Dharmsinh Desai University, Nadiad
Faculty of Technology
Department Of Computer Engineering

B.Tech CE Semester-VI
Subject : Object Oriented Software Engineering

Project Title : Online Hardware Store

By
Brijesh Khunt (CE063) (18CEUOS048)
Guided By
Prof. Mrudang T. Mehta

CERTIFICATE

This is to certify that the project entitled **"Online Hardware Store"** is a bonafide report of the work carried out by

1) **Khunt Brijesh Ashvinbhai**, Student ID No. **18CEUOS048**

of Department of Computer Engineering, semester VI, under the guidance and supervision for the award of the Degree of Bachelor of Technology at Dharmsinh Desai University, Nadiad.They are involved in Project Training during Academic year 2020-2021.

Prof. Mrudang T. Mehta Assistant Professor Department of Computer Engineering, Faculty of Technology, Dharmsinh Desai University, Nadiad **Prof. Jatayu H. Baxi** Associate Professor Department of Computer Engineering, Faculty of Technology, Dharmsinh Desai University, Nadiad	**Dr. C.K Bhensdadia** Prof. and Head, Department of Computer Engineering, Faculty of Technology, Dharmsinh Desai University, Nadiad

Table of Content

Abstract :

"Online Hardware Store" is a software used for buying and selling of Hardware Items like door handle, hings, knobs, catches, locks, latch, door magnet, etc... Software is a Web Application and using this software user can view the product and its details and find the perfect manufacturer as he wants. Users can make Inquiry to that manufacturer or seller about product customization and doubts. And get a reply mail soon for Inquiry. Users can order the product by choosing the product.

User who wants to sell hardware product they can provide his details and gst no.(mandatory) to register as a seller. Then our system checks and verifies the user to sell products. Then Seller can add products in system space to sell. Sellers can also manage or reply to queries coming from the end user about his product. Seller can manage orders means he can accept/decline orders then he externally transfers the money and makes deals for the end-user.

Introduction :

Nowadays, Online E-commerce systems have become very popular. But most of the system there is no good support for the seller community. And also there are many Frauds there. There are many good systems for Hardware Items but they charge many prices to sellers for selling products. So, our objective is to make a good system which provides functionality like Inquiry, order, good support, contact team, better security and many more…

Admin can manage all the users and verify the seller to sell. Sellers can easily manage the order and inquiries. Users can search for the wide range of the Hardware Item Category. Users can also contact the admin by Contact module and specify his doubts, or experience, faces a fraud, or making suggestions about the system.

Objective of the System :

→ to make a good Inquiry section and send mail to the seller and also the seller can make a reply to inquiry in our system.
→ User to make a good environment for placing orders. And support to sellers for managing Orders, Inquiries and any implication he faces.
→ make a better security system by implementing Authentication and Authorization functionality, complete check & verify of users to become Seller.

Technologies / Platform used :

→ React, Mongodb, NodeJS, Express,js
→ Material-Ui, HTML, CSS
→ Visual Studio Code (VSCode)

Software Requirement Specifications :

Functional Requirements :

Types of Users :

- Admin
- Sellers (Manufacturer)
- Buyers (Customer)

R.1 : Supplier

R.1.1 : Login
IP : Email & Password
OP : login success and redirected to home page

R.1.2 : Register
IP : Name, Email, Company Name, GST No., Address, Description …
OP : Registration Successful

R.1.3 : Add Product
IP : Sku No., Name, Image, Price, Finish, Category …
OP : added that item

R.1.4 : Update Product
IP : _id, updated product
OP : updated that item

R.1.5 : Delete Product
IP : _id
OP : deleted that item

R.1.6 : Reply to Inquiry
IP : subject, message
OP : replied sent to mail

R.1.7 : manage orders
IP : confirmation-approve (available in stocks), product dispatched
OP : success message

R.2 : Customer (Buyer)

R.2.1 : Registration
IP : basic details (email, name, password)
OP : success message

R.2.2 : Login
IP : login credentials (email, password)
OP : success message

R.2.3 : View & Filter Product
IP : product name, category
OP : browsed products

R.2.4 : make Order
IP : select product, quantity, transport, city, state
OP : success message and mailed details

R.2.5 : make Inquiry
IP : select product, subject, message
OP : success message

R.3 : Admin

R.3.1 : Login
IP : email and password
OP : success message and redirected to home page

R.3.2 : View User
IP : (buyers and sellers)
OP : details of (buyers and sellers)

R.3.3 : Authorize (verify) seller
IP : details of seller (company details)
OP : (verified or rejected)

Non-Functional Requirements :

Performance & Reliability :

The system must be interactive and the delays involved must be less. So, in every action-response of the system, there are no immediate delays. In case of opening App components, loading of scripts, loading or opening of photos, of popping error messages and saving the settings or sessions there is delay much below 3 seconds. The main pillar of reliability of the system is the Backup of the database which is continuously maintained and updated to reflect the most recent changes.

Security :

User details should be securely stored to the server. The main security concern is for user accounts hence proper login mechanism should be used to avoid hacking.

Maintainability & Portability :

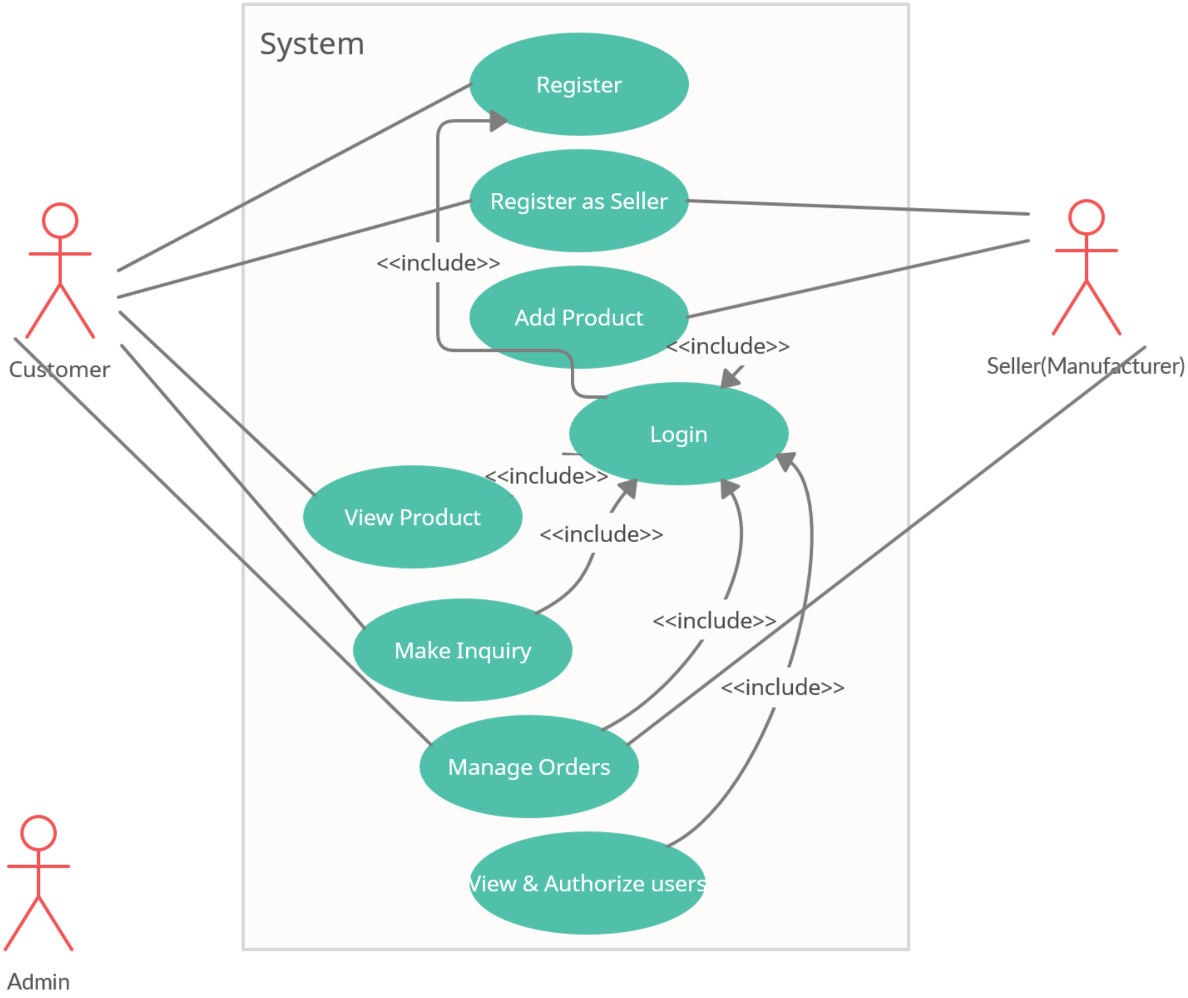
A commercial database is used for maintaining the database and the application server takes care of the site. The end-user part is fully portable and any system using any web browser should be able to use the feature of the system.

Analysis and Design

Use-Case Diagram :

Actors :

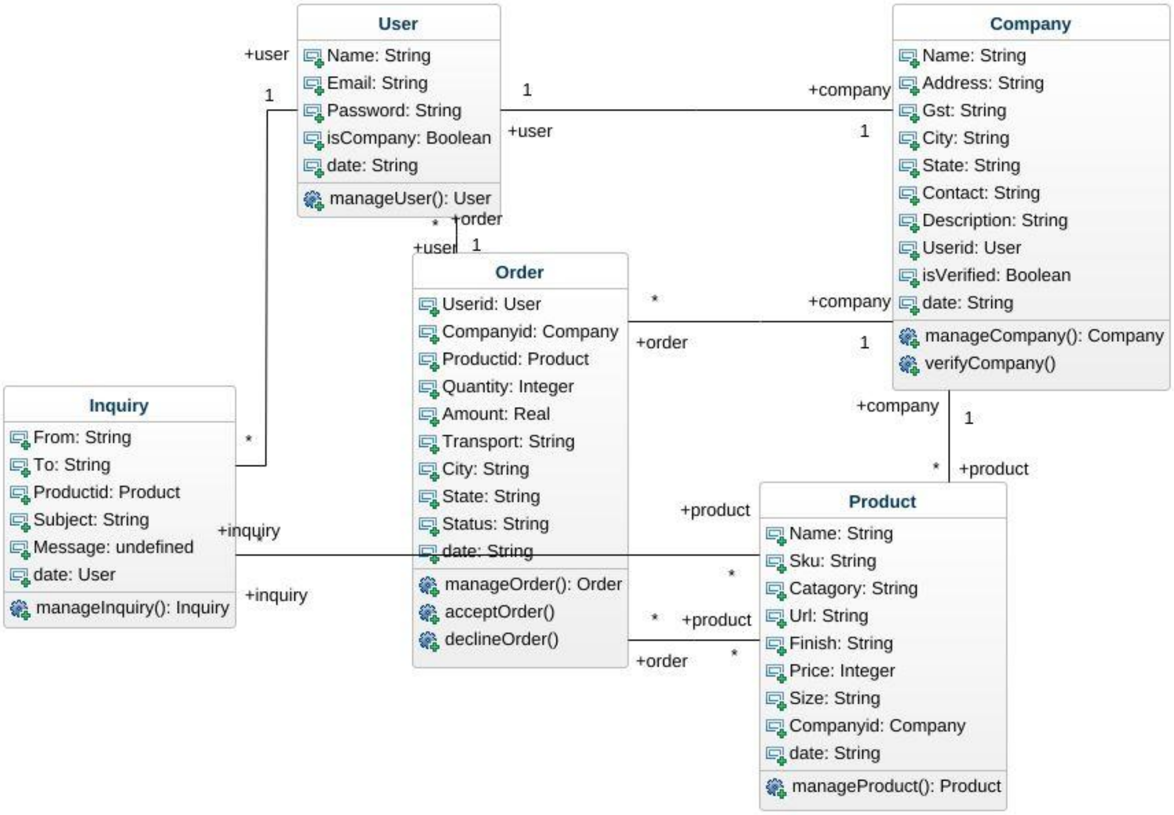
- Admin
- Seller
- Buyer



Class Diagram :

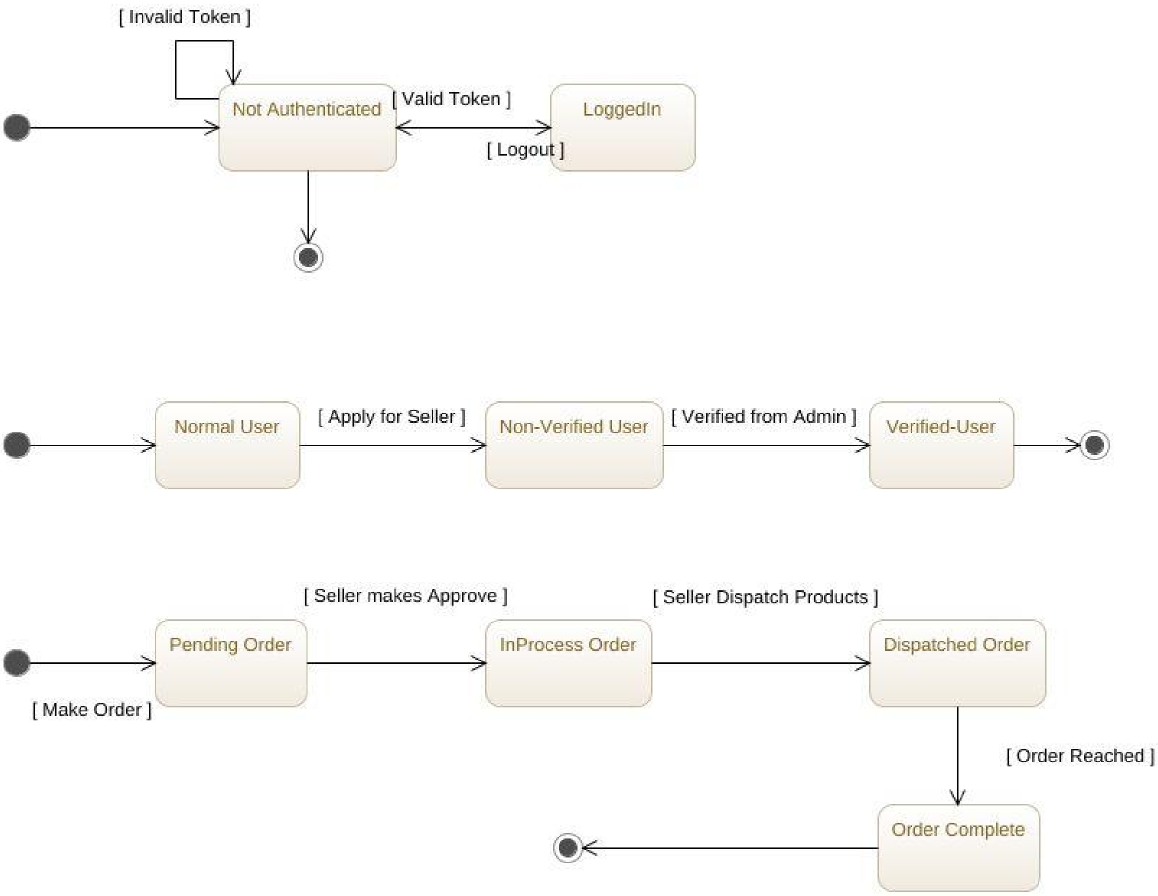
Classes :

- User
- Company
- Product
- Order
- Inquiry

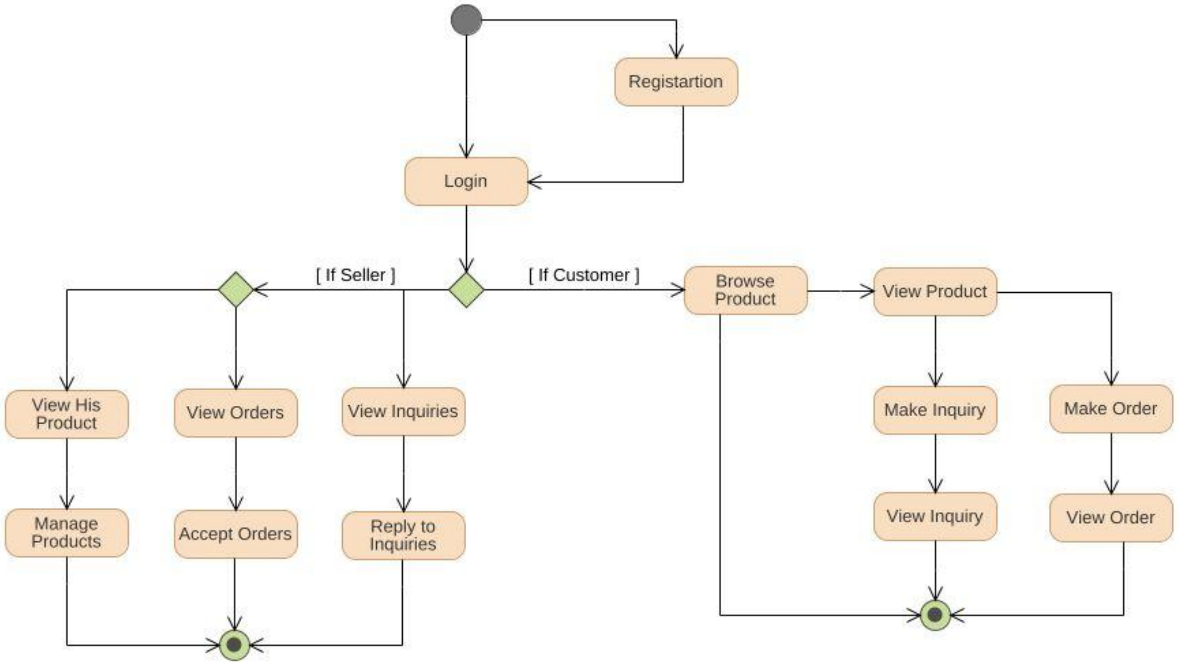


State Chart Diagram :

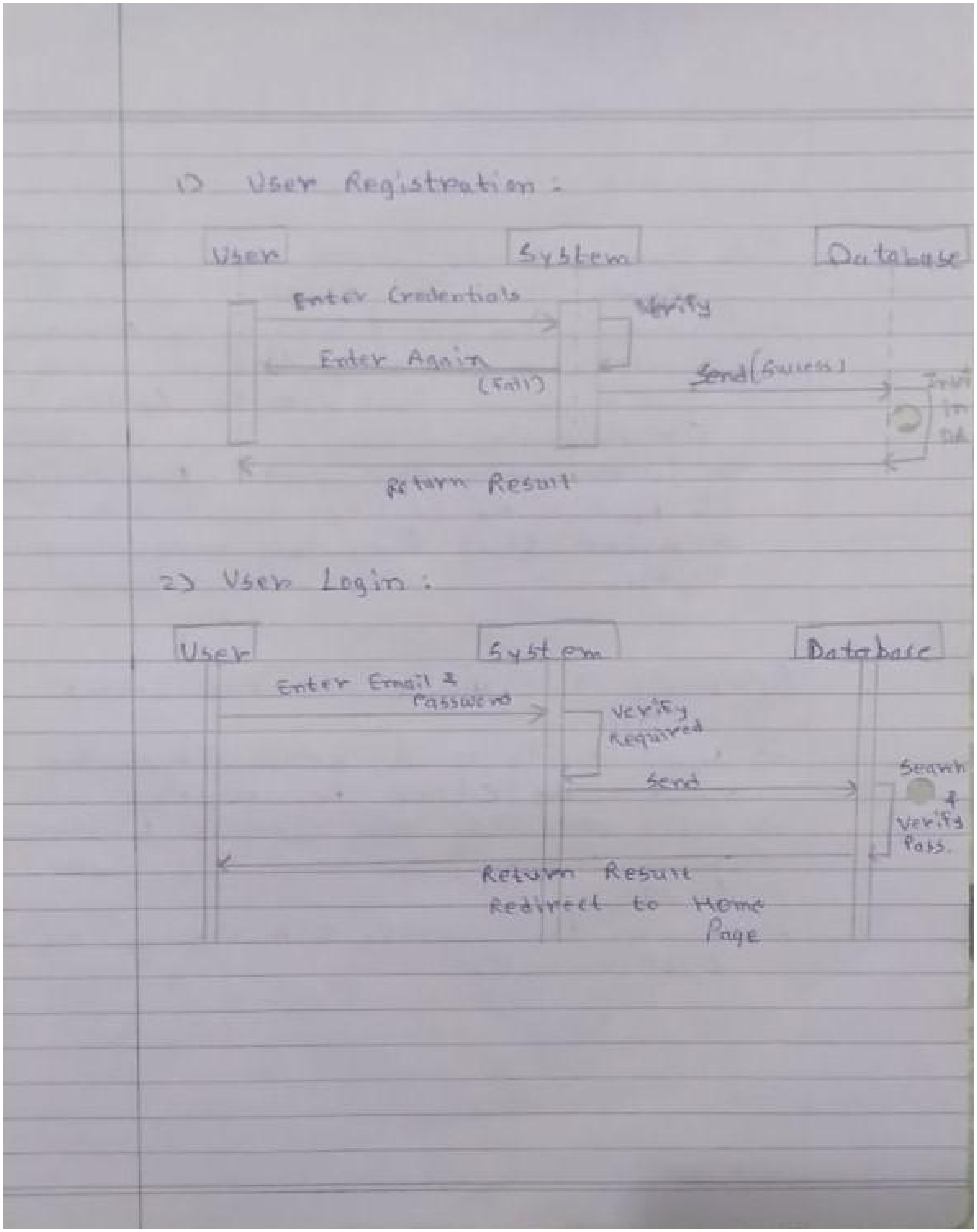
- Token (Session)
- User Object
- Order Object



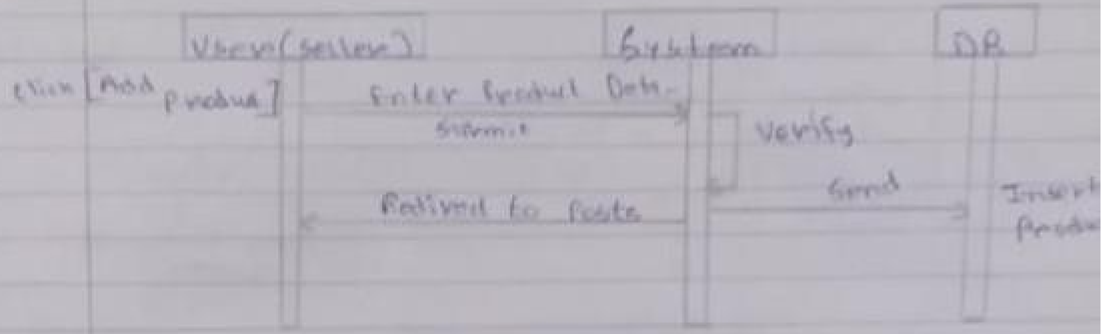
Activity Diagram :



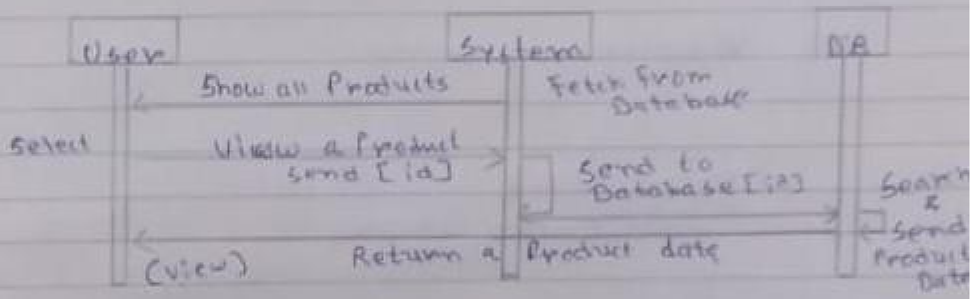
Sequence Diagram :



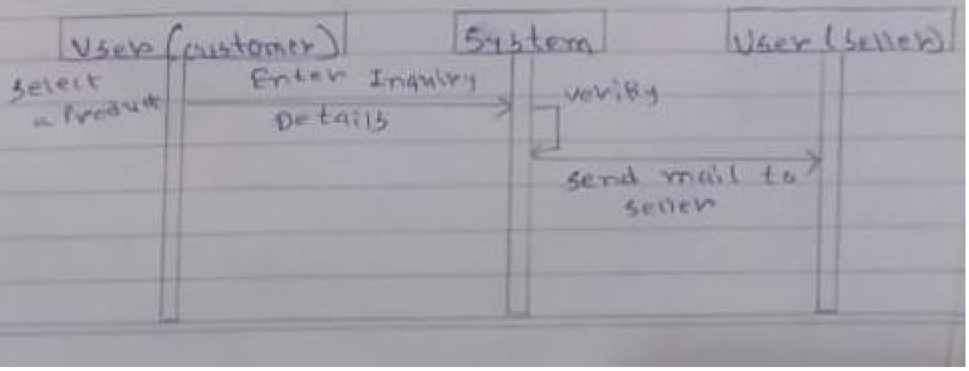
3) Add Product :



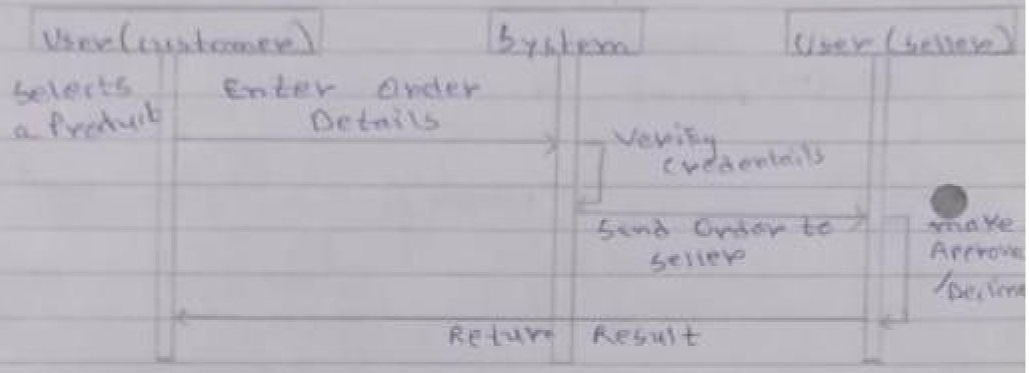
4) View Products :



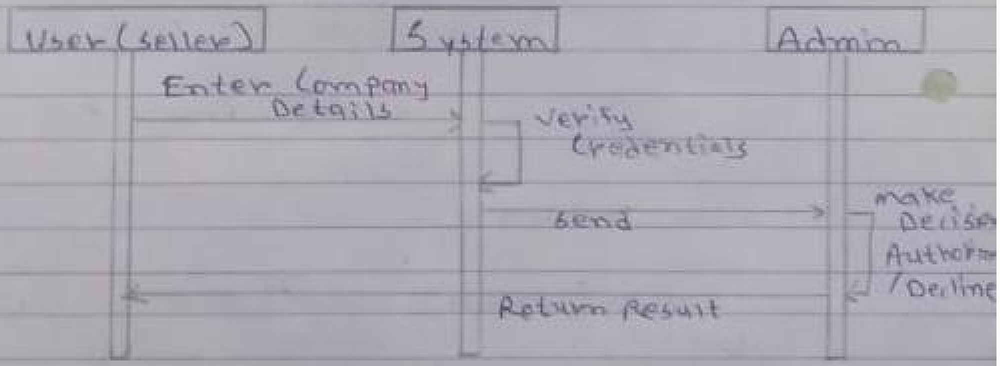
5) Make Inquiry :



