ZETECH UNIVERSITY

FINAL YEAR PROJECT ON

INVENTORY MANAGEMENT FOR FURNITURE SHOP

SUBMITTED BY

IATSIA MORRIS KEDOGO

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DIPLOMA IN COMPUTER SCIENCE

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DECLARATION

I hereby declare that the work contained in this report project in Inventory management System, is my Original work done under the supervision of Mrs. Hellen “my teacher”. The work has been submitted to Zetech University as part of the requirement to award a diploma certificate in Computer Science

ILATSIA MORRIS KEDOGO

DCS-01-8195/20

Acknowledgement

This task would be incomplete without the dedication and support from my family classmates and teachers who kept me going through this tough period. So before we go further, I would like to give my heartfelt thanks to people whose constant guidance, support and encouragement made this work successful. When I started the project towards its completion i have been fortunate to have help, support and encouragement from many people to which I would like send my gratitude and acknowledge them for their cooperation**.**

First and foremost I would like to thank Mr. Titus Njiru for not only introducing as to this project but also guiding as till the end of it. Secondly my supervisor Mrs. Hellen for always being there to guide as though the project. Thirdly I would like to thank Mr. Fransis Mutuku for guiding me though java Mr. Gitonga Munyi for guiding me through the documentation and presentation of the user interface and Mr. Samuel Kimathi for helping me understand more about the ssl protocols. Finally I would like to thank the ICT department (from the HOD to the subordinate staff) for making sure that we had all the things required to be able to tackle this technical skills and improve our skills day by day and Zetech University for giving me the privillage to being a student in this school.

Abstract

Without proper inventory management its more likely for you to fall out of favor in this competitive era. Consumers nowadays are more demanding and managing inventory better come in handy to help in better service delivery and more customer satisfaction. Most SMEs fall prey to big enterprises due poor management of their inventory and end up loosing their businesses and clients at large

This project is aimed at developing a desktop based application named Inventory Management System for managing the inventory system of any organization. The Inventory Management System (IMS) refers to the system and processes to manage the stock of organization with the involvement of Technology system. This system can be used to store the details of the inventory, stock maintenance, update the inventory based on the sales details, generate sales and inventory report daily or weekly based. This project is categorize individual aspects for the sales and inventory management system. In this system we are solving different problem affecting to direct sales management and purchase management. Inventory Management System is important to ensure quality control in businesses that handle transactions resolving around consumer goods.

Inventory Management System is also on important means of automatically tracking large stock. An automated Inventory Management System helps to minimize the errors while recording the stock

Inventory Management system

Introduction

Its quite clear how important inventory is to the growth of any business. While its seams hard to maintain inventory especially when handling large stock, most companies have many workers that help to fulfill the inventory management requirements. Employing these experienced personnel is quite expensive and unless you are a big organization you may not be able to afford these services. Furthermore as much as humans try to keep these records accurate , they are not that efficient and in the long run they are prone to make a mistake.

If we move from the large organizations the Small and Medium Enterprises are worse. There management of inventory is poor for those who have but most small and medium Enterprises don't manage there inventory. These makes them to incur a lot of losses without even knowing the cause.

SMEs being the ones that determine the growth of the economy of any country and also where most innovative ideas begin its important that we help them better manage inventory. This is the reason why I came up with an inventory management system.

Primary Objectives

- To help smes manage inventories efficiently
- To help keep track of inventories

Secondary Objectives

- Provide better security for inventory
- To provide a better storage of inventory

Features of the project

This application is used to show the stock remaining and details about the sales and purchase. It gives the details about the stock on daily based and weekly based. The details components are described below:

Add stock

We can create stock if we need to extend or we have more than one stock. We can create the stock along with the date.

Sales details

It show the details about the sales and the remaining stock of sales. It also show the details about thesales in return.

Purchase details

It shows the details about the purchase made by the organization along with the price and dates.

Generate Report details

It generate the purchase report of any months.

Scope of the Application

Inventory Management System (IMS) is targeted to the small or medium organization which doesn't have many go down or warehouses i.e. only to those organization that has single power of authority. Some of the scope are: Only one person is responsible in assigning the details or records. It is security driven. Go down can be added as per the requirement.

Determination of economic order quantity:

Economic order quantity or economic lot size refers to that number ordered in a single purchase or number of units should be manufactured in a single run, so that the total costs ordering or set up costs and inventory carrying costs are at the minimum. So, the determination of Economic Order Quantity is also within the scope of inventory control. Effectiveness towards running of store: The determination of policies of the location, layout and materials and storage handling equipment certainly help in the effective working of stores organization.

