import java.util.Scanner;

public class HomeAutomation {

private boolean lightsOn;

private int thermostatTemperature;

private boolean securitySystemArmed;

public HomeAutomation() {

lightsOn = false;

thermostatTemperature = 72; // default temperature in Fahrenheit

securitySystemArmed = false;

}

public void toggleLights() {

lightsOn = !lightsOn;

System.out.println("Lights are now " + (lightsOn ? "ON" : "OFF"));

}

public void setThermostat(int temperature) {

thermostatTemperature = temperature;

System.out.println("Thermostat set to " + thermostatTemperature + "°F");

}

public void armSecuritySystem() {

securitySystemArmed = true;

System.out.println("Security system is now ARMED");

}

public void disarmSecuritySystem() {

securitySystemArmed = false;

System.out.println("Security system is now DISARMED");

}

public void showStatus() {

System.out.println("Home Automation System Status:");

System.out.println("Lights: " + (lightsOn ? "ON" : "OFF"));

System.out.println("Thermostat: " + thermostatTemperature + "°F");

System.out.println("Security System: " + (securitySystemArmed ? "ARMED" : "DISARMED"));

}

public static void main(String[] args) {

HomeAutomation home = new HomeAutomation();

Scanner scanner = new Scanner(System.in);

while (true) {

System.out.println("\nHome Automation System Menu:");

System.out.println("1. Toggle Lights");

System.out.println("2. Set Thermostat");

System.out.println("3. Arm Security System");

System.out.println("4. Disarm Security System");

System.out.println("5. Show Status");

System.out.println("6. Exit");

System.out.print("Enter your choice: ");

int choice = scanner.nextInt();

switch (choice) {

case 1:

home.toggleLights();

break;

case 2:

System.out.print("Enter desired temperature: ");

int temperature = scanner.nextInt();

home.setThermostat(temperature);

break;

case 3:

home.armSecuritySystem();

break;

case 4:

home.disarmSecuritySystem();

break;

case 5:

home.showStatus();

break;

case 6:

System.out.println("Exiting...");

scanner.close();

return;

default:

System.out.println("Invalid choice. Please try again.");

}

}

}

}