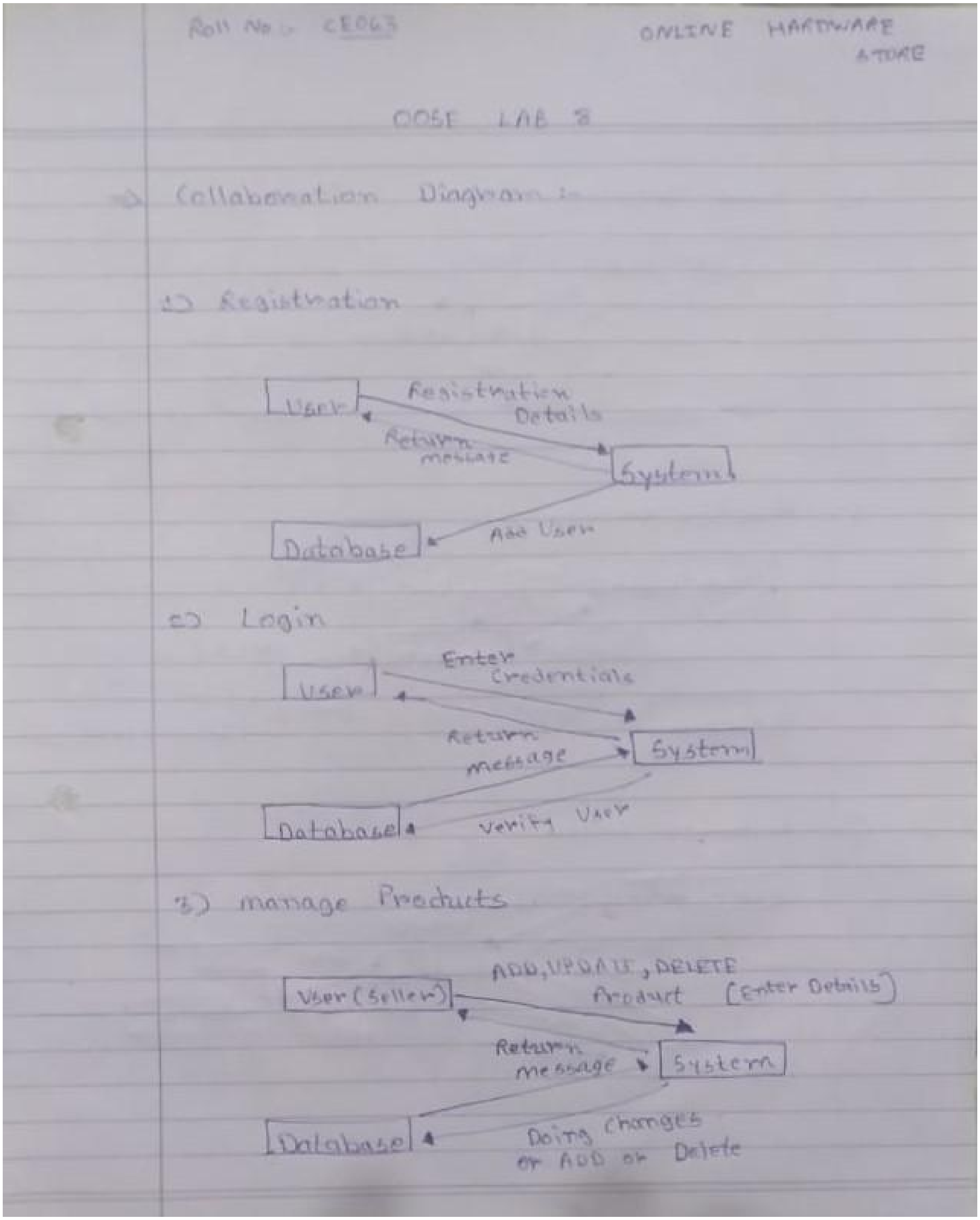
6) Manage Orders :



7) Authorize seller



Collaboration Diagram :



Roll No :- CE063

ONLINE HARDWARE STORE

OOSE LAB 8

→ Collaboration Diagram :-

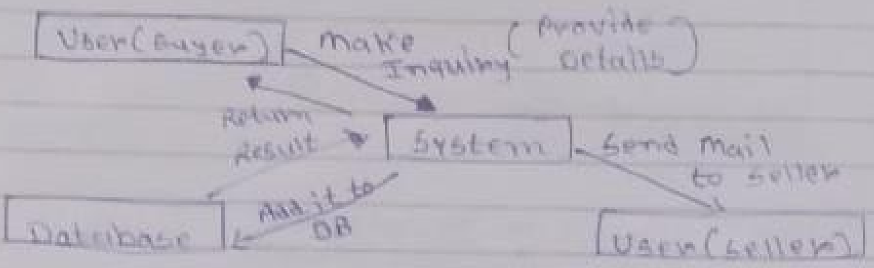
1) Registration

2) Login

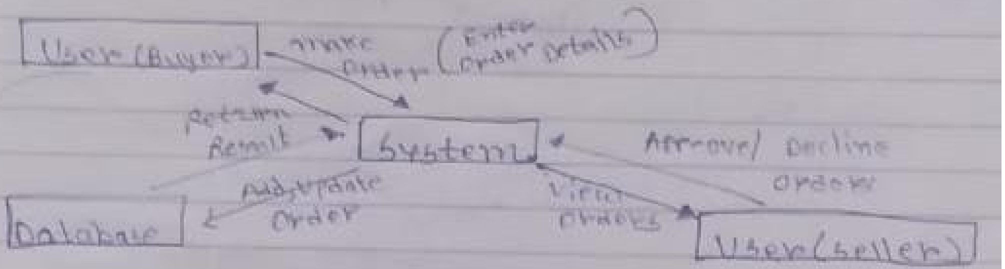
3) manage Products

User (Seller)
ADD, UPDATE, DELETE Product (Enter Details)
Return message
System
Database
Doing changes or ADD or Delete

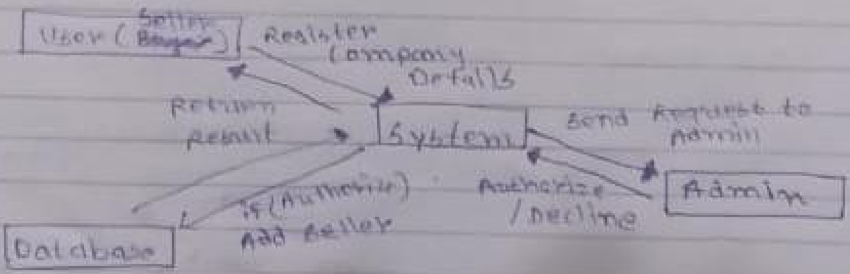
4) make Inquiry:



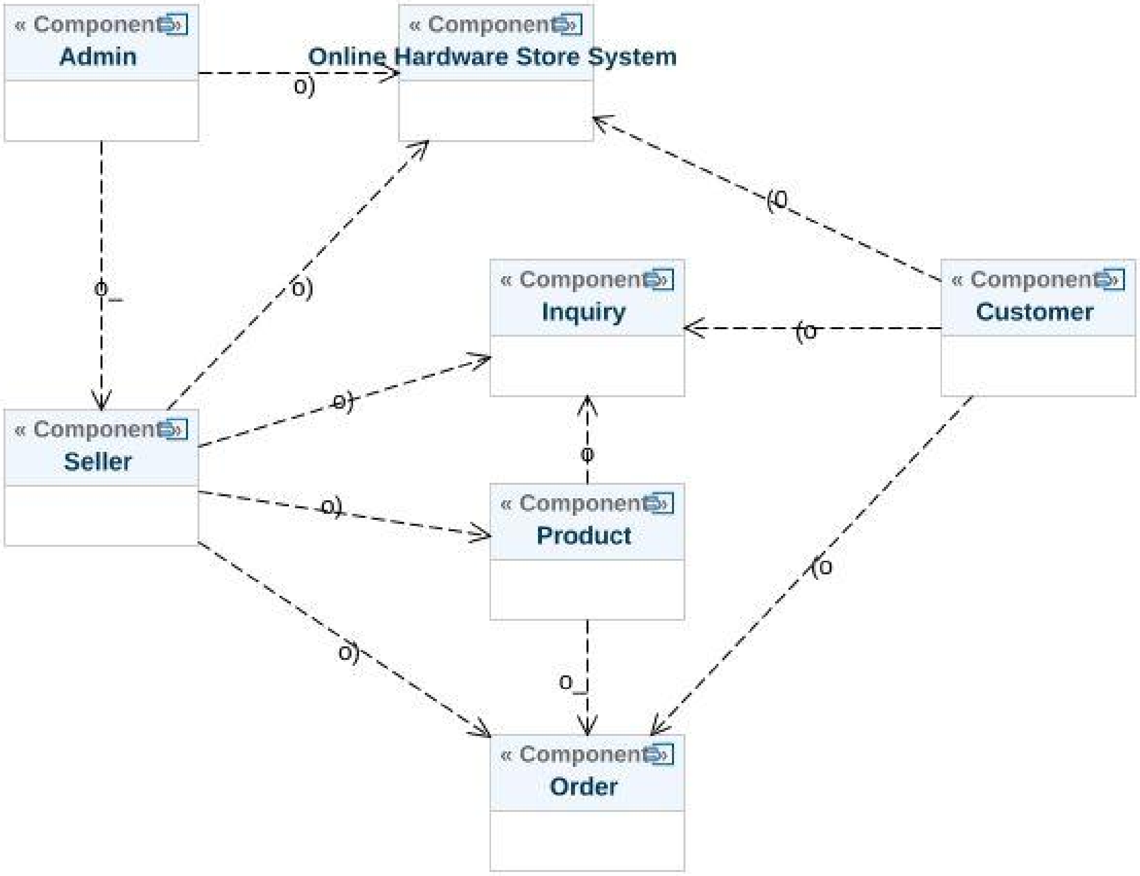
5) Manage Orders



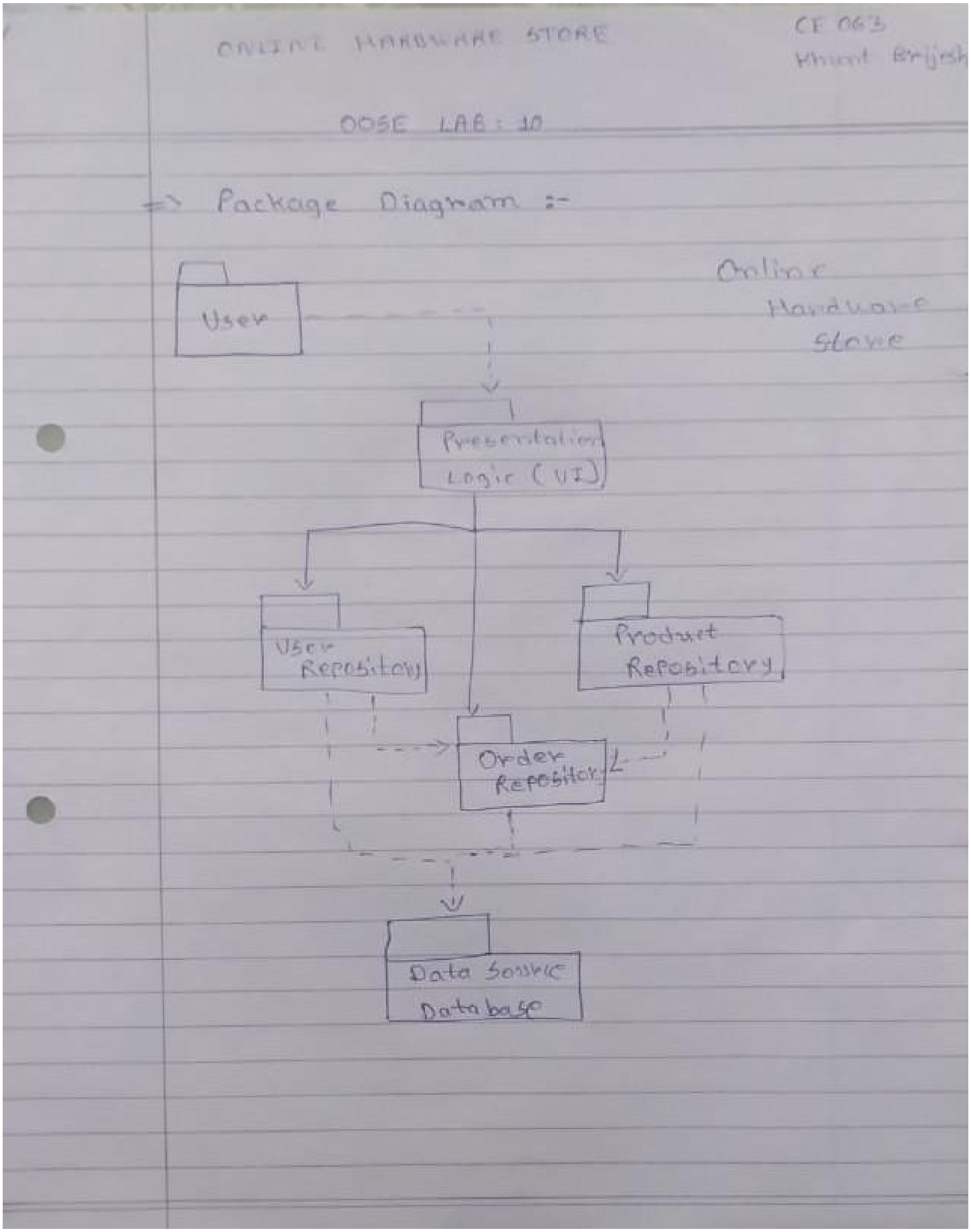
6) Authorize Seller



Component Diagram :



Package Diagram :



ONLINE HARDWARE STORE

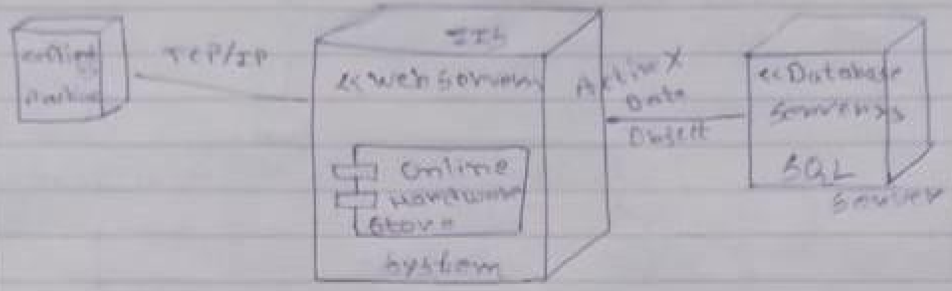
CE 063
Khunt Brijesh

OOSE LAB : 10

=> Package Diagram :-

Deployment Diagram :

=> Deployment Diagram :-



Testing :

Unit Testing :

The software units in a system are modules and routines that are assembled and integrated to perform a specific function. Unit testing focuses first on modules, independently of one another, to locate errors. This enables, to detect errors in coding and logic that are contained within each module. This testing includes entering data and ascertaining if the value matches to the type and size supported by language. The various controls are tested to ensure that each performs its action as required.

Integration Testing :

Data can be lost across any interface, one module can have an adverse effect on another, sub functions when combined, may not produce the desired major functions. Integration testing is a systematic testing to discover errors associated within the interface. The objective is to take unit tested modules and build a program structure. All the modules are combined and tested as a whole. Here the Server module and Client module options are integrated and tested. This testing provides the assurance that the application is a well integrated functional unit with smooth transition of data.

→ In our system we have implemented most of the corner case testing. In form page whenever required attribute is required then it needs to be passed and in quantity property during make order page cannot be negative.

→ after submit of any form in we asked for confirmation message do the testing of every aspect of our system.

Implementation Details :

→ we have implemented the system as a web-app. We used the MERN technologies for this project.
→ so, we deploy a backend server which is made using Express.js in Node. we take a database as MongoDb (Database Name : 'oosedb').
→ we have made user, product, order, company, inquiry, contact model classes and implemented the controller methods and specified the routing mechanism for using that controller's method.
→ we used the nodemailer package for sending mail & bcryptjs package for encrypting password and store it in DB.
→ we also use middleware in the backend for authorizing request which is made from end user.

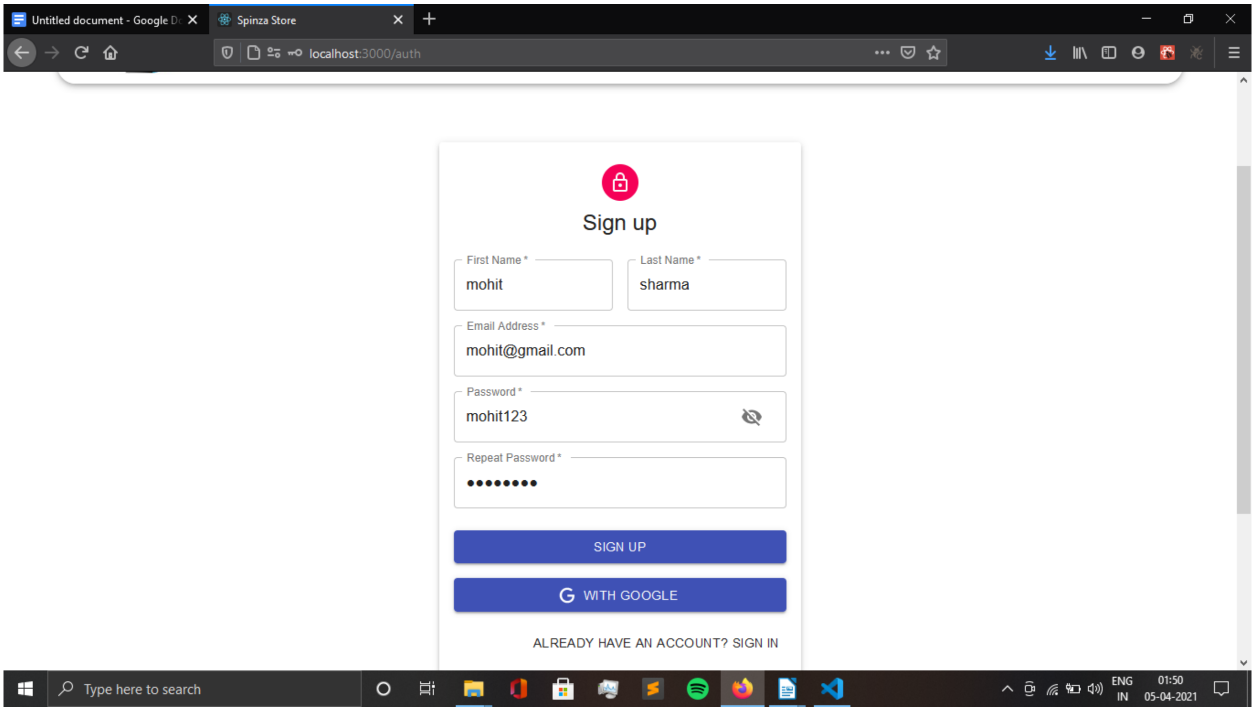
→ In the frontend we have used React. Specifically we have used the function Component. In that we have used React-Redux for storing global states.
→ to make a good-looking UI we have used a Material-UI library. Also we have implemented google login in the system.
→ we have to make inquiry, company & order form page and data table page.
→ we used Json Web Token for authenticating and Authorizing. Stored JWT token in localstorage of the browser.

→ in this system, we have used 'ES-6 Promise' and used javascript as type 'module'.

→ In this system, we have also made contact pages for queries related to the system or fixes bugs in the system. Also make about the page (owner page). We have also implemented the Admin section of the site.

→ when frontend sent the request to the backend then with every request we stored the authorization info in headers of the request.