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System Analysis

The Theoretical Background

Architecture

This desktop based application is based on 3-tier architecture of .Net Framework. The3-tier includes the three hierarchy of the flow of programming logic from user interface to database and again database to user interface with the desired information requested by the clients. In between there involves the logic layer for effectively and correctly manipulating the request. The 3-tier includes the following

Client tier

The visual part is implemented using all kinds of swing components, which does not make database calls. The main function of this tier is to display information to the

user upon user's request generated by user's inputs such as firing button events. For example, inventory list will display when user click "display" butt

on if he or she wants to know the list of stock remaining in the organization.

Business tier

The middle tier, business logic, is called by the client to make database queries.
It provides core function of the system as well as connectivity to the data tier, whichsimplify tasks that were done by the clients tier

Data tier

Data layer is also the class which gets the data from the business tier and sends it to the database or gets the data from the database and sends it to business tier. This is the actual DBMS access layer or object layer also called the business object. The

database backend stores information which can be retrieved by using the mysql databaseConnectivity. MySQL database connectivity is used to manage the
commi=unication between the middle tier and the backend database by issuing complex databasequeries

IMS requirements

The goal for the application is to manage the inventory management function of the organization. Once it is automated all the functions can be effectively managed and the organization can achieve the competitive advantage. Business requirement are discussed in the Scope section, with the following additional details:

- Helps to search the specific product and remaining stock.
- Details information about the product sales and purchase.
- Brief Information of the organization todays status in terms of news, number of present inventory as per the date entered.
- It helps to identify the total presented inventory in the company

Limitations of Existing Project

Due to limited time and proper resources I was not able to conduct proper research, in order to well explain the extent of the problems experienced by SMEs in managing the inventories. Here are some of the limitations of the system.

- This software application is able to generate only simple reports.
- Single admin panel is only made.
- It is not suitable for large organization.
-

Advantages of Proposed System

Inventory management system is a simple Desktop application suitable for small furniture shop . the System can also be modified for use by other small enterprises.
It has every features which are used by small organization. The system is capable of update, insert and delete the item as per the requirement. This application also provides a simple report

on daily basis to know the daily sales and purchase details. This application matches for small organization where there small limited if godwoms. Through it has some limitations, I strongly believes that the implementation of this system will surely benefit the organization.

User requirements

Admin

- Able to create new godwom along with date.
- Able to edit the entry as per entry.
- Able to add, modify and delete the stock entry.

Inventory management

- Able to check the stock available
- Able to check the balance payment.
- Able to view the remaining sales stock

Feasibility Study

Economic Feasibility

The system is estimated to be economically affordable. The system is medium scale desktop application and has affordable price. The benefits include increased efficiency, effectiveness, and the better performance. Comparing the cost and benefits the system is found to be economically feasible.

Technical Feasibility

Development of the system requires tools like:

- Java netbaens
- Mysql or xamp

Operational Feasibility

The system provides better solution to the libraries by adding the typical requirement and necessities. The solution provided by this system will be acceptable to ultimate solution for the stock management.

Schedule Feasibility

The organized schedule for the development of the system is presented in the schedule sub-section. The reasonable timeline reveals that the system development can be finished on desired time framework

Background Knowledge

Basic computer skills

Software and hardware requirements

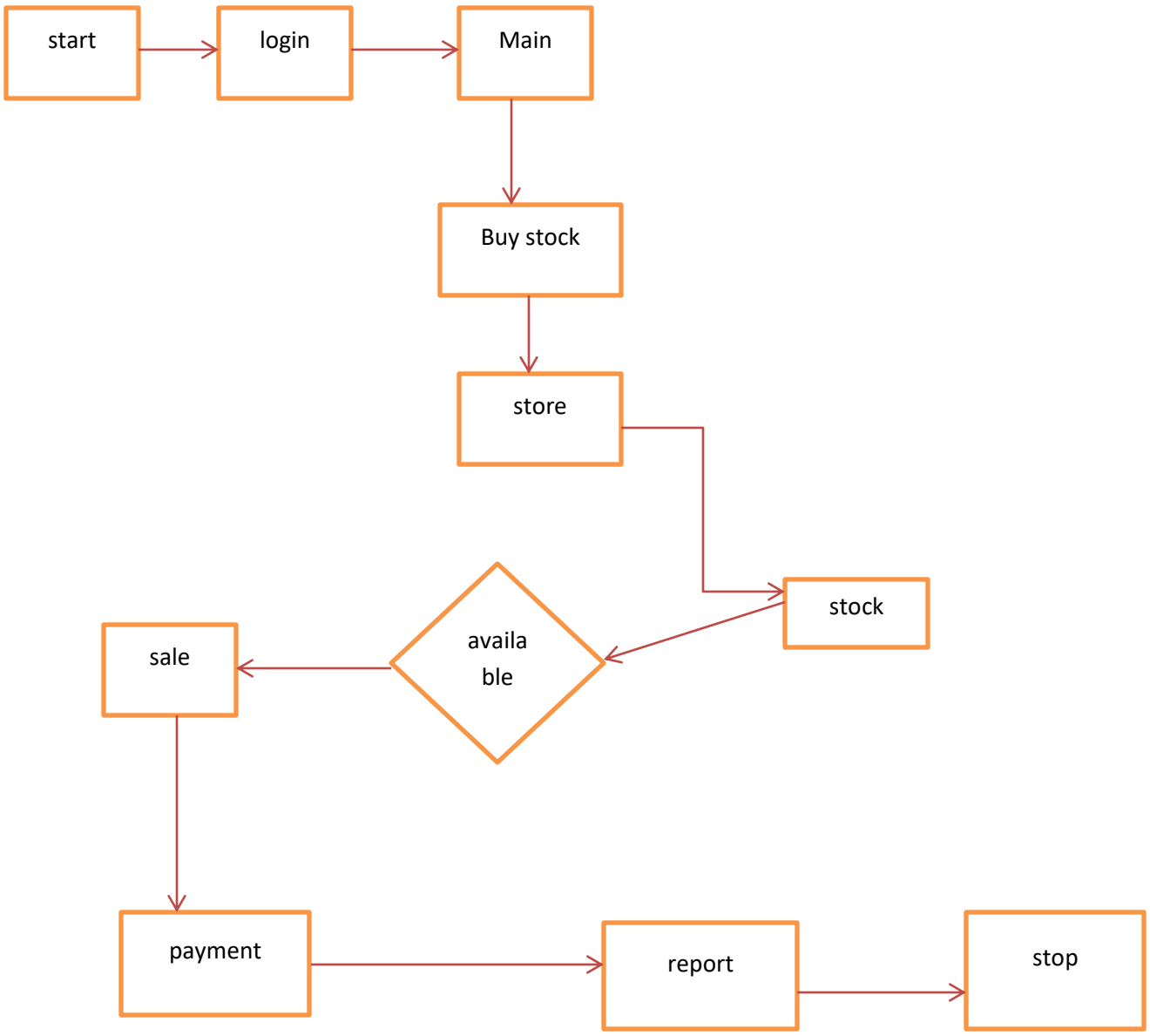
- Computer
- Java IDE preferably netbeans
- Java runtime environment

Justification of technology

Technology is more efficient as compared to humans. Its more easy to retrieve data stored in a database as compared to that stored in a ledger book. The authentications in computer ensure that data stored in it is not tampered with. It is also much easier to track progress or loss. In short technology has more benefits as compared to the traditional ways of keeping records.

System design

Process flow diagram



Use case diagram

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cases

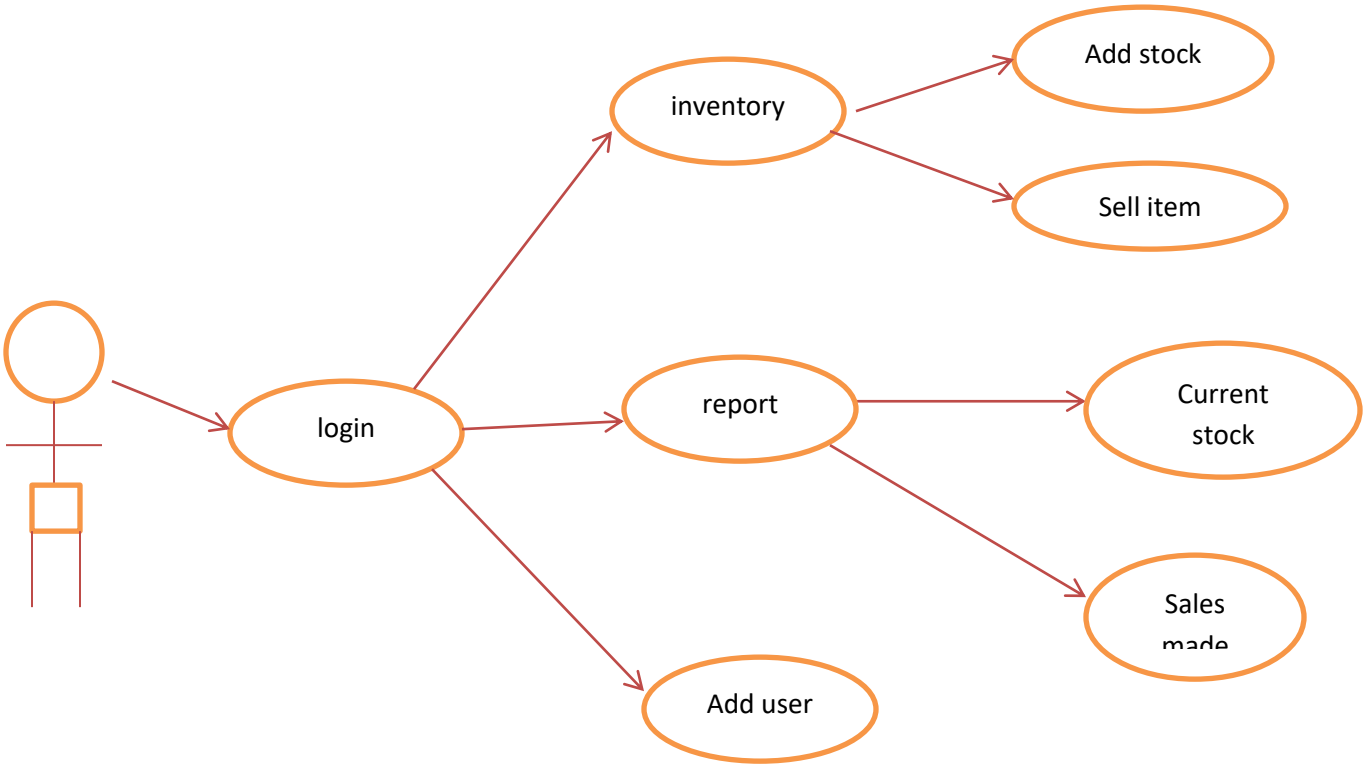
A use case describes a sequence of actions that provide something of measurable value to an actor and is drawn as a horizontal ellipse.

Actor

An actor is a person, organization or external system that plays a role in one or more interactions with the system

System boundary boxes (optional)

A rectangle is drawn around the use case called the system boundary box to indicate scope of the system.

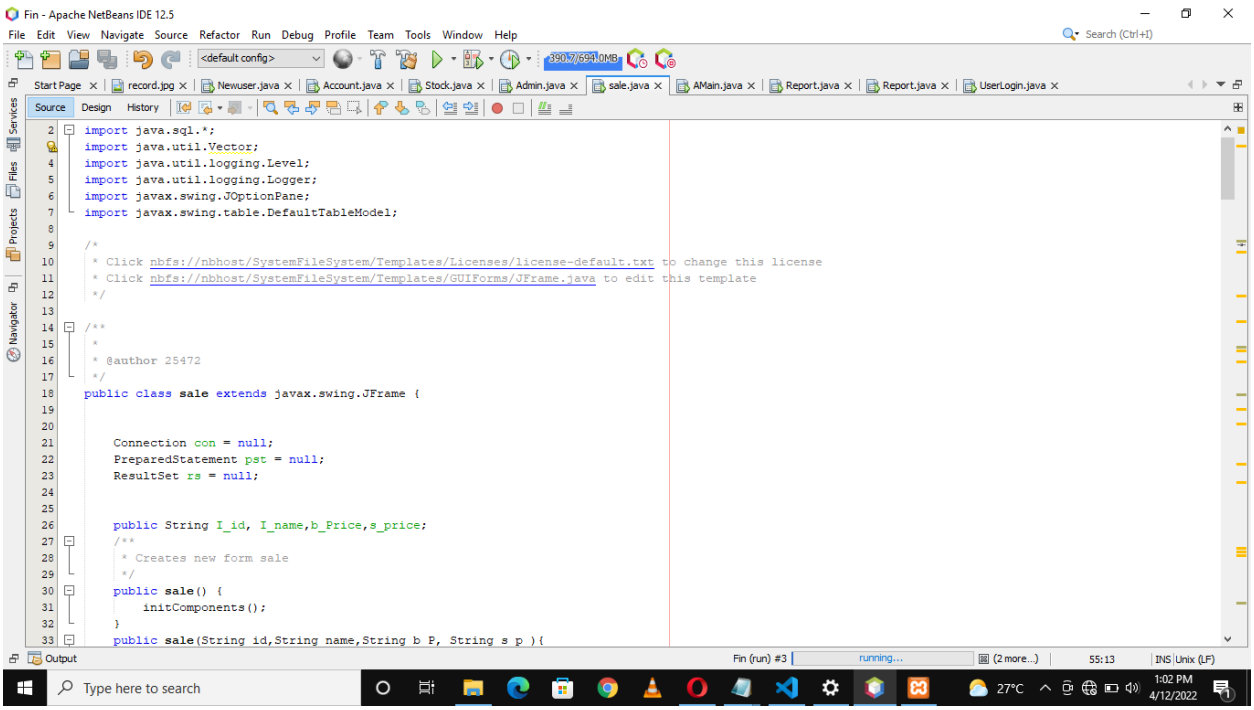


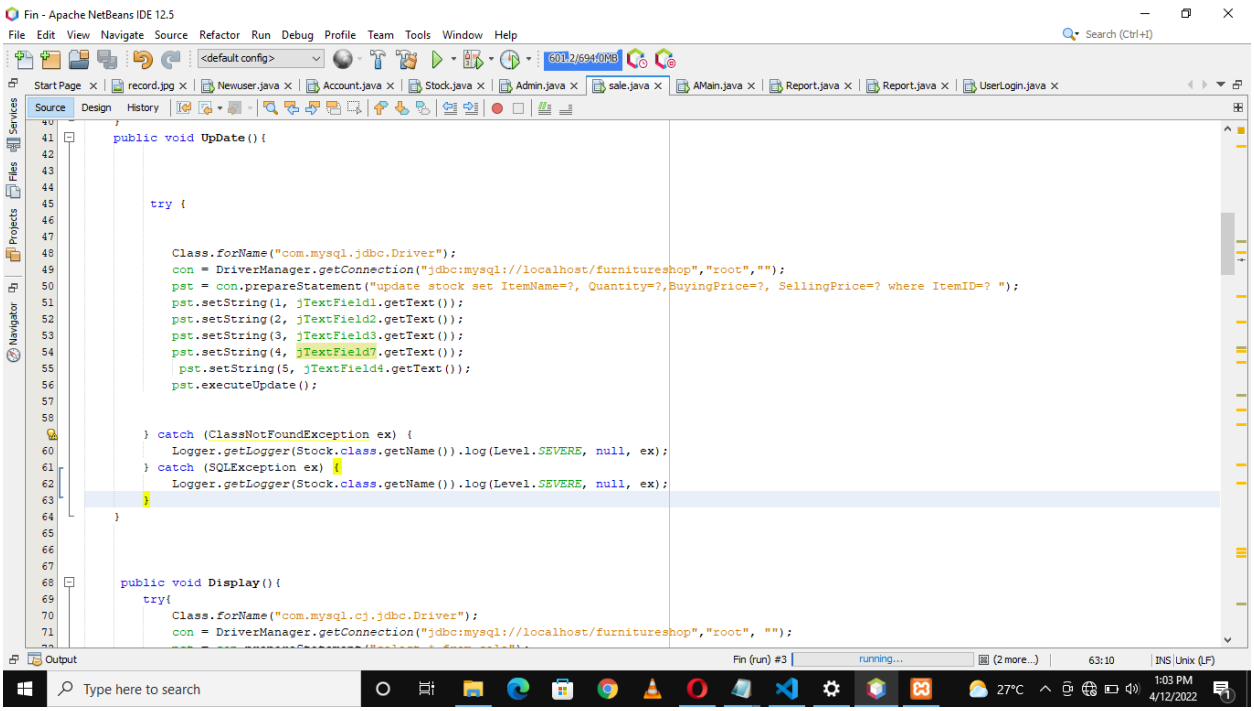
System Implementation

Application Code Structure
Inventory Management System was designed using Java as mentioned earlier following the three tier application architecture: I found that I could better express my logic using the language because it provided me with the necessary tools to accomplish my goals.

Logic
Logic is the main component of any application portrayed through the code. Every modules in the application includes logic. Most of the logic are common and understandable as we call 3-tier architecture based system

