

Minor Project- Report Aug-2019-2020

Course Faculty: Prof. Shravya A R

Course Name & code:

Java Programming Laboratory with Mini Project 19CS3DLJPL

Semester: 3

Date: 07-01-2021

TITLE OF THE PROJECT	Supply Chain Management System			
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USN	1DS19CS165	1DS19CS166	1DS19CS167	1DS19CS168
INDIVIDUAL CONTRIBUTION	HTML CSS Database (MySQL)	HTML CSS JAVA(JSP,JDBC and Servlets) DataBase(MySQL)	HTML CSS JAVA(JSP) DataBase (MySQL)	JAVA(JSP,JDBC and Servlets) Database(MySQL)
GUIDE	Prof. Shravya A R			
PROJECT ABSTRACT :	Supply Chain Management System Supply-chain-management software (SCMS) is the software tools or modules used in executing supply chain transactions, managing supplier relationships and controlling associated business processes. While functionality in such systems can often be broad – it commonly includes: <ul style="list-style-type: none">• Customer-requirement processing• Purchase-order processing• Supplier Management/Sourcing• Inventory management• Goods receipt and Warehouse management			

	<ul style="list-style-type: none"> Sales and Distribution <p>Project :</p> <p>The Application implemented aims at increasing the efficiency of the management of a supply chain and easing the process of fulfilling the client's requirements, ultimately making it a hassle free experience for the involved entities.</p> <p>The system grants access to activity to two of the three involved entities, namely the client and the admin. Based on the granted access, various activities limited to the user are made available.</p>
PLATFORM USED (H/W & S/W TOOLS TO BE USED)	FrontEnd : HTML,CSS DataBase : MySQL and Text File BackEnd: 1.Language: Java (JSP, JDBC and Servlets) 2.Web Server: Apache Tom Cat
INTRODUCTI ON	<h2>Supply Chain Management System</h2> <p>To understand the project in hand, it is vital to understand what it aims at improvising.</p> <p>To understand this, a look at following is required:</p> <h3>Supply chain</h3> <p>A supply chain is a network between a company(here, admin) and its suppliers(here, dealers) to produce and distribute a specific product to the final buyer(here, client). This network includes different activities, entities, information, and resources.</p> <h3>Supply chain management</h3> <p>At the most fundamental level, supply chain management (SCM) is management of the flow of goods, data, and finances related to a product or</p>

service, from the procurement of raw materials to the delivery of the product at its final destination. (source - oracle)

Supply Chain Management System

Supply-chain-management software (SCMS) is the **software tools or modules** used in executing supply chain transactions, managing supplier relationships and controlling associated business processes.

While functionality in such systems can often be broad – it commonly includes:

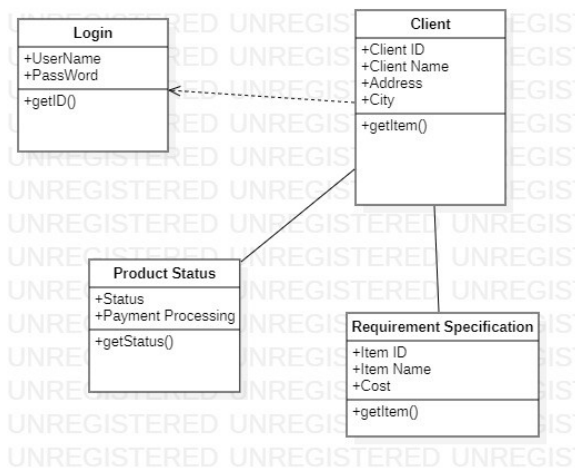
- Customer-requirement processing
- Purchase-order processing
- Supplier Management/Sourcing
- Inventory management
- Goods receipt and Warehouse management
- Sales and Distribution

DESIGN

The Project has been split into three Sections:

- 1.Admin
- 2.Dealer
- 3.Client

The **Client Section** is described with the UML diagram below:

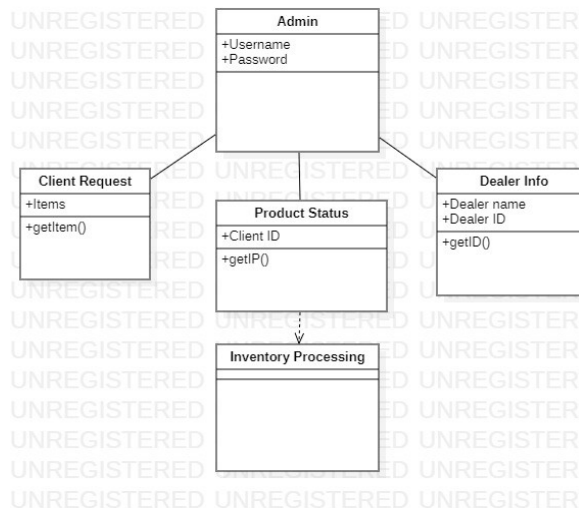


Fig(1.1):Client Functionalities

The above diagram shows the client functionality, where the client logs in

with the user name and password, specifies the product and checks the product status.

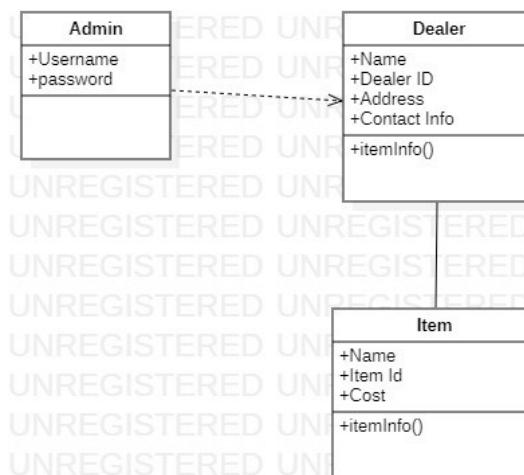
The **Admin Section** is described with the UML diagram below:



Fig(1.2):Admin Functionalities

The above figure shows the Admin functions. There are five classes which are associated with each other. The 'Admin' class is the main class which is associated with the 'View client request', 'View dealer info', 'Product status', 'Inventory processing' classes.

The **Dealer Section** is described with the UML diagram below:



Fig(1.3):Dealer Functions

The above diagram shows the Dealer functionality. The dealer class is associated with the 'Item' class and it is dependent on the 'Admin' class.

Work Flow Activity:

The client logs in after creating an account and Picks a product from the catalog. Upon confirming the order and credentials, a unique order number is generated and is displayed in the 'OrderConfirmation' page, which gets put into the database.

Admin views the requirements, and compares the product details from various sources.

The Product details as quoted by the Dealers is stored in the form of a database.

The Admin verifies the client's requirements, maintains the Orders' record. Admin functions also include inventory processing and generation of invoices of the selected items.

The Admin then gets an option to mark an order as 'Delivered' once it has been delivered and paid for.

Once The Order gets marked 'Delivered', the order's status gets changed from 'Processing' to 'Delivered and paid-for' and gets moved to the MyBills Section and Orders Section of the Client webpages.

Database Design:

The database consists of all the required data that needs to be validated with or displayed on the jsp pages. the database consists of the following tables:

1.all_items: This table contains the product id, name, category, description and price.

2.dealerdetails: This table contains the dealer id, the category of the products that he/she deals with, name, address, city and contact no.

3.logistics: This table contains the id, name, address, city and contact no. of the logistics service provider.

4.**activeclients**: This table contains the record of the details that are required for the processing of the orders once they are placed by the customers. the records include the email id, order date, order no., status of the order and the delivery date.

5.**password**: this table essentially contains only one column and record which specifies the password of the admin. The validation of the password that the admin enters while trying to gain access to the website is done with reference to the contents of this table.

6.**clientdetails**: This table consists of the clients' first name, last name, email id, password, address, city and contact no. that are obtained when the client creates an account by signing up. The validation of the client's email-id and password while logging in is in reference with the contents of this table.

Concepts from java:

MVC Architecture

MVC architectural pattern follows an elementary idea – we must separate the responsibilities in any application on the following basis:

Model: Handles data and business logic.

View: Presents the data to the user whenever asked for.

Controller: Entertains user requests and fetch necessary resources.

In this project, we have implemented the *model* with *DAO(Data Access Object) files that implement JDBC*, the *view* with *jsp(Java Server Pages)*, the controller with *Servlets*.

JDBC (Java DataBase Connectivity)

Java Database Connectivity (JDBC) is an application programming interface (API) for the programming language Java, which defines how a client may access a database. It is a Java-based data access technology used for Java database connectivity.

It is part of the Java Standard Edition platform, from Oracle Corporation. It provides methods to query and update data in a database, and is oriented toward relational databases. A JDBC-to-ODBC bridge enables connections to any ODBC-accessible data source in the Java virtual machine

(JVM) host environment.

In this project we have used JDBC to connect to MySQL databases.

JSP (JakartaServer Pages (formerly - Java Server Pages))

Java Server Pages can be used independently or as the view component of a server-side model–view–controller design, normally with JavaBeans as the model and Java servlets (or a framework such as Apache Struts) as the controller. This is a type of Model 2 architecture.[3]

JSP allows Java code and certain predefined actions to be interleaved with static web markup content, such as HTML. The resulting page is compiled and executed on the server to deliver a document. The compiled pages, as well as any dependent Java libraries, contain Java bytecode rather than machine code. Like any other .jar or Java program, code must be executed within a Java virtual machine (JVM) that interacts with the server's host operating system to provide an abstract, platform-neutral environment.

Servlets

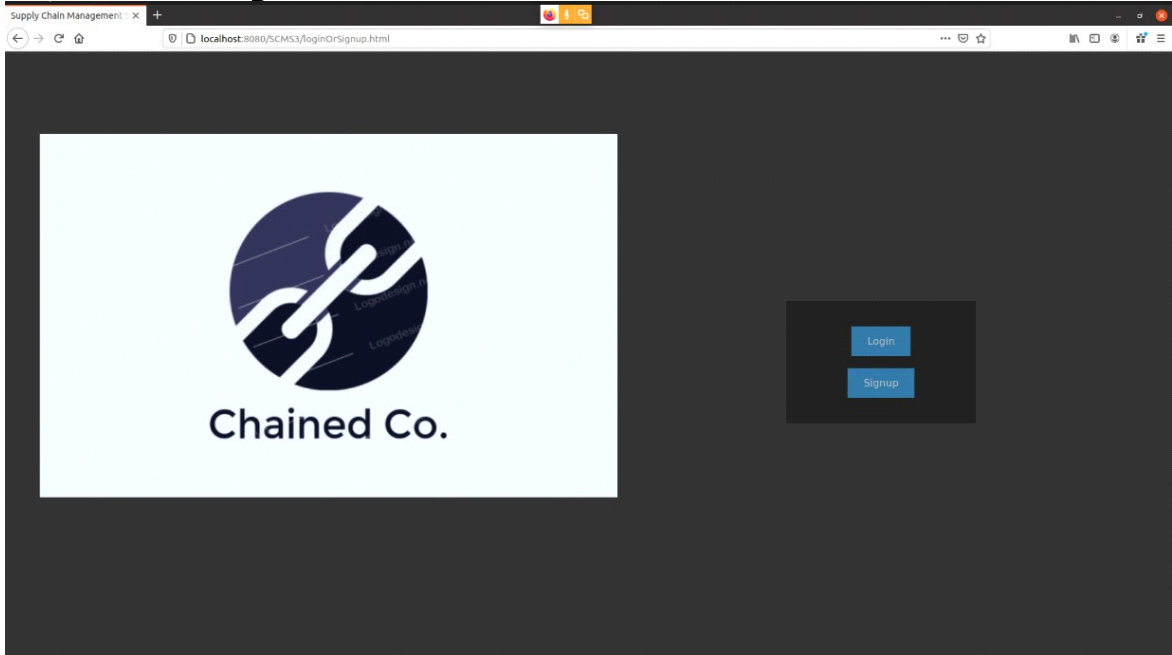
Java Servlets are programs that run on a Web or Application server and act as a middle layer between a requests coming from a Web browser or other HTTP client and databases or applications on the HTTP server.