ScreenShots :



Sign up

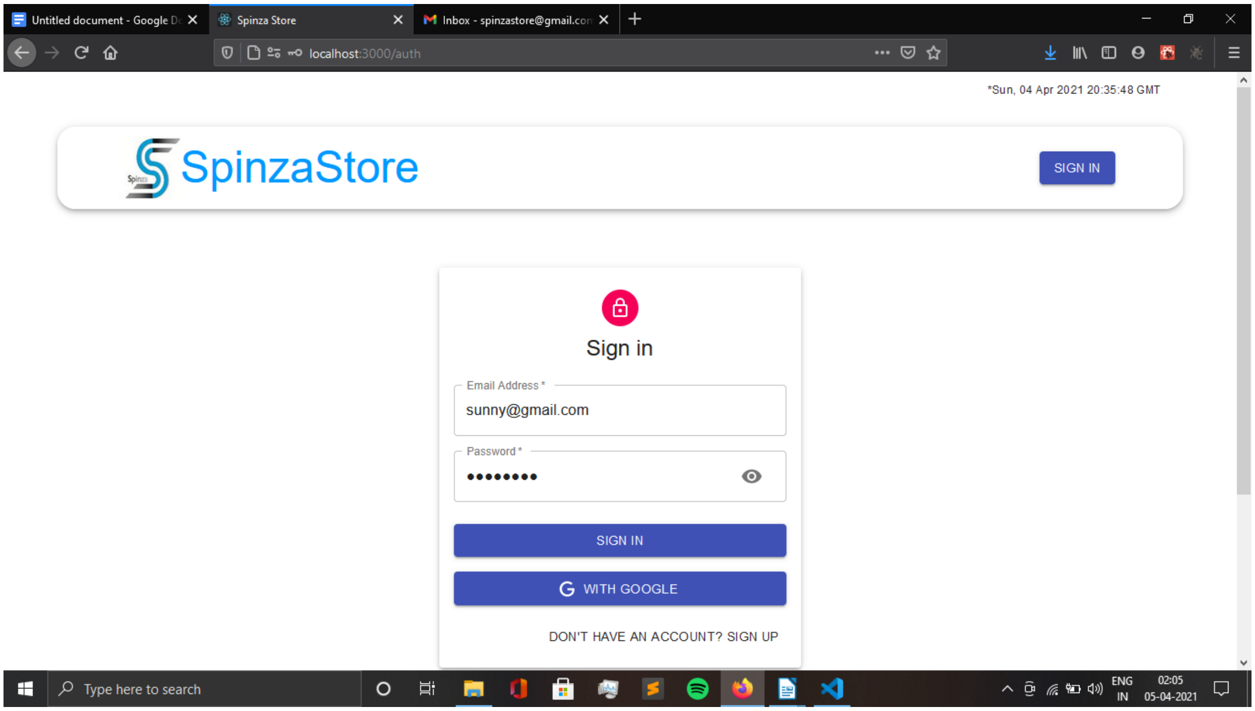
First Name * mohit

Last Name * sharma

Email Address * mohit@gmail.com

Password * mohit123

Repeat Password * ••••••••

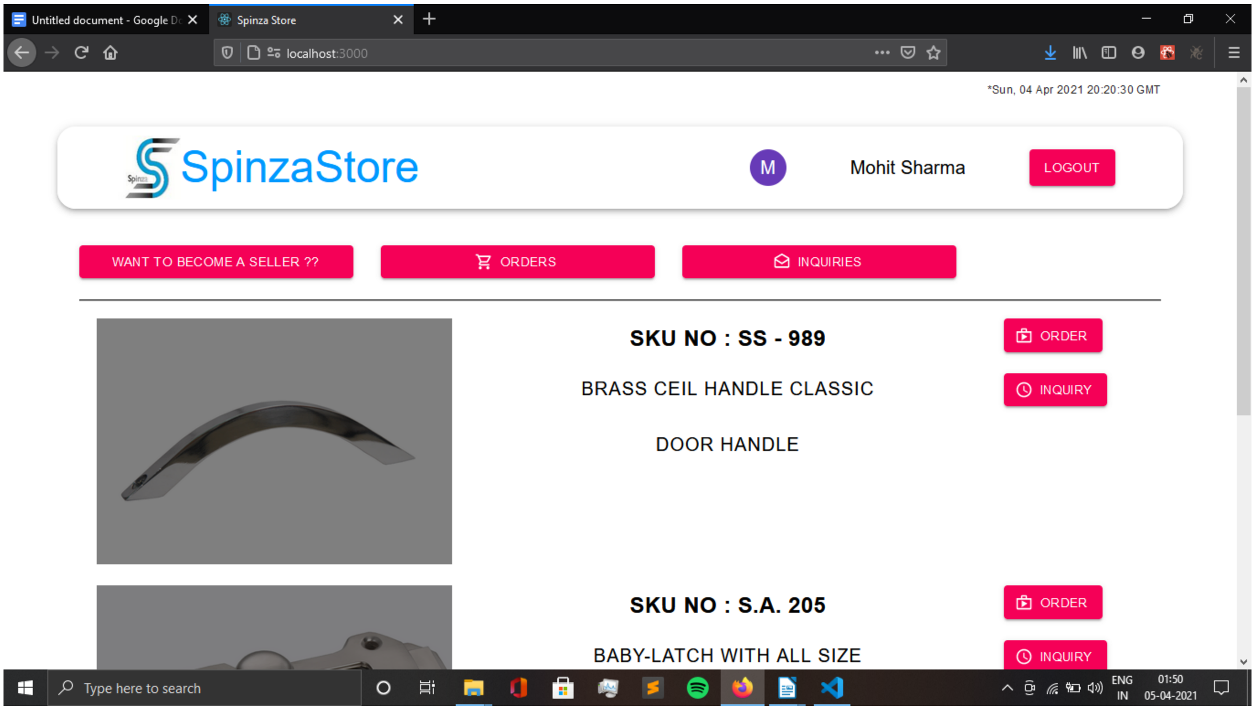


*Sun, 04 Apr 2021 20:35:48 GMT

Sign in

Email Address * sunny@gmail.com

Password * ••••••••



*Sun, 04 Apr 2021 20:20:30 GMT

SpinzaStore

M Mohit Sharma LOGOUT

WANT TO BECOME A SELLER ?? | ORDERS | INQUIRIES

SKU NO : SS - 989

BRASS CEIL HANDLE CLASSIC

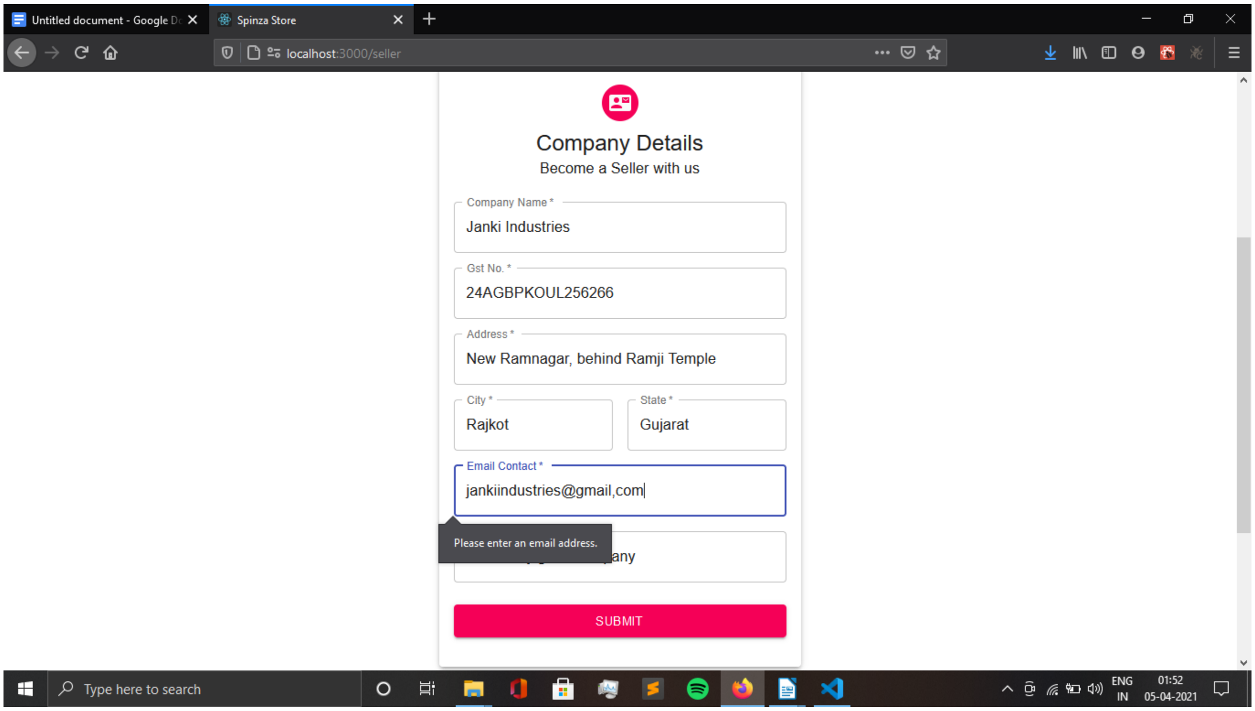
DOOR HANDLE

ORDER | INQUIRY

SKU NO : S.A. 205

BABY-LATCH WITH ALL SIZE

ORDER | INQUIRY



Company Details

Become a Seller with us

Company Name * Janki Industries

Gst No. * 24AGBPKOUL256266

Address * New Ramnagar, behind Ramji Temple