Login and validation code

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File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Start Page | record.jpg | Newuser.java | Account.java | Stock.java | Admin.java | sale.java | AMain.java | Report.java | Report.java | UserLogin.java
Source Design History
public void UpDate(){
try {
Class.forName("com.mysql.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost/furnitureshop","root","");
pst = con.prepareStatement("update stock set ItemName=?, Quantity=?,BuyingPrice=?, SellingPrice=? where ItemID=? ");
pst.setString(1, jTextField1.getText());
pst.setString(2, jTextField2.getText());
pst.setString(3, jTextField3.getText());
pst.setString(4, jTextField7.getText());
pst.setString(5, jTextField4.getText());
pst.executeUpdate();
} catch (ClassNotFoundException ex) {
Logger.getLogger(Stock.class.getName()).log(Level.SEVERE, null, ex);
} catch (SQLException ex) {
Logger.getLogger(Stock.class.getName()).log(Level.SEVERE, null, ex);
}
}
public void Display(){
try{
Class.forName("com.mysql.cj.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost/furnitureshop","root", "");
Output
Fin (run) #3
running...
(2 more...)
63:10
INS Unix (LF)
Type here to search
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1:03 PM
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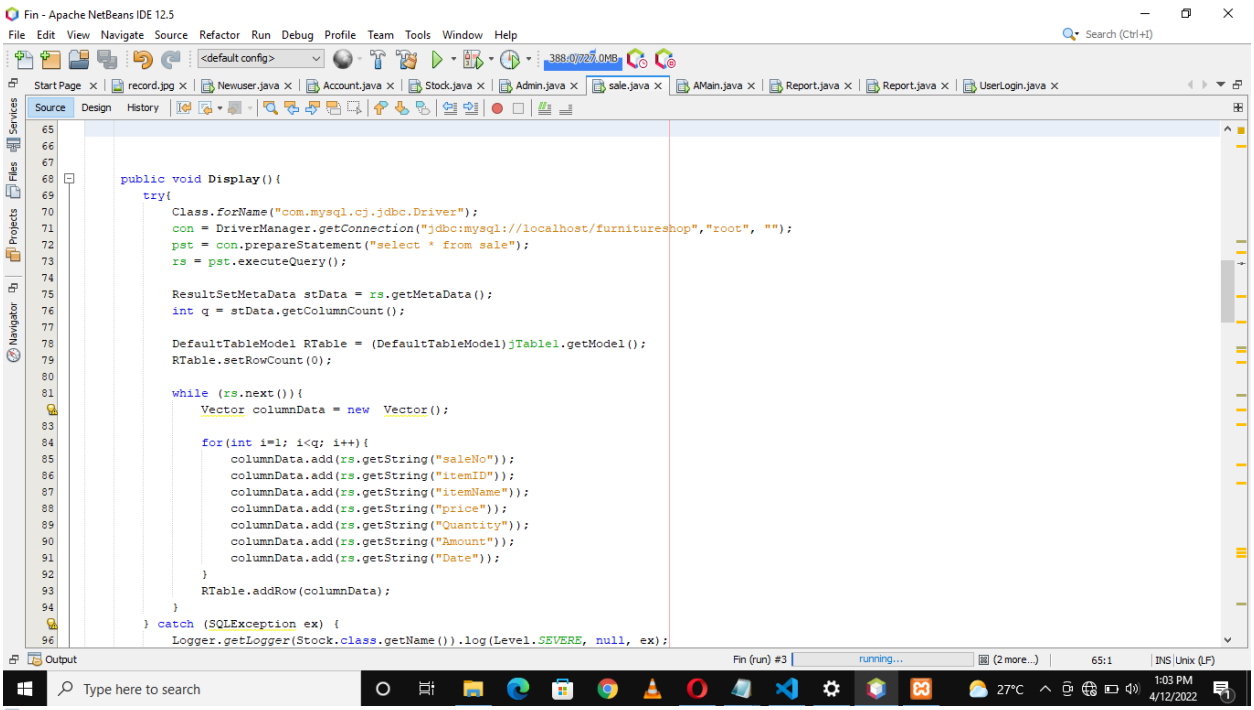