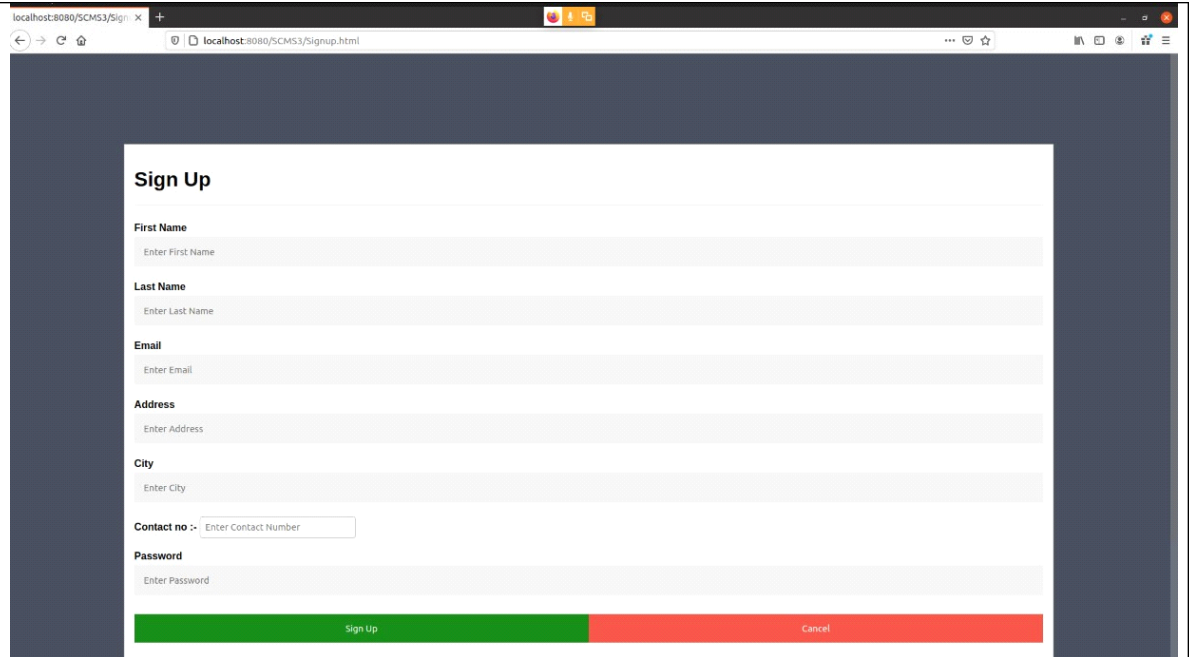
Using Servlets, you can collect input from users through web page forms, present records from a database or another source, and create web pages dynamically.

DAO(Data Access Object) files

data access object (DAO) is a pattern that provides an abstract interface to some type of database or other persistence mechanism. By mapping application calls to the persistence layer, the DAO provides some specific data operations without exposing details of the database. This isolation supports the single responsibility principle. It separates what data access the application needs, in terms of domain-specific objects and data types (the public interface of the DAO), from how these needs can be satisfied with a specific DBMS, database schema, etc.

The primary advantage of using data access objects is the relatively

	<p>simple and rigorous separation between two important parts of an application that can but should not know anything of each other, and which can be expected to evolve frequently and independently. Changing business logic can rely on the same DAO interface, while changes to persistence logic do not affect DAO clients as long as the interface remains correctly implemented.</p>
PROJECT SOURCE CODE LINK (GITHUB/GOOGLE DRIVE)	Github: https://github.com/SriGoutamj/SCMS
CONCLUSION /FUTURE ENHANCEMENT	<p>We suggest the following enhancements:</p> <ol style="list-style-type: none"> 1. Include Payment Options and a Payment Gateway. 2. Make the database centralized by hosting it in a cloud hosting platform. 3. Make the website small screen compatible.
UI SCREENSHOTS	<p>Pic(1) First Page</p>  <p>Pic(2) Client SignUp Page</p>



