```

```
} else if (newTemp < minTemp || newTemp > maxTemp) {
```

```
    print('Temperature must be between $minTemp°C and $maxTemp°C.');
```

```
} else {
```

```
    thermostat = newTemp;
```

```
    print('Thermostat set to $thermostat°C.');
```

```
}
```

```
break;
```

```
case '3':
```

```
    stdout.write(
```

```
        'Do you want to arm (1) or disarm (0) the security system? ');
```

```
    String? secInput = stdin.readLineSync();
```

```
    if (secInput == '1') {
```

```
        securityArmed = true;
```

```
        print('Security system ARMED.');
```

```
    } else if (secInput == '0') {
```

```
        securityArmed = false;
```

```
        print('Security system DISARMED.');
```

```
    } else {
```

```
        print('Invalid input! Enter 1 to arm or 0 to disarm.');
```

```
    }
```

```
    break;
```

```
case '4':
```

```
    print('\nSystem Status:');
```

```

String lightStatus = lightsOn ? 'ON' : 'OFF';

String securityStatus =
    securityArmed ? 'ARMED'.toUpperCase() : 'DISARMED'.toUpperCase();

// FizzBuzz-like condition for temperature
String dayStatus = "";
if (thermostat % 3 == 0 && thermostat % 5 == 0) {
    dayStatus = 'Perfect Day';
} else if (thermostat % 3 == 0) {
    dayStatus = 'Cool Day';
} else if (thermostat % 5 == 0) {
    dayStatus = 'Warm Day';
}

print('Lights: $lightStatus');
print(
    'Thermostat: $thermostat°C ${dayStatus.isNotEmpty ? dayStatus : ""}');
print('Security System: $securityStatus');
break;

case '5':
    print('Exiting the system. Goodbye!');
    return;

default:
    print('Invalid choice. Please enter a number between 1 and 5.');
```