City * Rajkot

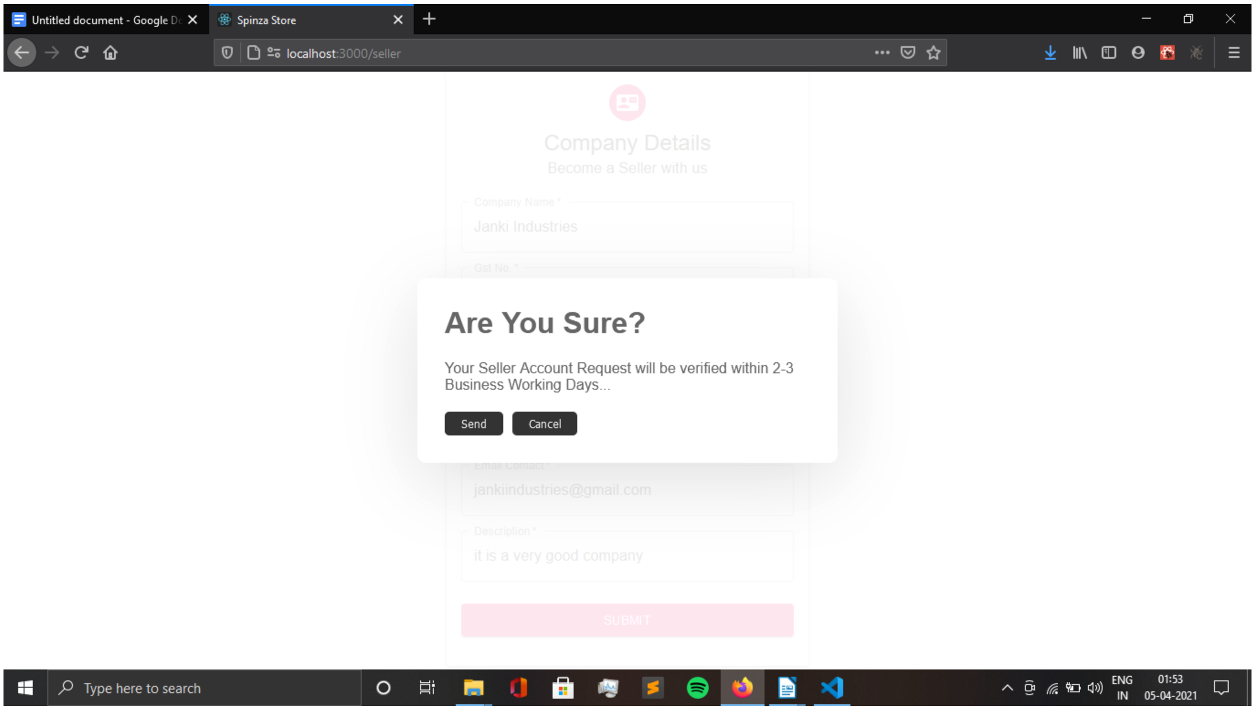
State * Gujarat

Email Contact * jankiindustries@gmail,com

Please enter an email address.

any

SUBMIT



Company Details

Become a Seller with us

Company Name *

Janki Industries

Gst No *

Are You Sure?

Your Seller Account Request will be verified within 2-3 Business Working Days...

Send Cancel

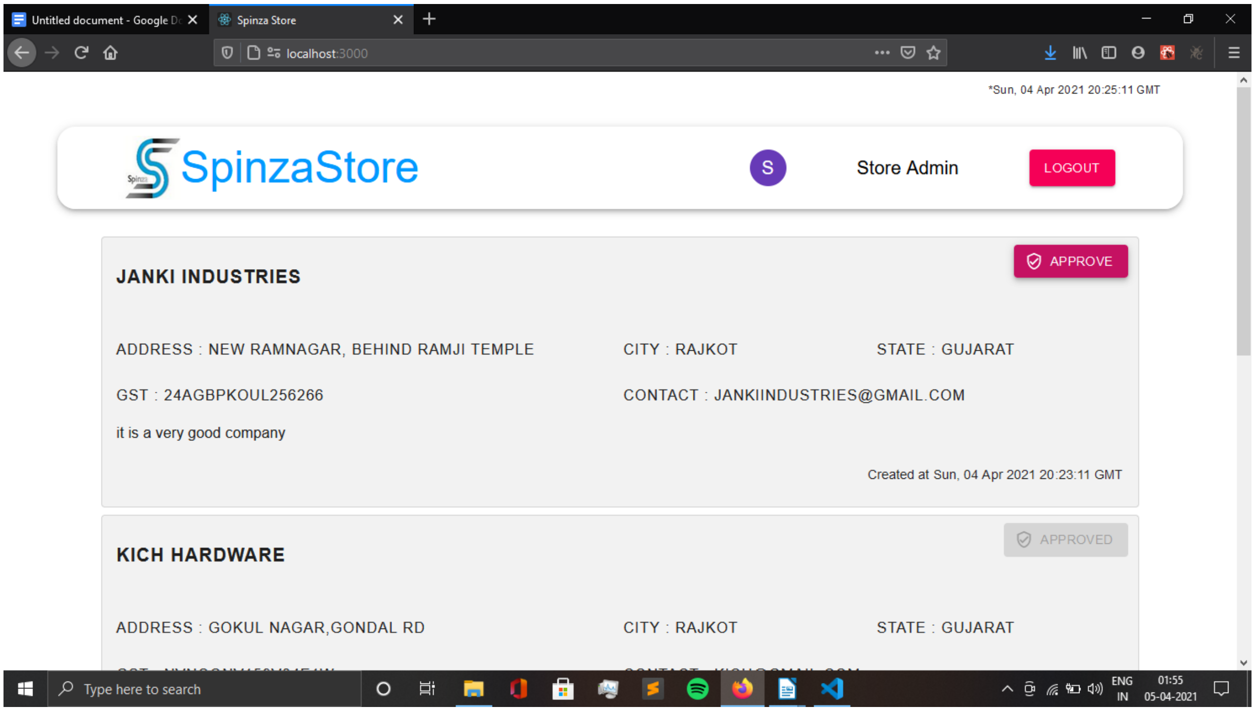
Email Contact *

jankiindustries@gmail.com

Description *

it is a very good company

SUBMIT



*Sun, 04 Apr 2021 20:25:11 GMT

SpinzaStore   S   Store Admin   LOGOUT

JANKI INDUSTRIES   APPROVE

ADDRESS : NEW RAMNAGAR, BEHIND RAMJI TEMPLE   CITY : RAJKOT   STATE : GUJARAT

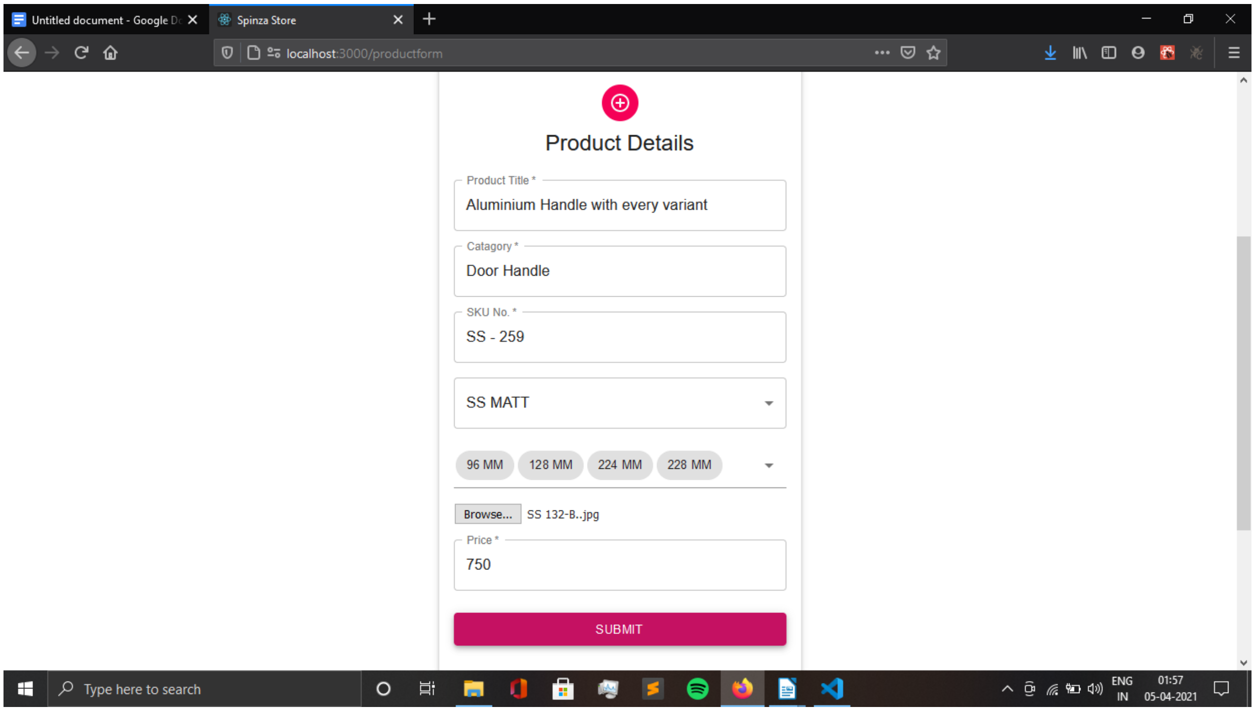
GST : 24AGBPKOUL256266   CONTACT : JANKIINDUSTRIES@GMAIL.COM