localhost:8080/SCMS3/signup.html

Sign Up

First Name
Enter First Name

Last Name
Enter Last Name

Email
Enter Email

Address
Enter Address

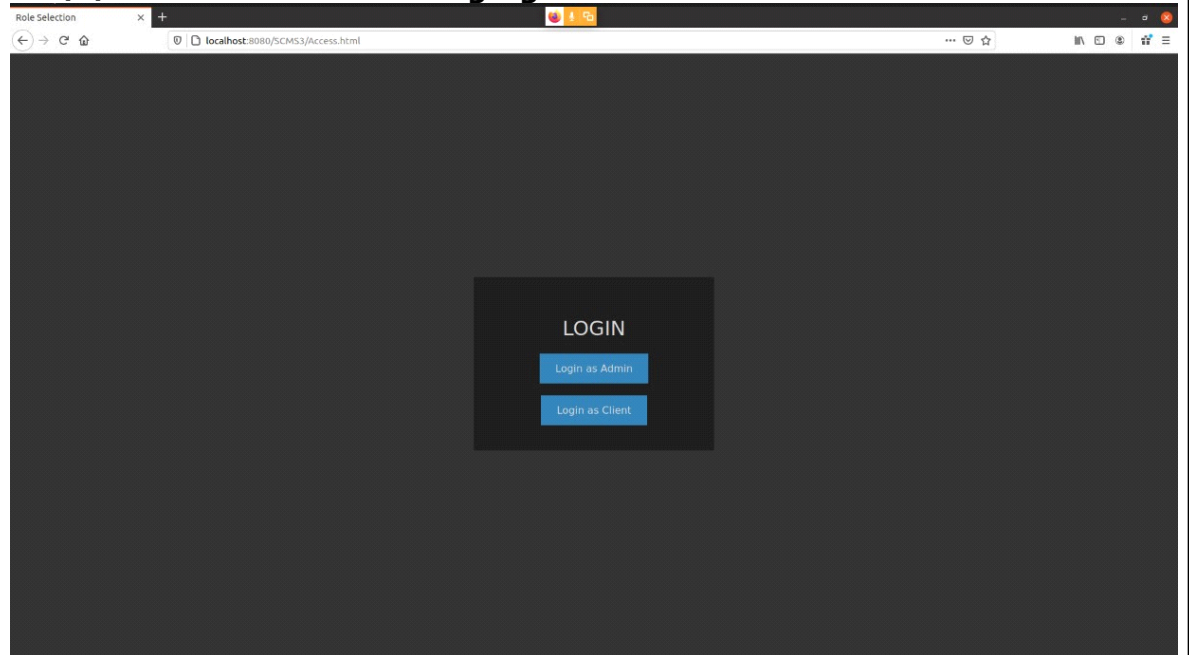
City
Enter City

Contact no :- Enter Contact Number

Password
Enter Password

Sign Up Cancel

Pic(3) Role Selection For Logging in



Role Selection

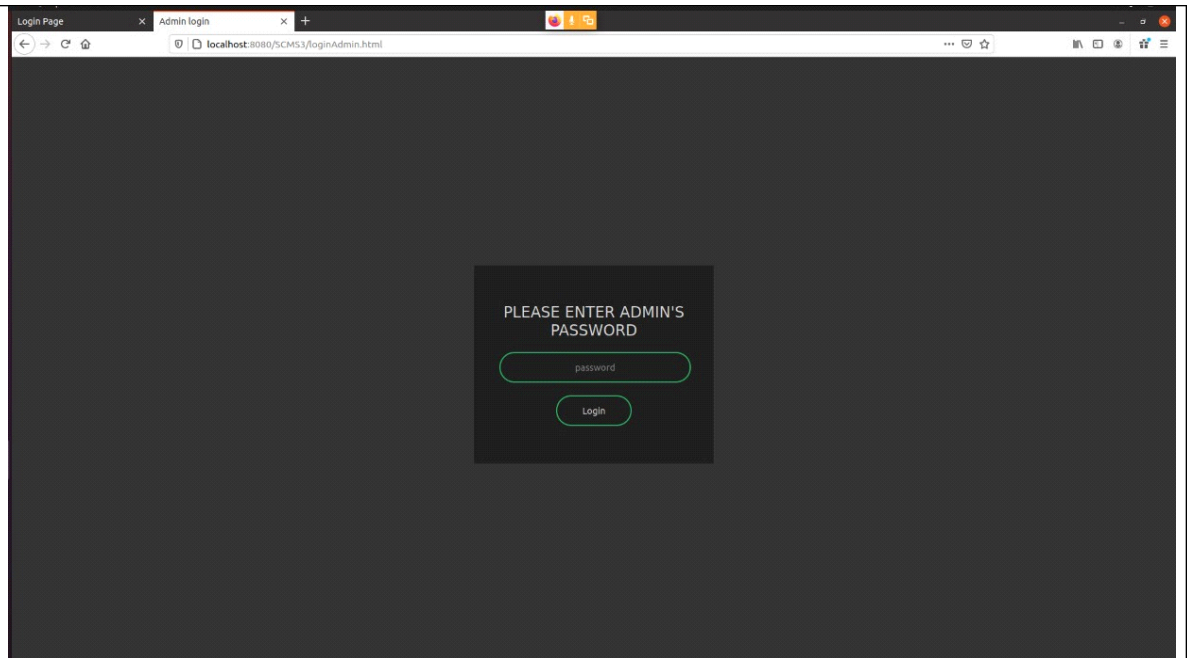
localhost:8080/SCMS3/Access.html

