

Course : Object Oriented Analysis & Design

Course code: CSCI 5448

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Hardware Rental Store

Language : Java 8

Environment : Eclipse IDE , Junit4 library

Program Design:

1. Factory Pattern implemented to create instances of Customers , Tools and AddOnTools based on type.
2. Decorator pattern implemented in such a way that , AddOnDecorator has an instance of Tool which means it decorates a Tool instance.
 - a. Tool instance in AddOnDecorator can be actual Tool like Painting,Plumbing etc . or it can be an instance of Decorated Tool (Basically an AddOnDecorator holding an actual Tool instance).
3. Object Pool Design implemented to maintain inventory of all categories of tools.
4. MyUnitTest.java file contains 10 test cases, which tests various important methods across the project.
Unit Test cases output snapshot is provided at the end of this pdf.

Assumptions:

1. All the tools in a rental are rental for same number of days.
2. At the time of renting itself, number of nights that the tools is being rented for is mentioned.

OUT File Details:

1. Inventory with types of tools are printed.
2. For days from 1 to 34
 - a. Which customer comes to store and rental details are printed
 - b. Price of the rental also printed
 - c. Total price store made for that particular day is also printed.

3. At the end of file, we have Summary of 34 transactions which contains total completed rentals along with each customer type and also overall profit made by store.

Junit test cases result:

