

Output

The screenshot displays the Eclipse IDE interface. The Project Explorer on the left shows a project named 'Facade pattern' with a source folder 'src' containing several Java files. The main editor window shows the 'HomeTheaterTestDrive.java' file, which implements the Facade pattern. The code defines a 'package facade;' and a 'public class HomeTheaterTestDrive' with a 'main' method that instantiates various components like 'Amplifier', 'Tuner', 'DvdPlayer', 'CdPlayer', 'Projector', 'TheaterLights', and 'Screen'. The Console window at the bottom shows the output of the program, which simulates a home theater system's startup and shutdown sequence.

```
1 package facade;
2
3 public class HomeTheaterTestDrive {
4     public static void main(String[] args) {
5         // instantiate components here
6         Amplifier amp = new Amplifier("Top-O-Line Amplifier");
7         Tuner tuner = new Tuner("Top-O-Line AV/FM Tuner", amp);
8         DvdPlayer dvd = new DvdPlayer("Top-O-Line DVD Player", amp);
9         CdPlayer cd = new CdPlayer("Top-O-Line CD Player", amp);
10        Projector projector = new Projector("Top-O-Line Projector", dvd);
11        TheaterLights lights = new TheaterLights("Theater Ceiling Lights");
12        Screen screen = new Screen("Theater Screen");
13    }
14 }
```

Console Output:

```
<terminated> HomeTheaterTestDrive [Java Application] C:\Users\dunga002\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220805-1047\jre\bin\javaw.exe (Oct 4, 2022, 10:47 AM)
Get ready to watch a movie...
Popcorn Popper on
Popcorn Popper popping popcorn!
Theater Ceiling Lights dimming to 10%
Theater Screen going down
Top-O-Line Projector on
Top-O-Line Projector in widescreen mode (16x9 aspect ratio)
Top-O-Line Amplifier on
Top-O-Line Amplifier setting DVD player to Top-O-Line DVD Player
Top-O-Line Amplifier surround sound on (5 speakers, 1 subwoofer)
Top-O-Line Amplifier setting volume to 5
Top-O-Line DVD Player on
Top-O-Line DVD Player playing "Star wars"
Shutting movie theater down...
Popcorn Popper off
Theater Ceiling Lights on
Theater Screen going up
Top-O-Line Projector off
Top-O-Line Amplifier off
Top-O-Line DVD Player stopped "Star wars"
Top-O-Line DVD Player eject
Top-O-Line DVD Player off
```