LOGIN

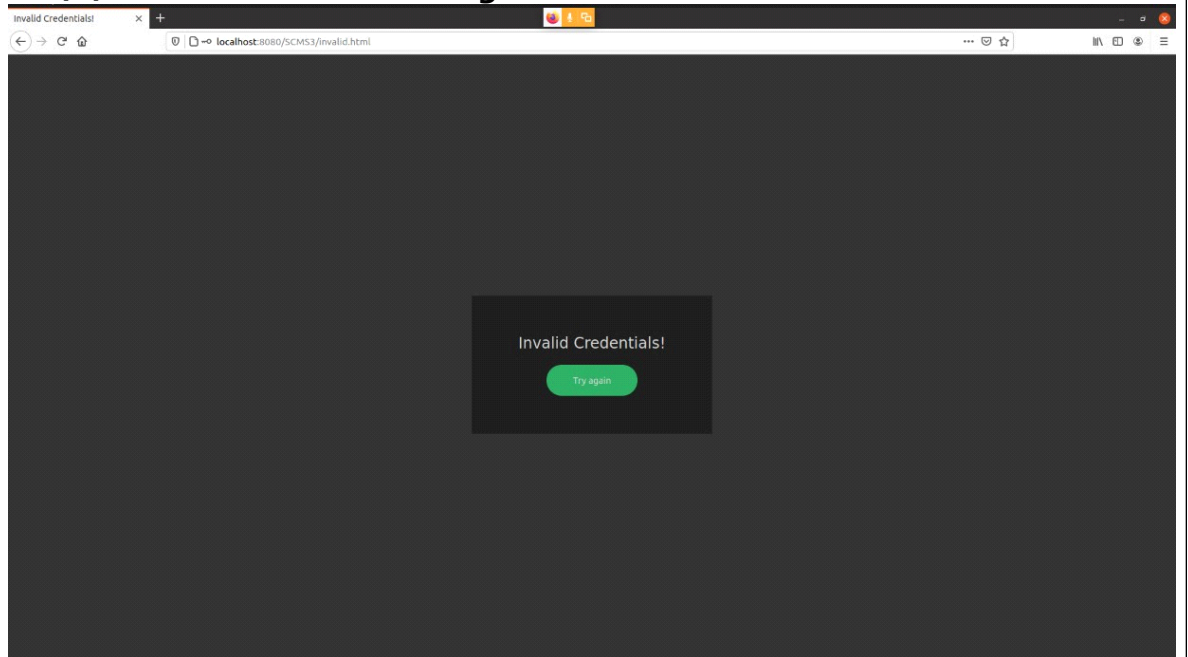
Login as Admin

Login as Client

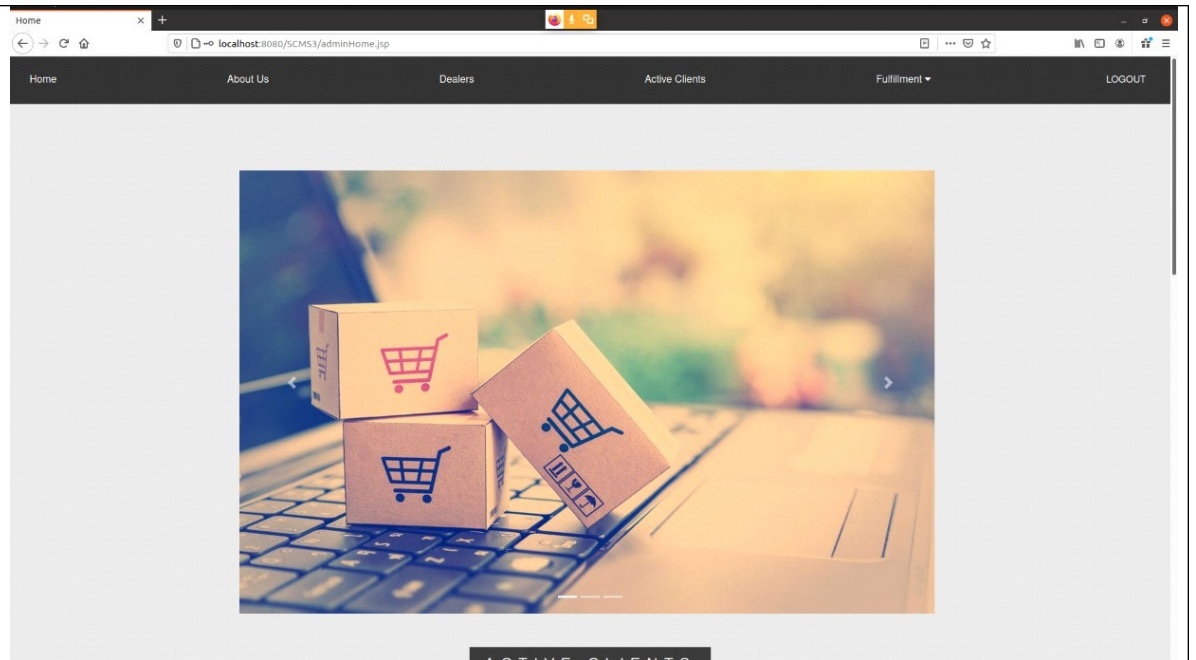
Pic(4) Admin Login Page



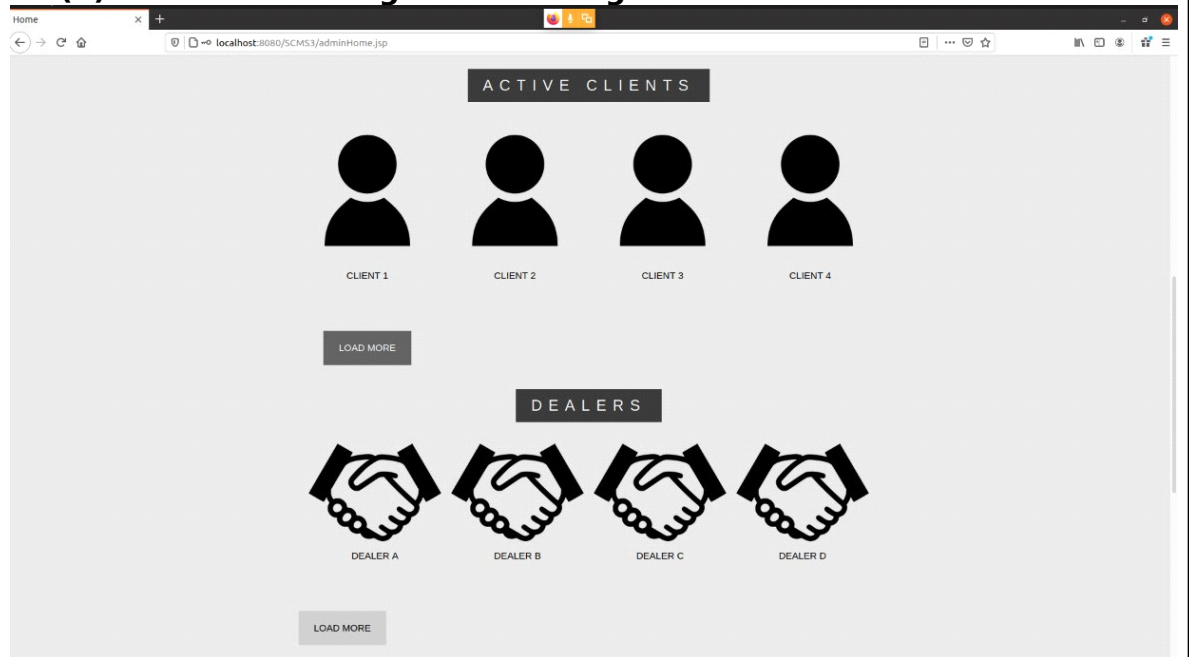
Pic(5) Invalid Credentials Page for both Admin and Clients



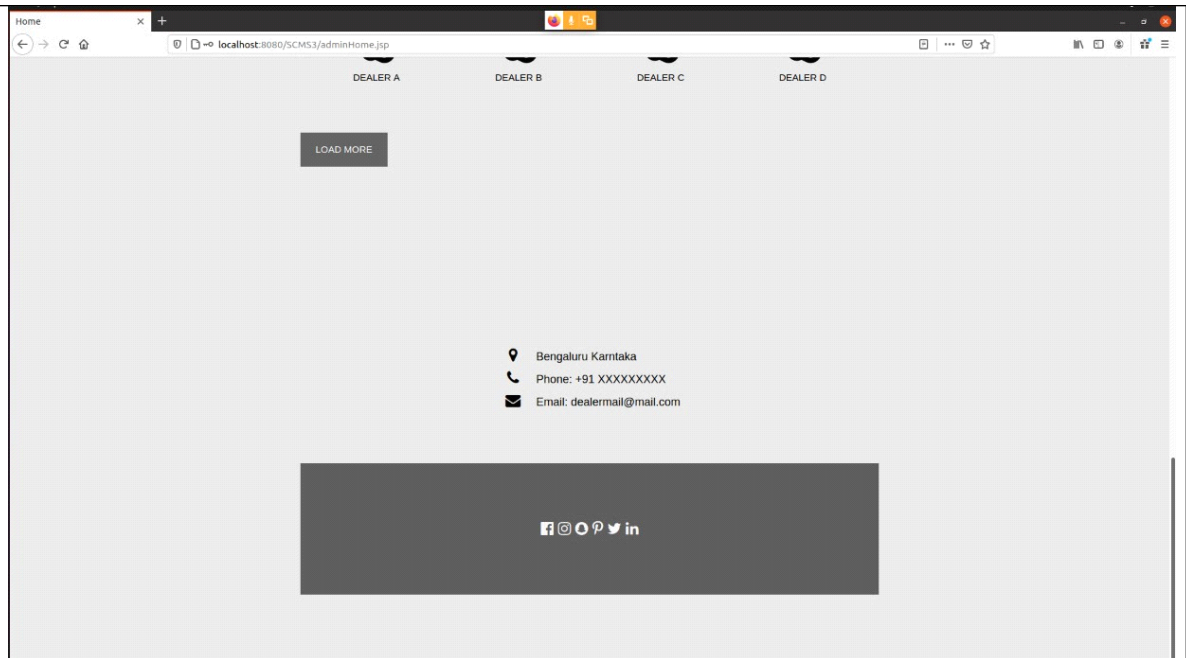
Pic(6) Admin Home Page



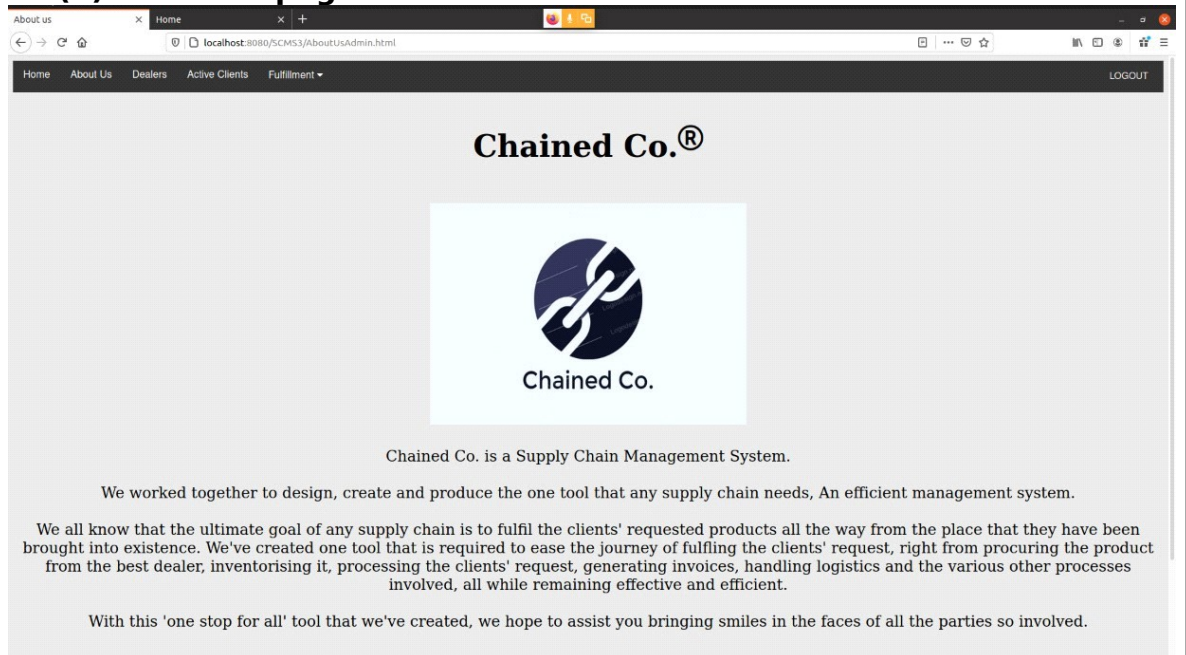
Pic(7) Admin Home Page on Scrolling down