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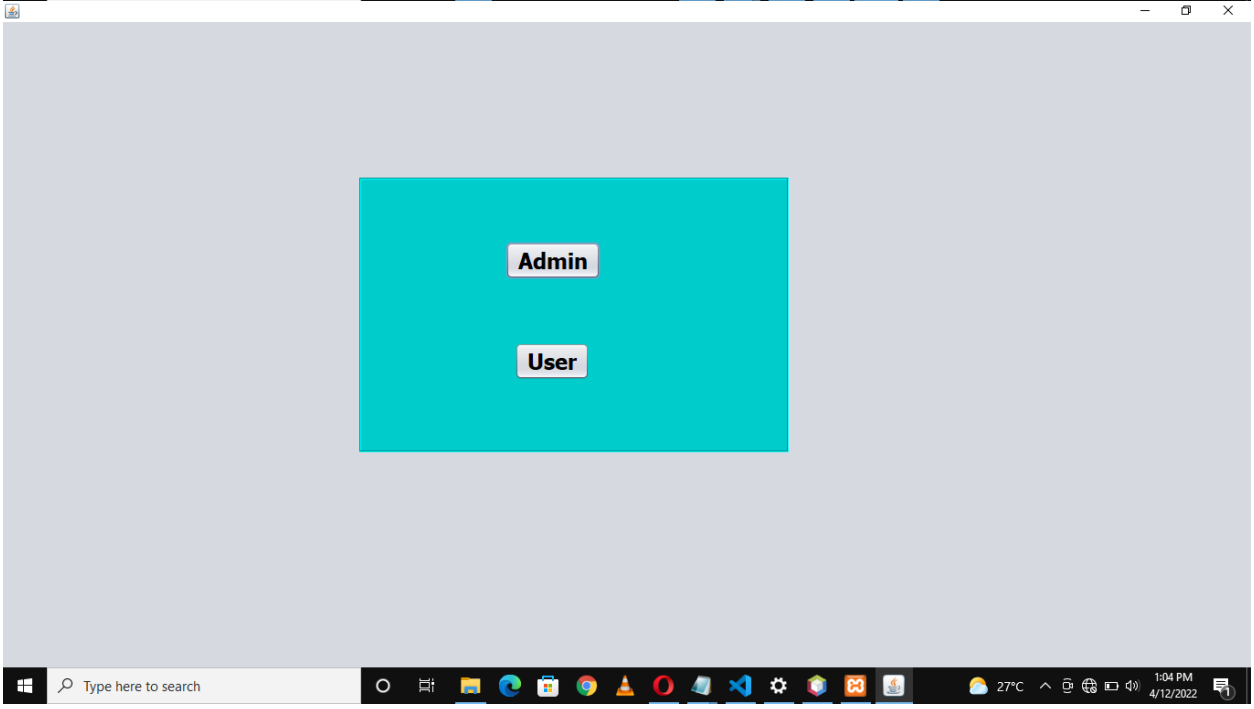
Source Design History
Services Files Projects Navigator
65
66
67
68 public void Display(){
69 try{
70 Class.forName("com.mysql.cj.jdbc.Driver");
71 con = DriverManager.getConnection("jdbc:mysql://localhost/furnitureshop","root", "");
72 pst = con.prepareStatement("select * from sale");
73 rs = pst.executeQuery();
74
75 ResultSetMetaData stData = rs.getMetaData();
76 int q = stData.getColumnCount();
77
78 DefaultTableModel RTable = (DefaultTableModel)jTable1.getModel();
79 RTable.setRowCount(0);
80
81 while (rs.next()){
83
84 for(int i=1; i<q; i++){
85 columnData.add(rs.getString("saleNo"));
86 columnData.add(rs.getString("itemID"));
87 columnData.add(rs.getString("itemName"));
88 columnData.add(rs.getString("price"));
89 columnData.add(rs.getString("Quantity"));
90 columnData.add(rs.getString("Amount"));
91 columnData.add(rs.getString("Date"));
92 }
93 RTable.addRow(columnData);
94 }
96 } catch (SQLException ex) {
Logger.getLogger(Stock.class.getName()).log(Level.SEVERE, null, ex);
Output
Fin (run) #3
running...
(2 more...)
65:1
INS Unix (LF)
Type here to search
27°C
1:03 PM
4/12/2022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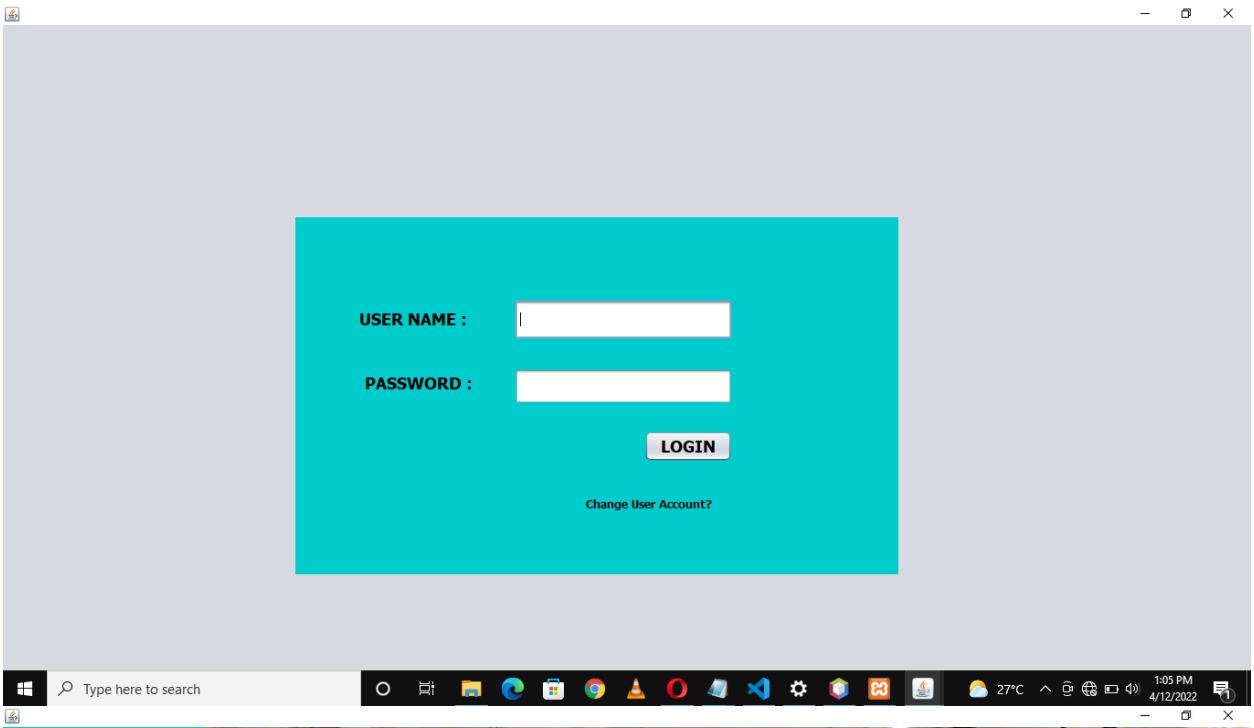

