

A Minimal Home Automation System

Description

A minimal home automation application using the Command Pattern to control devices such as lights, thermostats, and door locks. The application allows users to execute commands to change the state of these devices, and prints the current state of devices before exiting.

Components and Pattern Usage:

1. Command Interface (Command.java):

- Defines the execute method that concrete command classes implement. Provides a common interface for all commands, enabling them to be executed uniformly.

2. Concrete Commands (LightCommand.java, ThermostatCommand.java, DoorLockCommand.java):

- Implement the Command interface to perform specific actions (turning on/off lights, setting thermostat temperature, locking/unlocking doors). Encapsulates the request as an object, allowing parameterization and easy execution of different commands.

3. CommandInvoker (CommandInvoker.java):

- Manages command execution and stores the current state of commands. Invokes commands and maintains a list of commands for execution.

4. Main Application (Main.java):

- Provides a user interface for interacting with the system, executing commands, and viewing current device states. Demonstrates how the Command Pattern can be applied to manage device states and user interactions.

Pattern Usage :

Encapsulates requests as command objects. Each command is executed through a common interface, facilitating flexible management and execution of different commands.

Features:

- User selects and executes commands for controlling devices.
- Current state of devices is printed before the application exits.