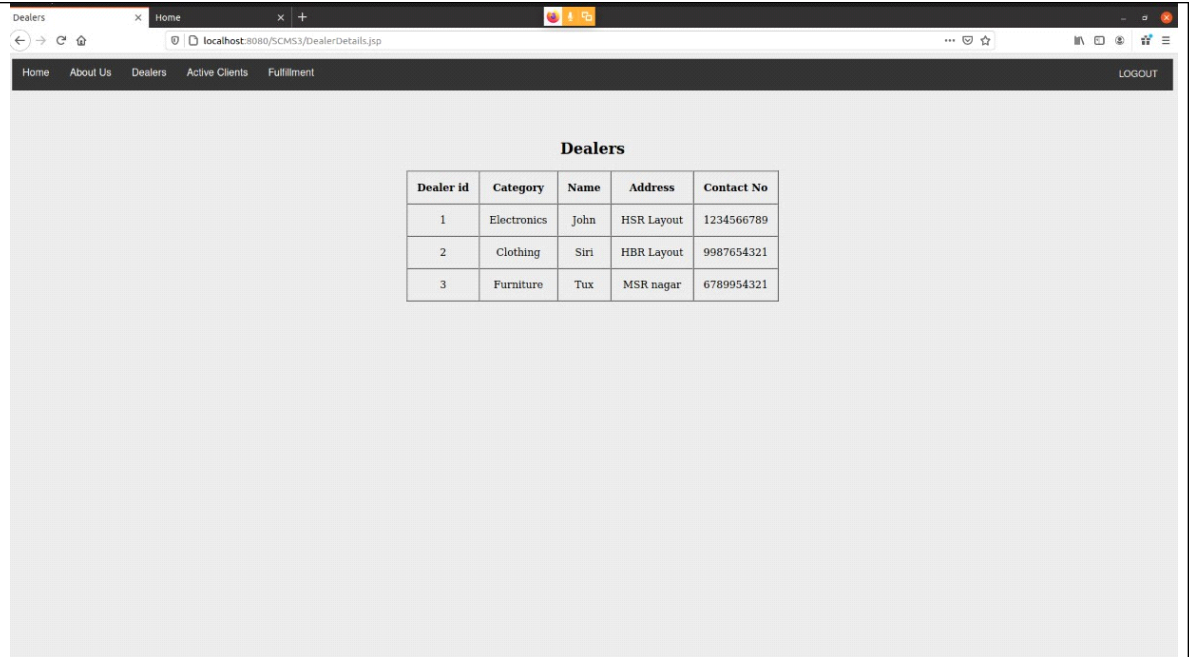
Pic(8) Admin Home Page Footer



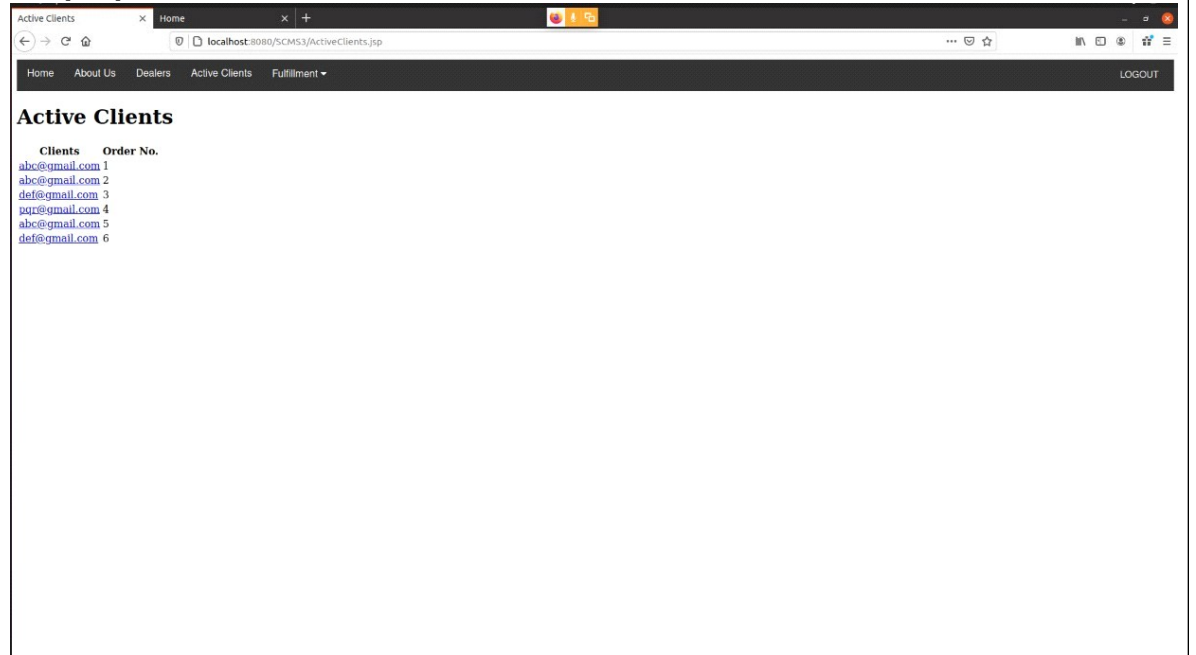
Pic(9) About Us page



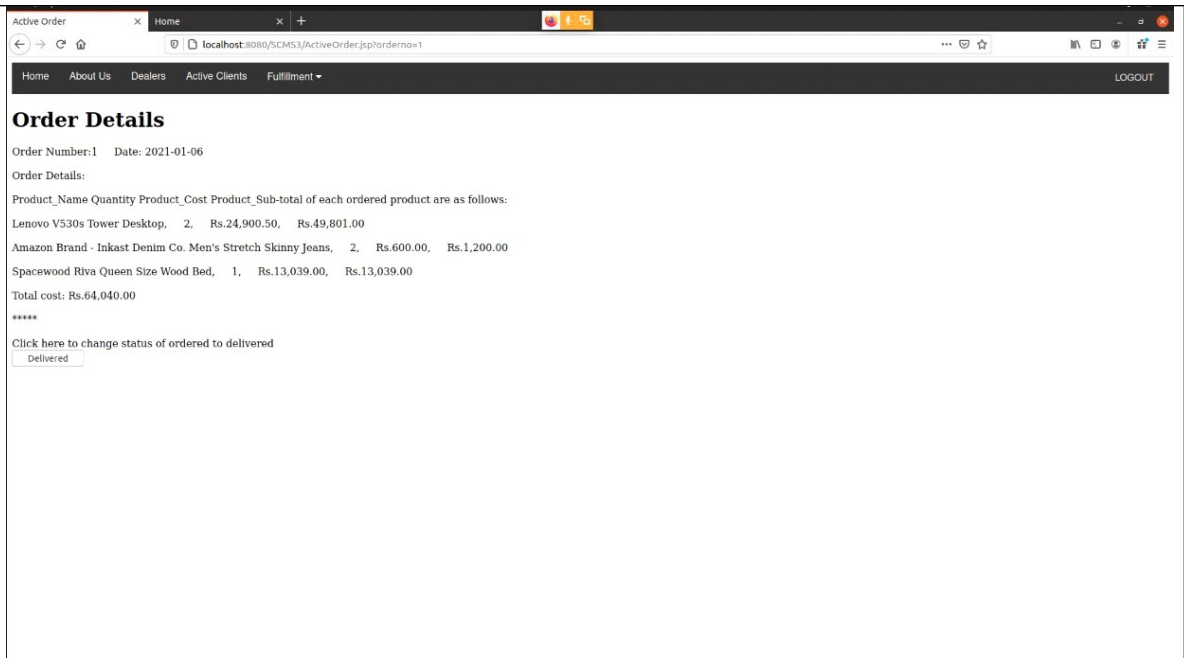
Pic(10) Dealer Details Display Page



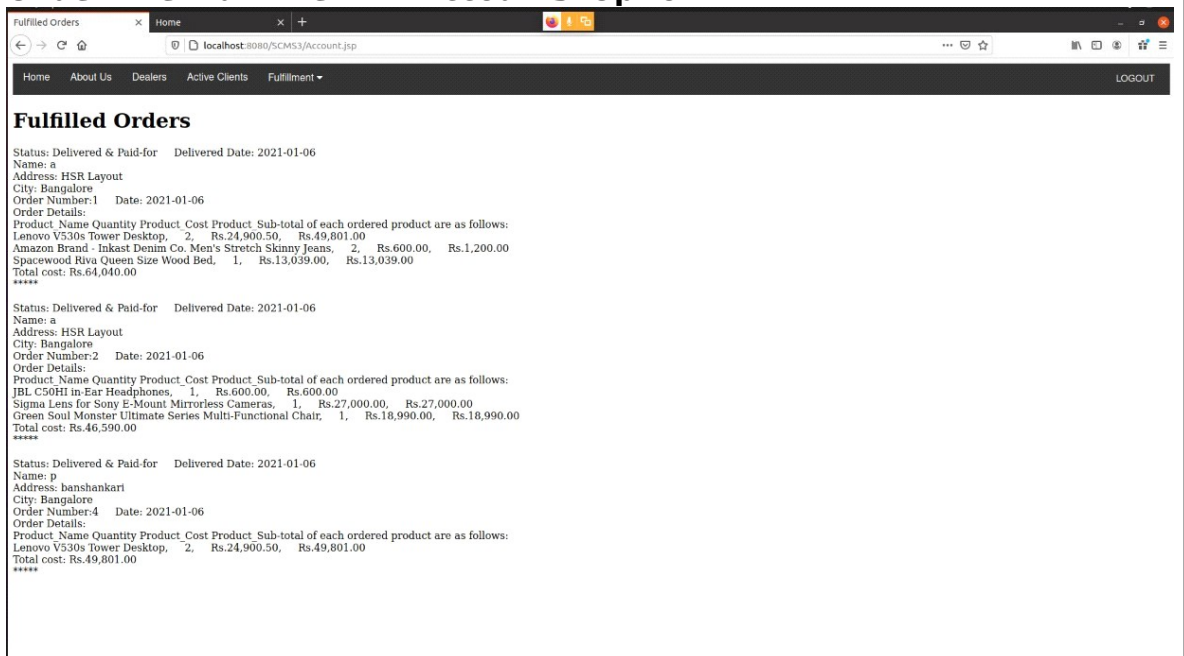
Pic(11) Active Client



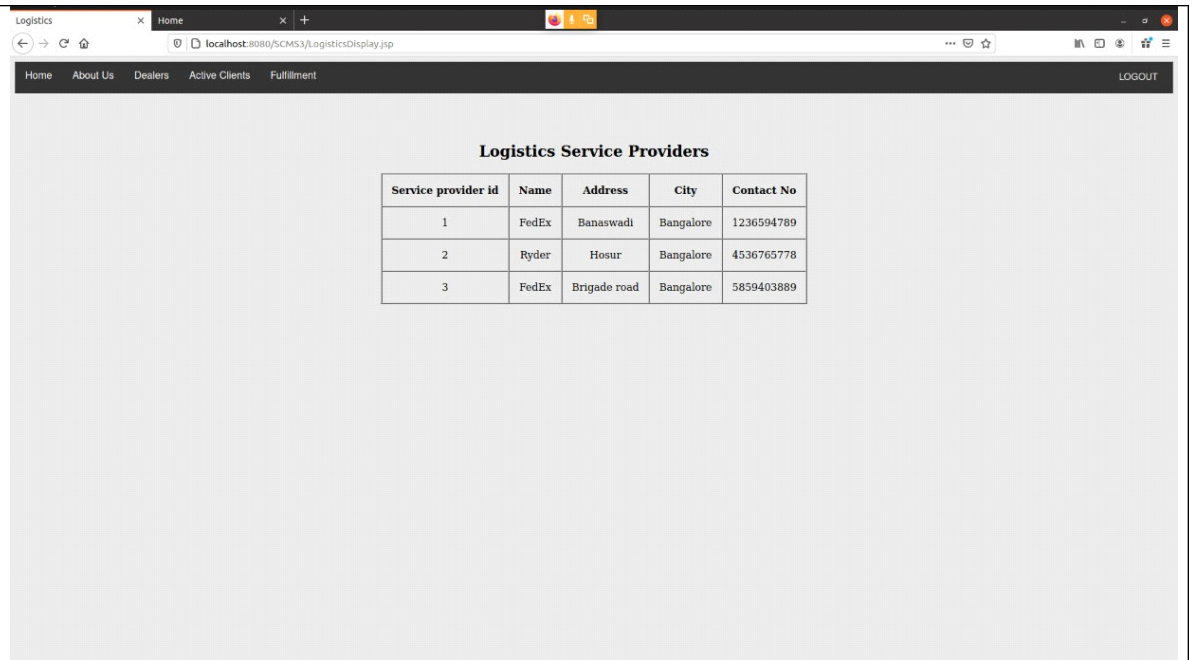
Pic(12) Page which displays the Order Details of Active Clients where the option to choose if it is 'Delivered' is given.



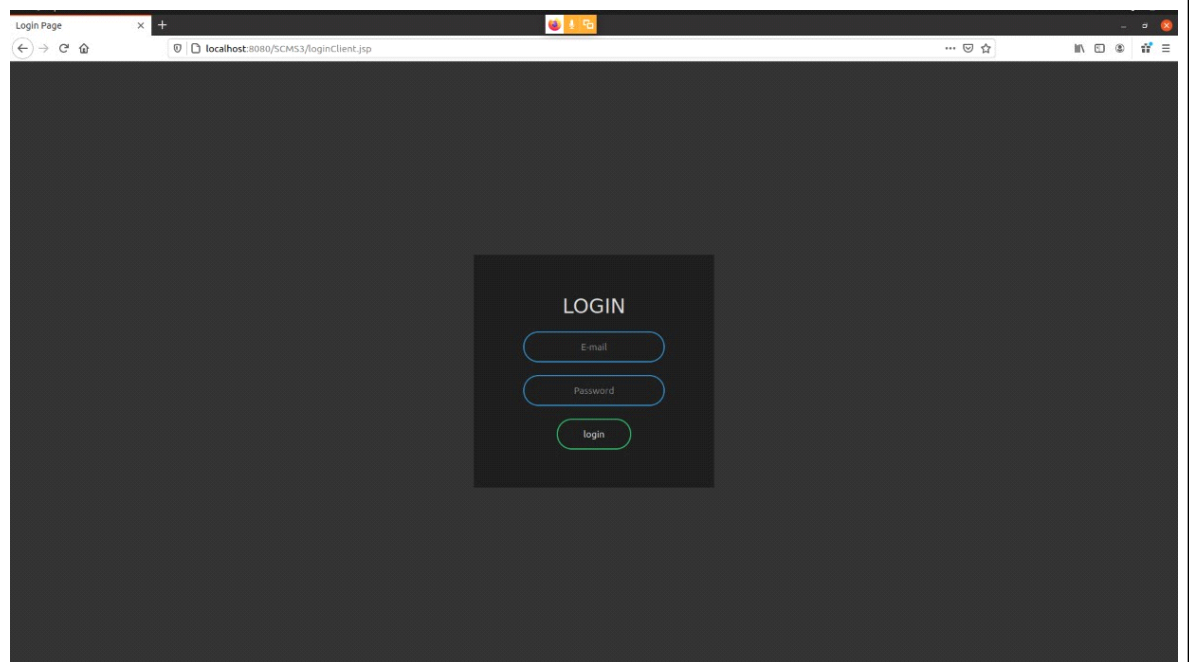
Pic(13) Accounts Page Which displays Invoices of Fulfilled Orders Under The 'Fulfilment'->'Accounts' Option



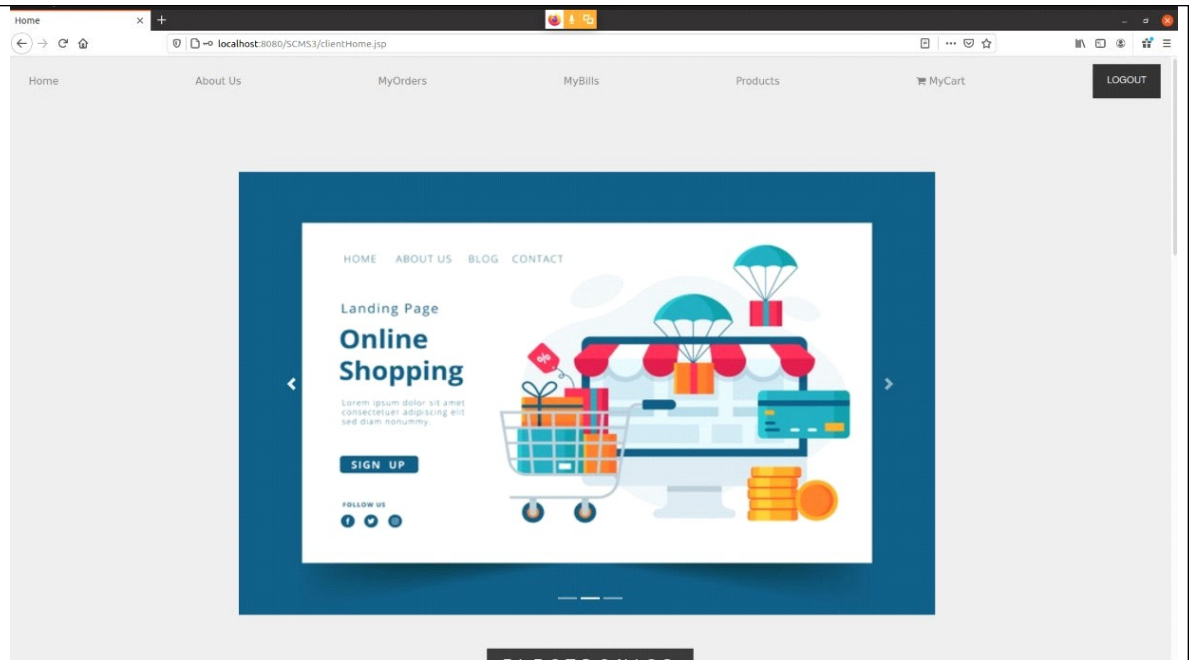
Pic(14) Logistics Service Providers Details Display page under the 'Fulfilment'->'Logistics'