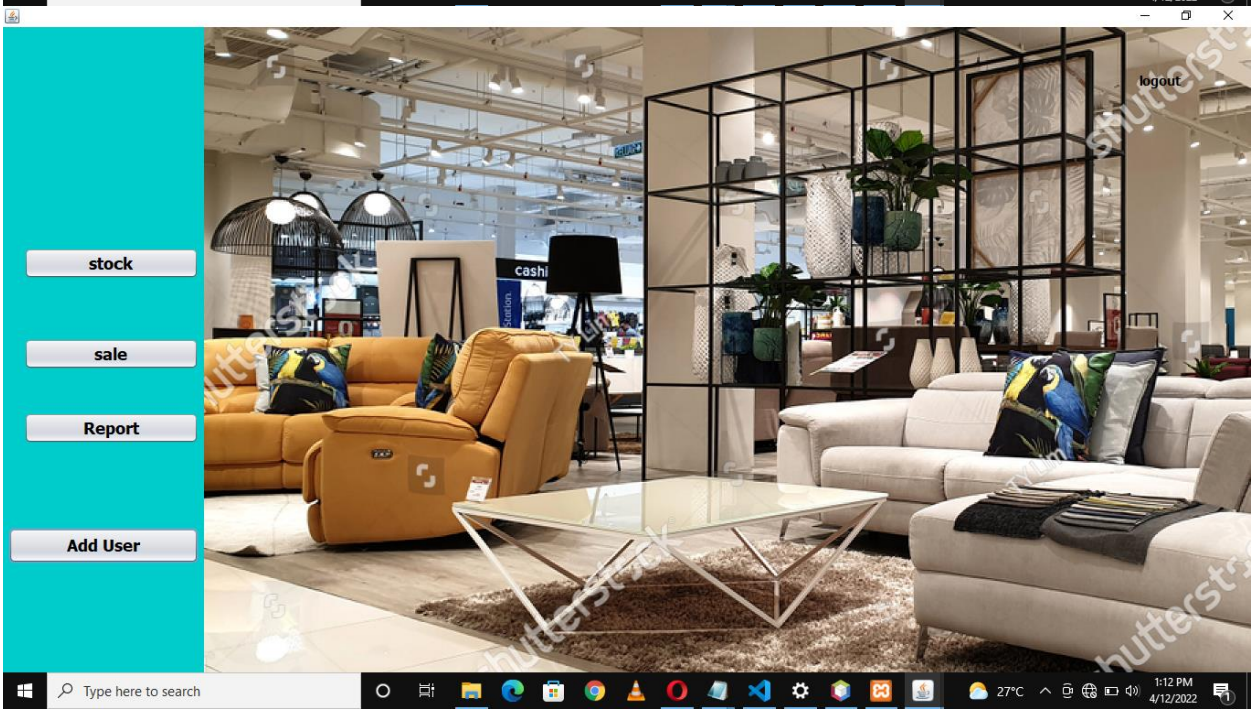

Testing

Unit testing

This type of testing is the testing of individual software components. It was done to acquire detailed information about each software component before the system is intergraded. During this test I checked on how the database is working, the reflection of data on the database. The user interface, how each module appears. How each module is working.