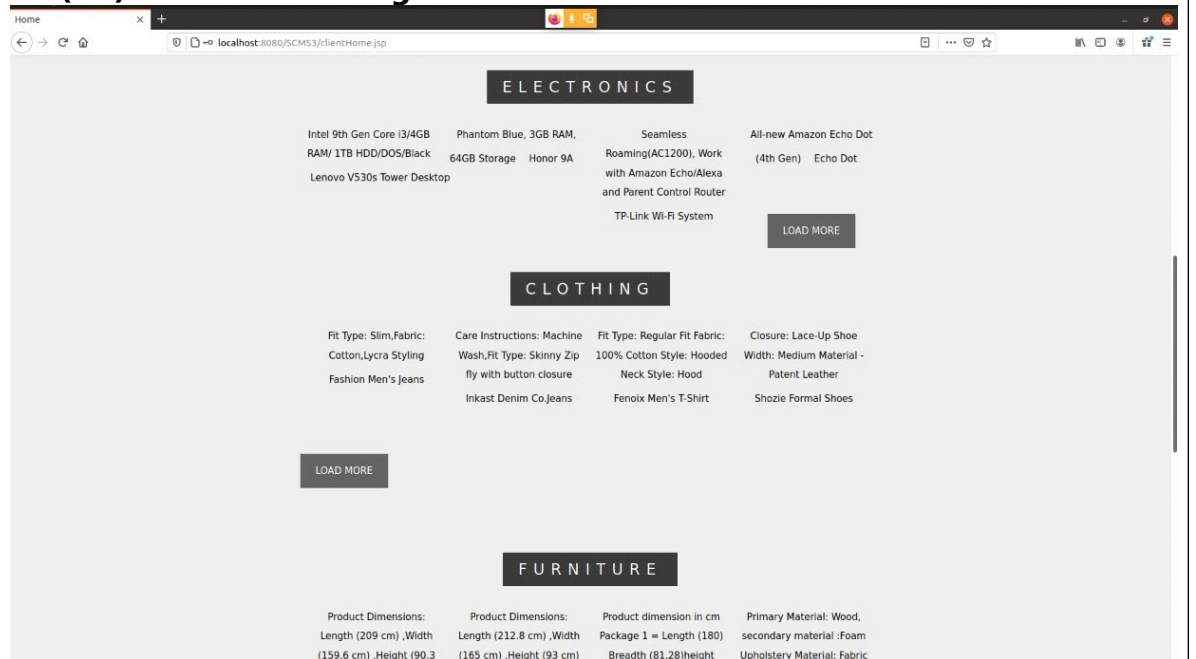
Pic(15) Client Login Page



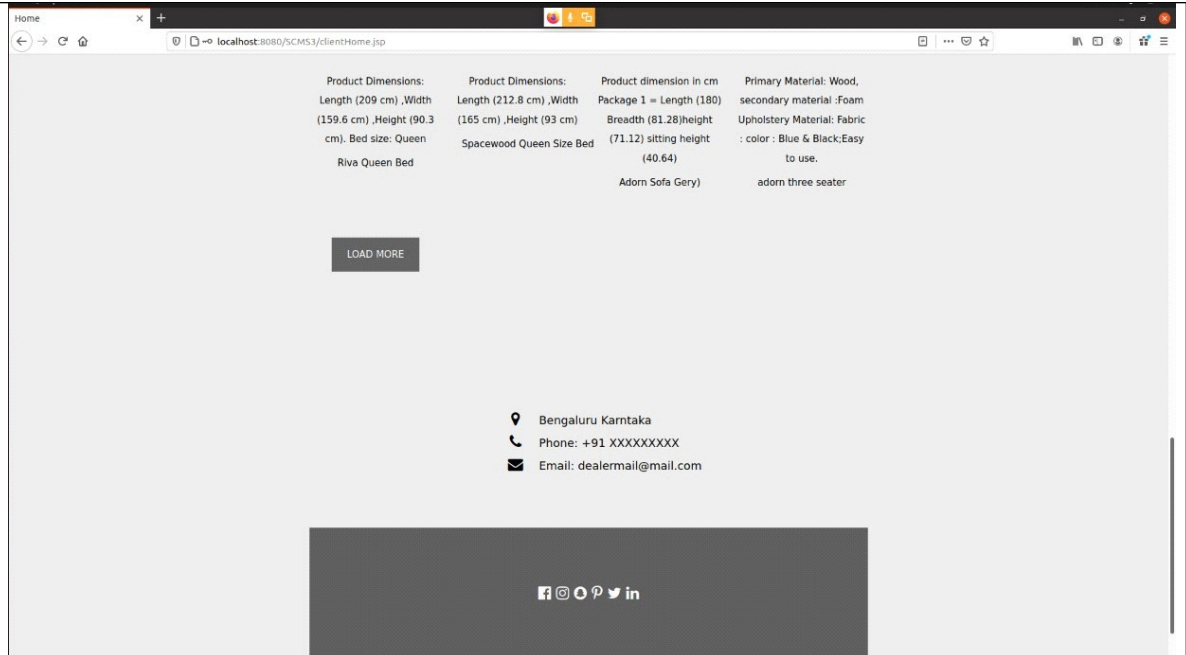
Pic(16) Client Home Page



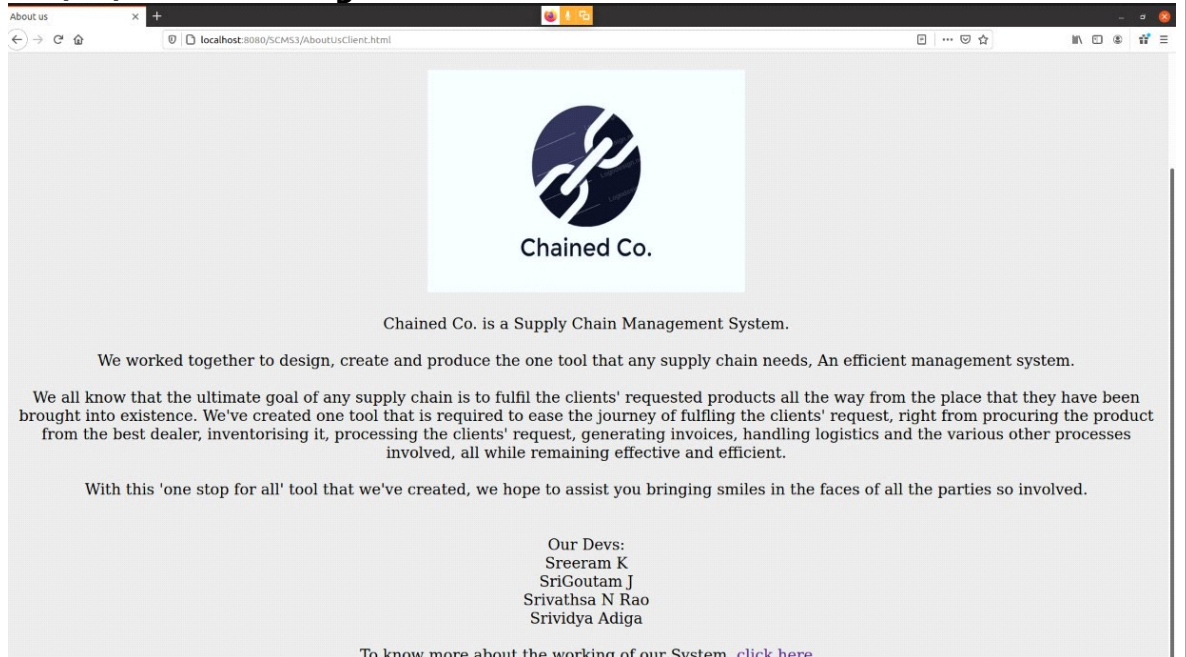
Pic(17) Client Home Page 2



Pic(18) Client Home Page 3



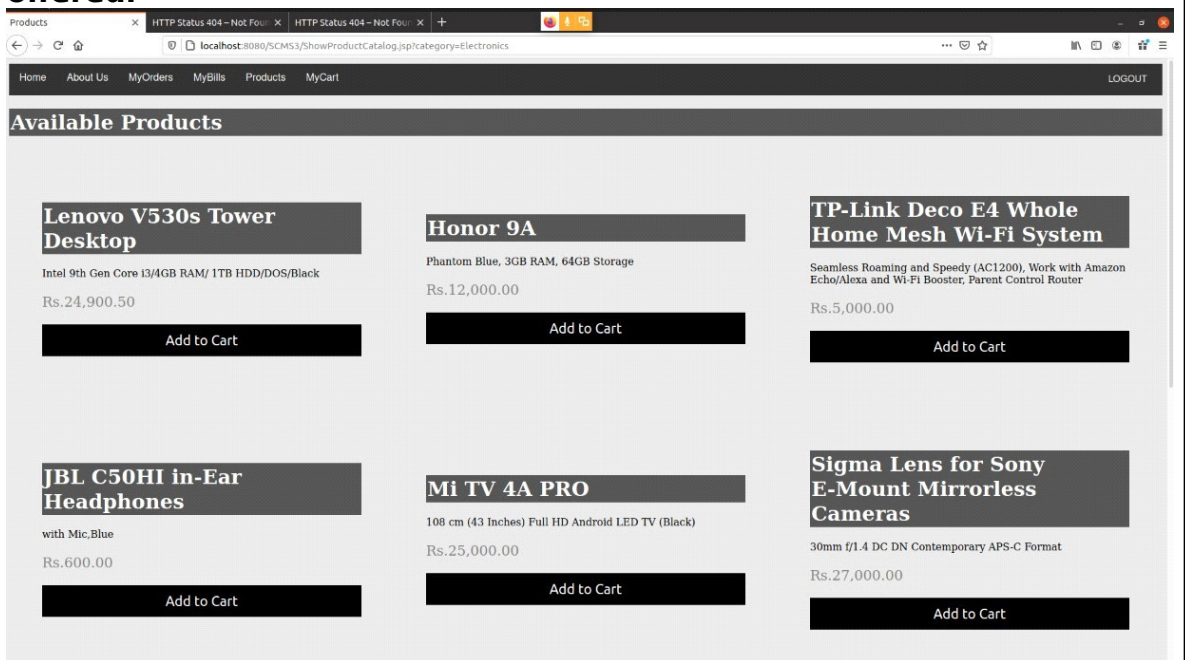
Pic(19) About us Page view 2



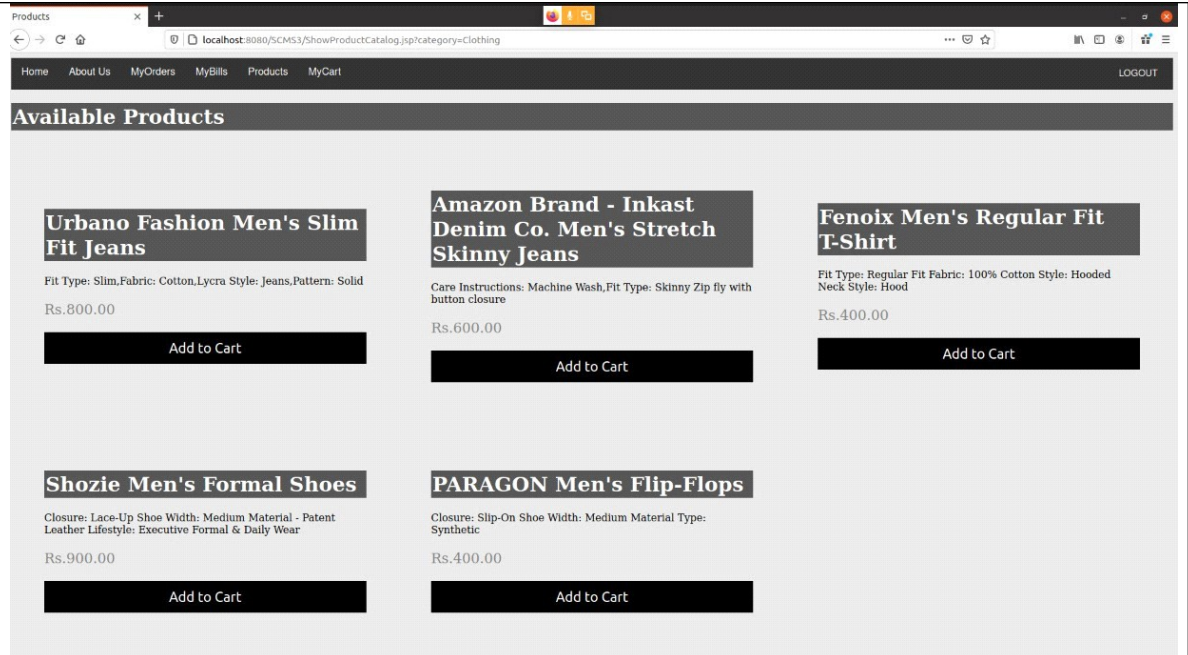
Pic(20) Categories page which displays the categories of products that are offered



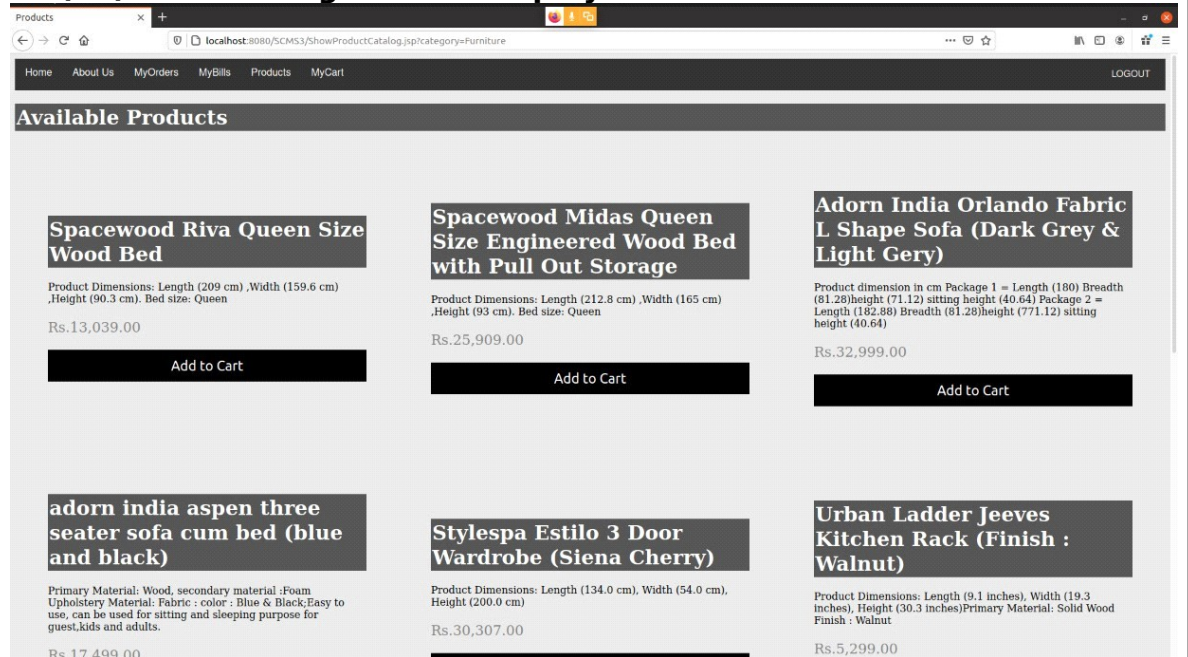
Pic(21) Products Page which displays the Electronics Products offered.



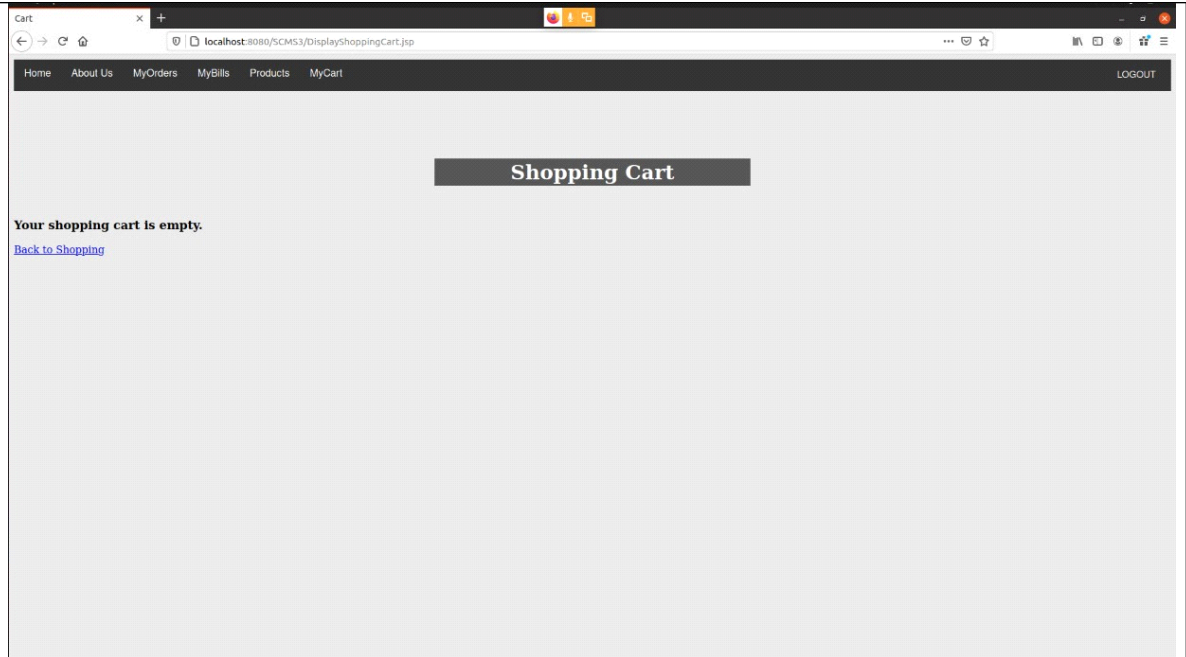
Pic(22) Product Page Which displays the Clothing Products Offered



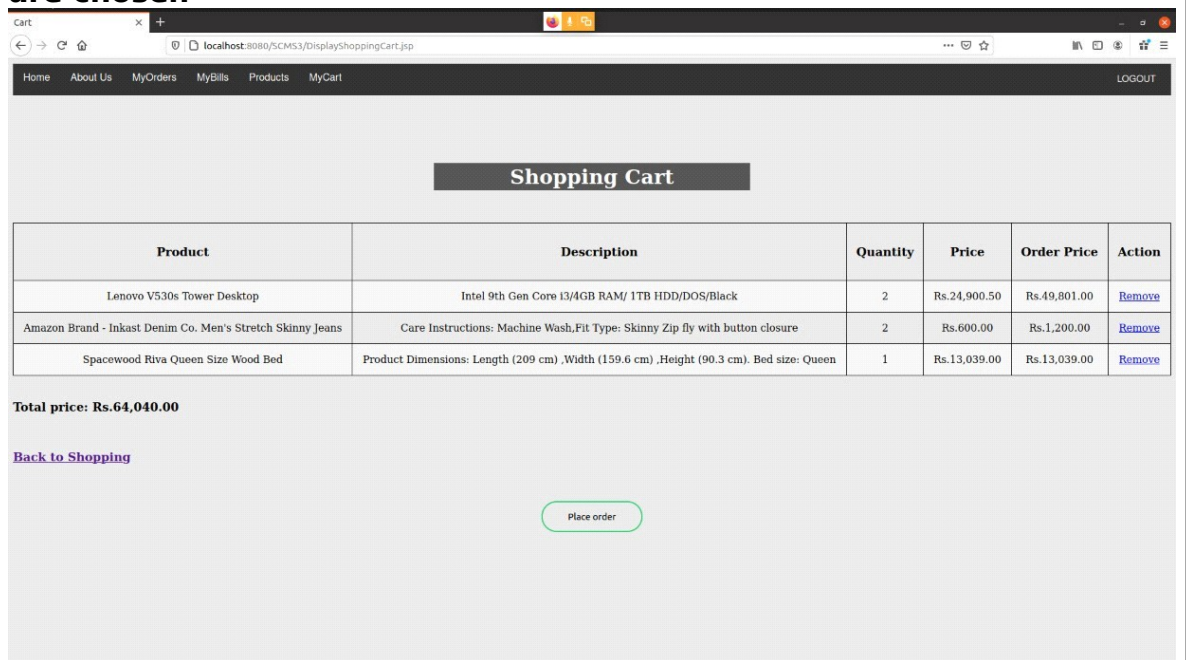
Pic(23) Product Page Which Displays The Furniture Products Offered



Pic(24) MyCart Page which displays The shopping cart when no products are chosen



Pic(25) MyCart Page Which displays the shopping cart after products are chosen



Pic(26) Order And Credentials confirmation page to confirm order

Confirmation x +
localhost:8080/SCMS3/Continue.jsp
Home About Us MyOrders MyBills Products MyCart LOGOUT

Order Summary

Product	Description	Quantity	Price	Order Price
Lenovo V530s Tower Desktop	Intel 9th Gen Core i3/4GB RAM/ 1TB HDD/DOS/Black	2	Rs.24,900.50	Rs.49,801.00
Amazon Brand - Inkast Denim Co. Men's Stretch Skinny Jeans	Care Instructions: Machine Wash,Fit Type: Skinny Zip fly with button closure	2	Rs.600.00	Rs.1,200.00
Spacewood Riva Queen Size Wood Bed	Product Dimensions: Length (209 cm) ,Width (159.6 cm) ,Height (90.3 cm). Bed size: Queen	1	Rs.13,039.00	Rs.13,039.00

Total price:Rs.64,040.00

Details:

Name:
a

Address:
HSR Layout

City:

Pic(27) Order And Credentials confirmation page to confirm order 2

Confirmation x +
localhost:8080/SCMS3/Continue.jsp
total price:Rs.64,040.00

Details:

Name:
a

Address:
HSR Layout

City:
Bangalore

Email:
abc@gmail.com

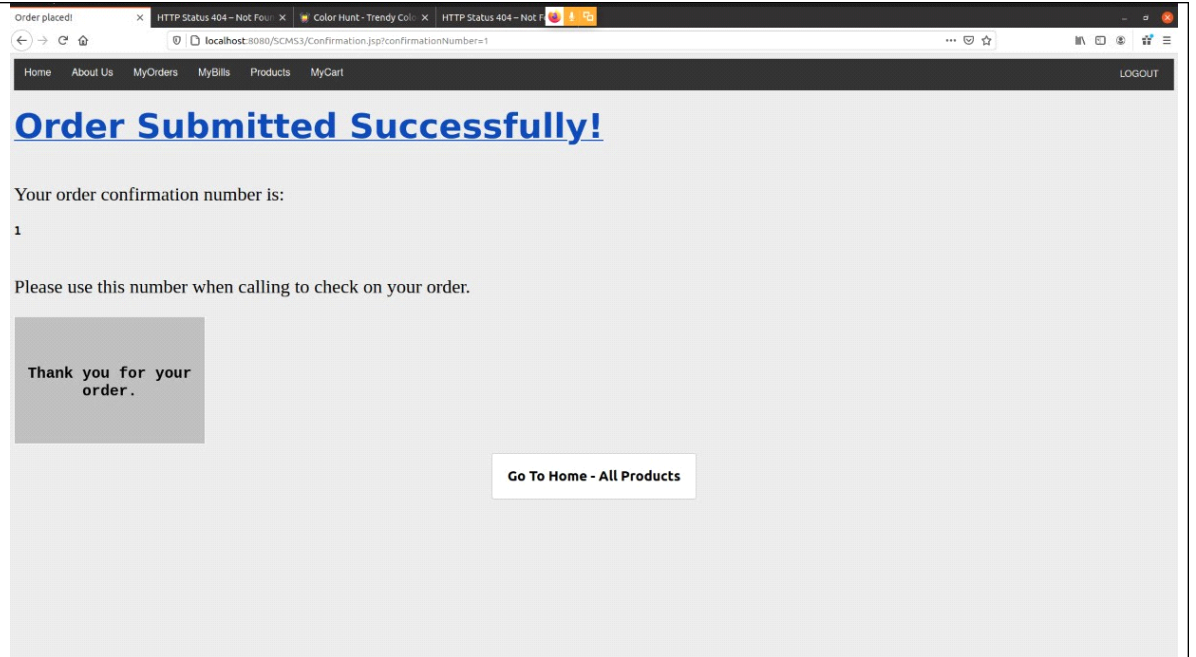
Contact no.:
9234596781

Payment Option: Cash on Delivery

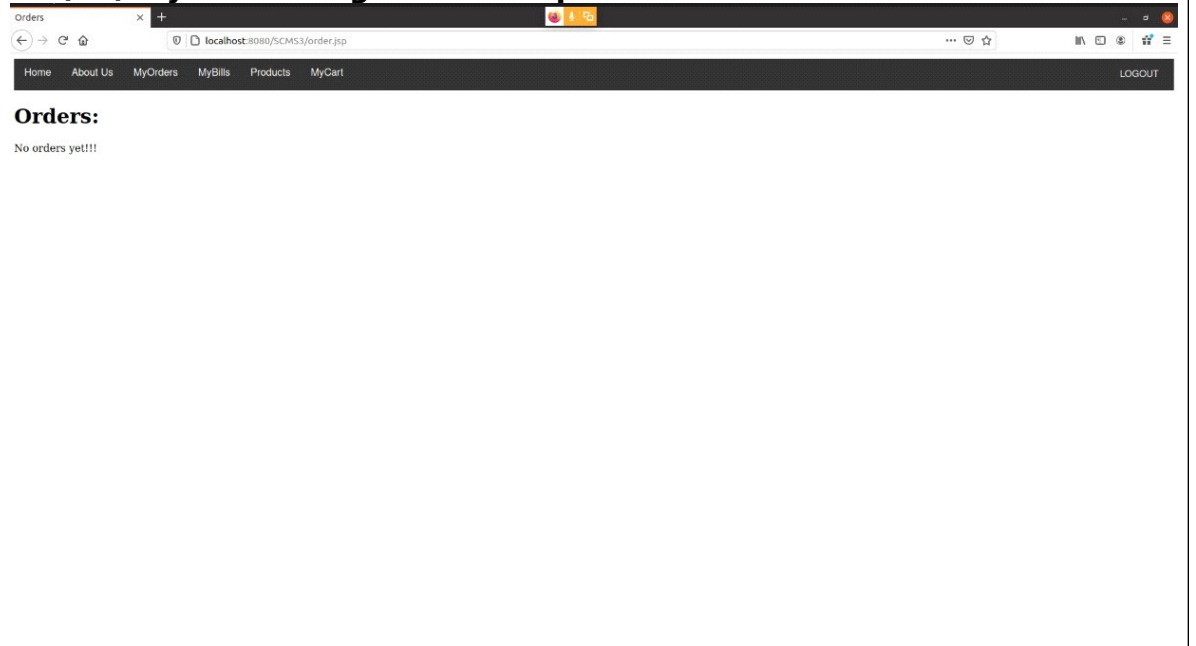
Cancel

Confirm

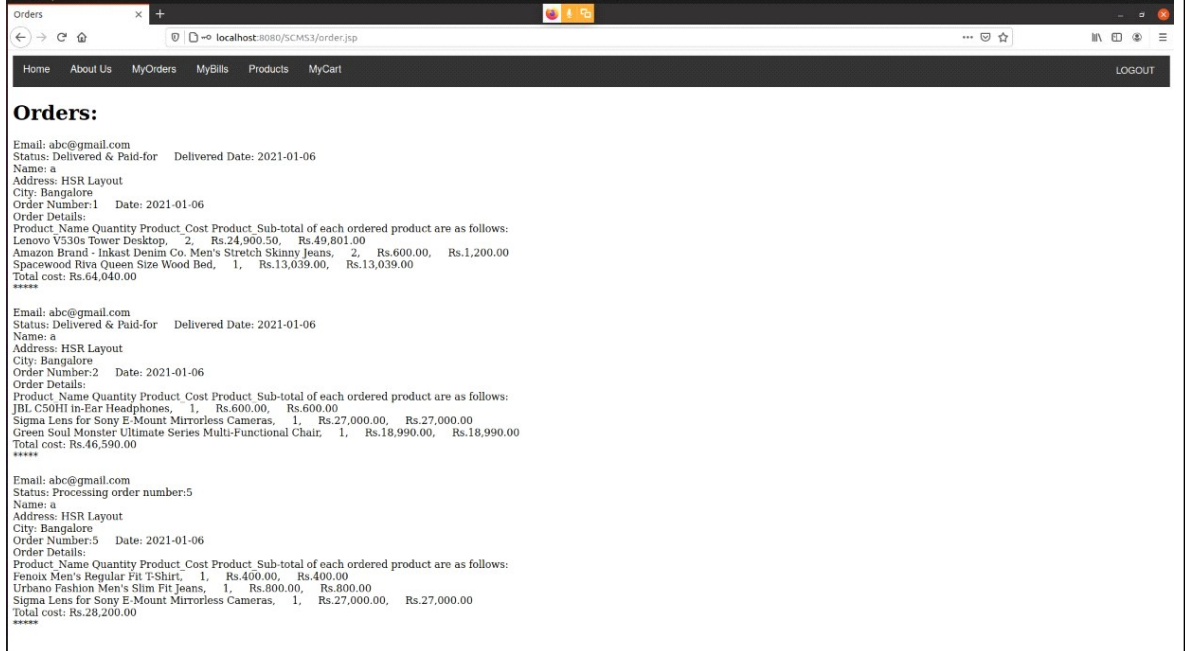
Pic(28) Order confirmed page



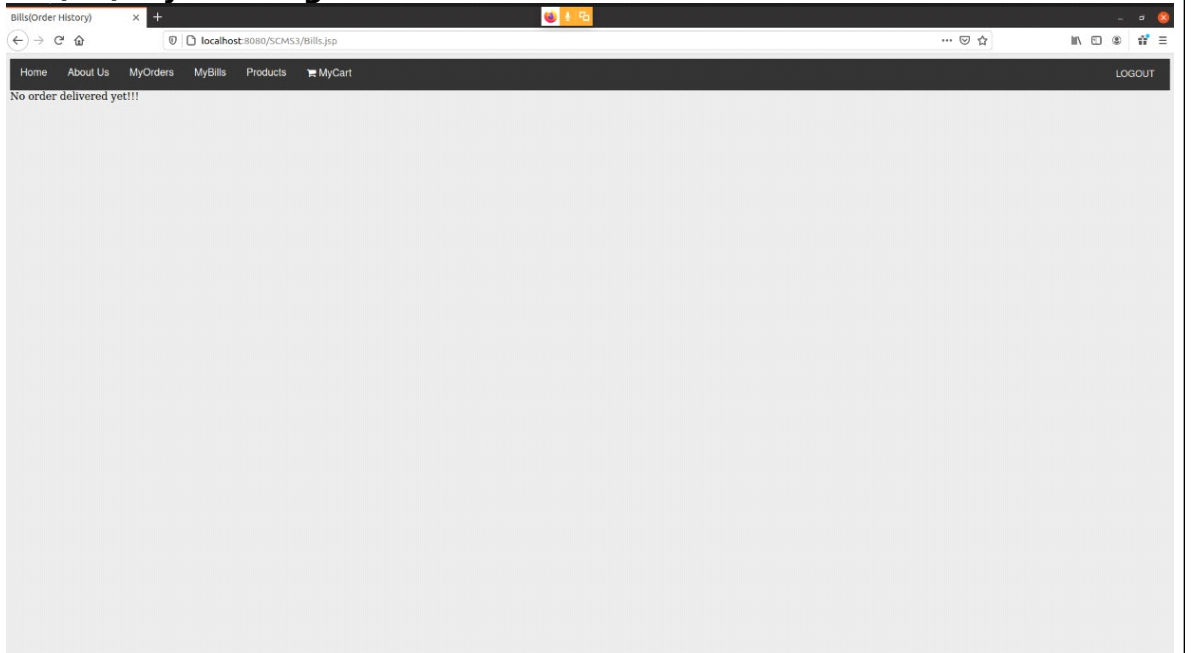
Pic(29) MyOrders Page When no products have been ordered



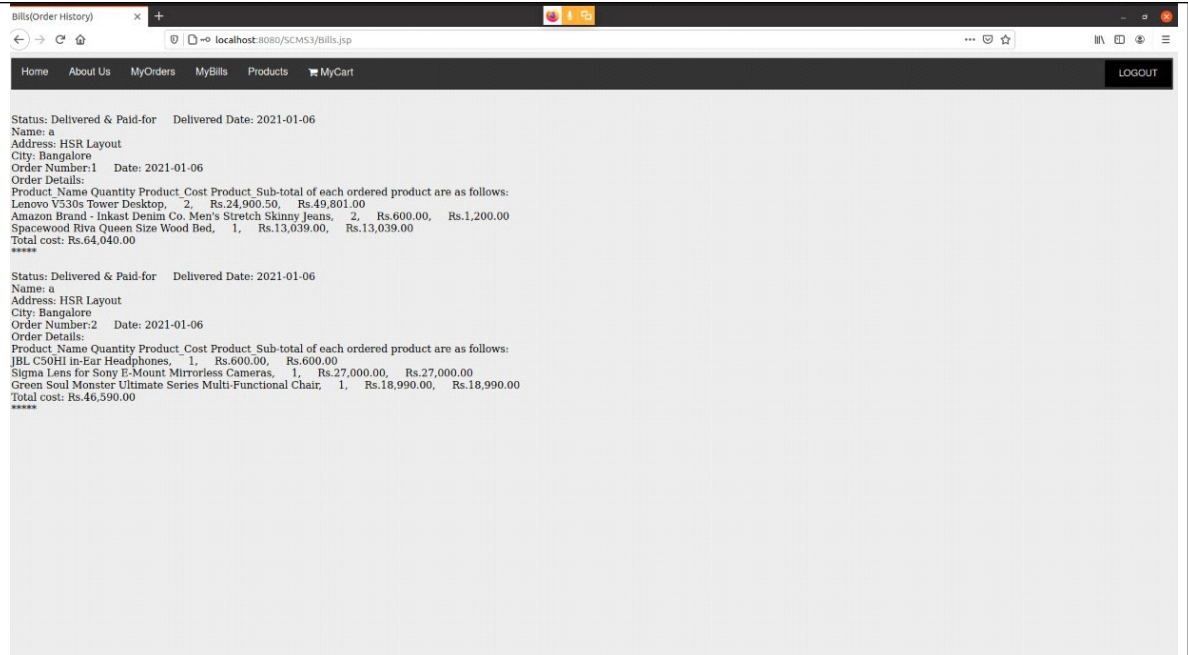
Pic(30) MyOrders Page After All Orders after they Are Placed



Pic(31) MyBills Page When no Orders are delivered



Pic(32) MyBills Page Which displays the invoices of orders after they have been delivered



Pic(33) System Working page which describes the work flow.