it is a very good company

Created at Sun, 04 Apr 2021 20:23:11 GMT

KICH HARDWARE   APPROVED

ADDRESS : GOKUL NAGAR,GONDAL RD   CITY : RAJKOT   STATE : GUJARAT



Product Details

Product Title *
Aluminium Handle with every variant

Catagory *
Door Handle

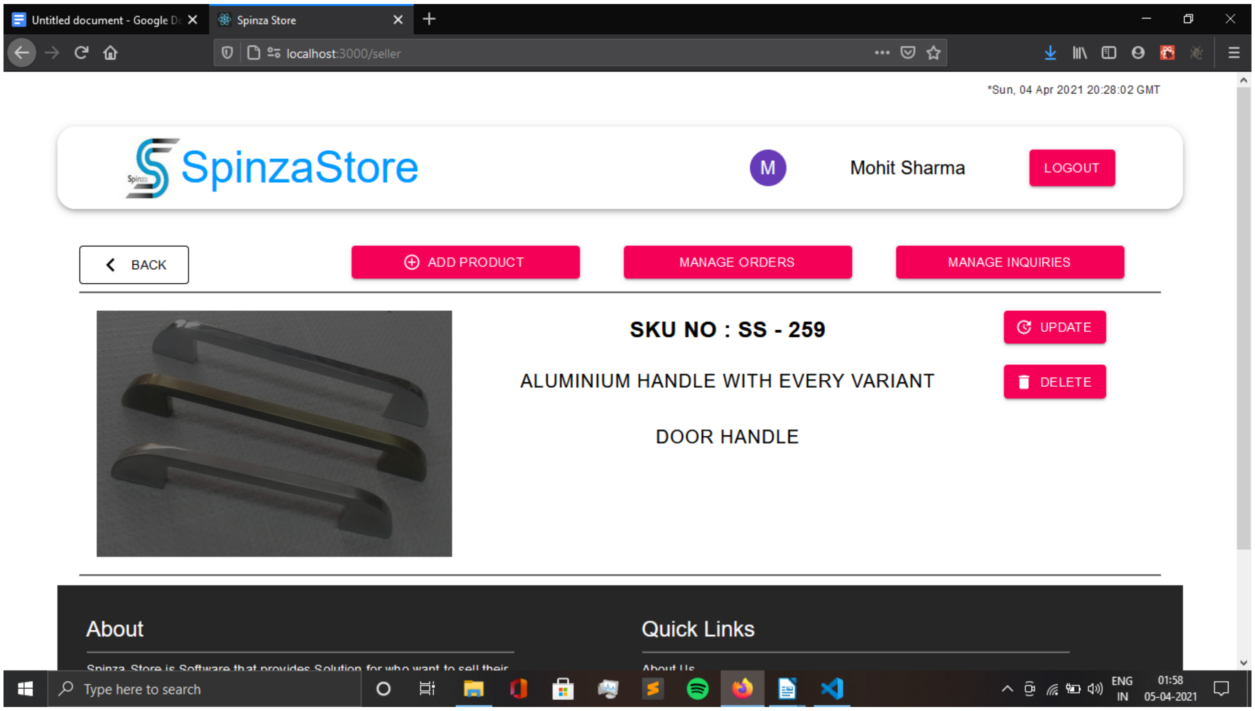
SKU No. *
SS - 259

SS MATT

96 MM 128 MM 224 MM 228 MM

Browse... SS 132-B..jpg

Price *
750



*Sun, 04 Apr 2021 20:28:02 GMT

SKU NO : SS - 259

ALUMINIUM HANDLE WITH EVERY VARIANT

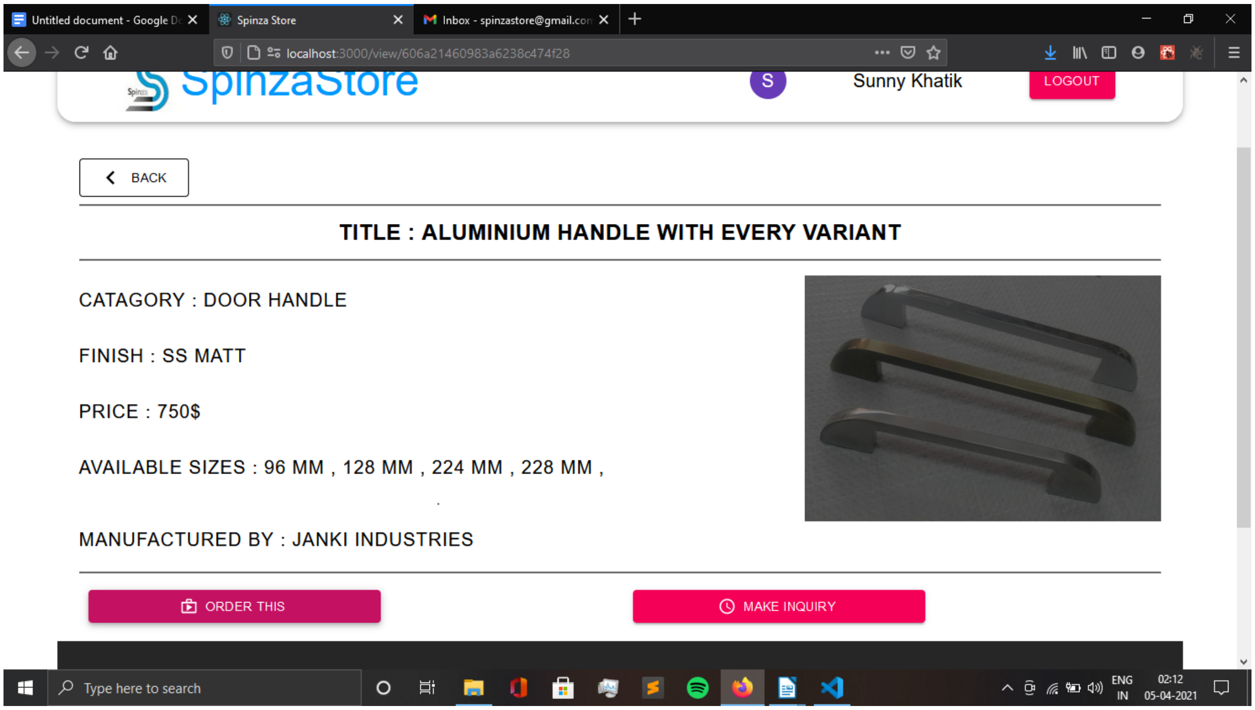
DOOR HANDLE

About

Spinza Store is Software that provides Solution for who want to sell their

Quick Links

About Us



TITLE : ALUMINIUM HANDLE WITH EVERY VARIANT

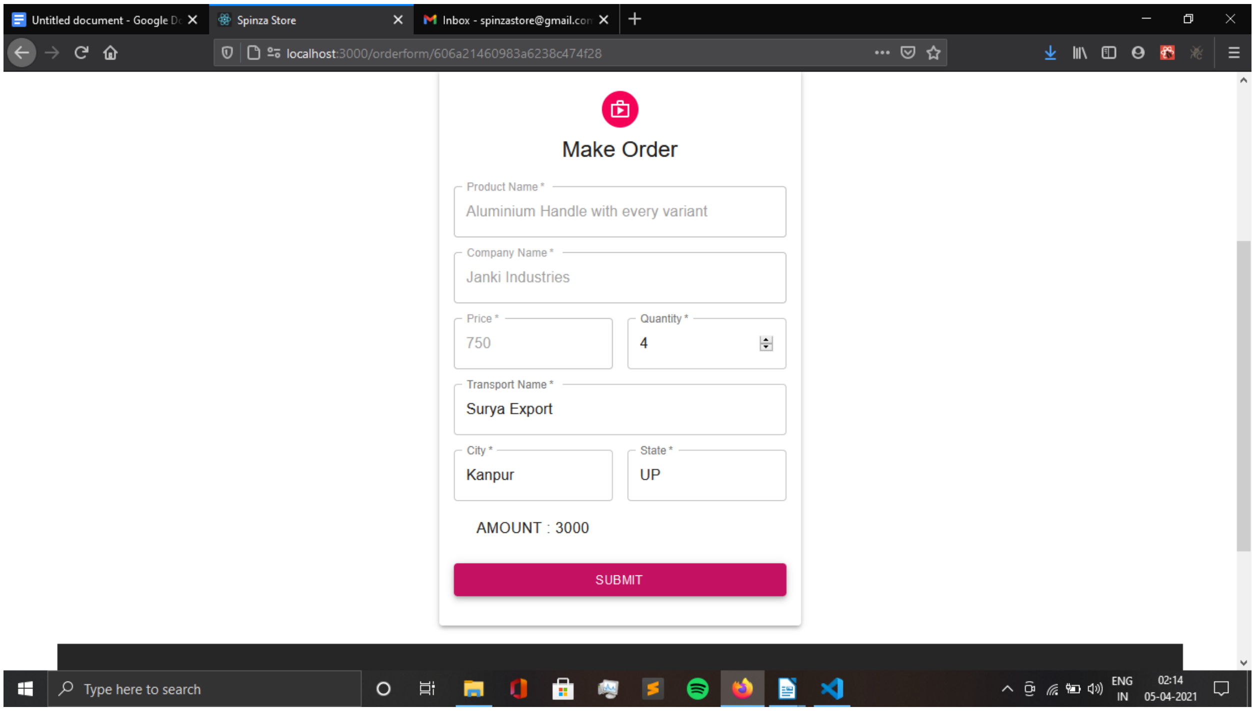
CATAGORY : DOOR HANDLE

FINISH : SS MATT

PRICE : 750$

AVAILABLE SIZES : 96 MM , 128 MM , 224 MM , 228 MM ,

MANUFACTURED BY : JANKI INDUSTRIES


Untitled document - Google D
Spinza Store
Inbox - spinzastore@gmail.com
localhost:3000/orderform/606a21460983a6238c474f28
SUBMIT
Type here to search
ENG
IN
02:14
05-04-2021

Make Order

Product Name * Aluminium Handle with every variant

Company Name * Janki Industries

Price * 750

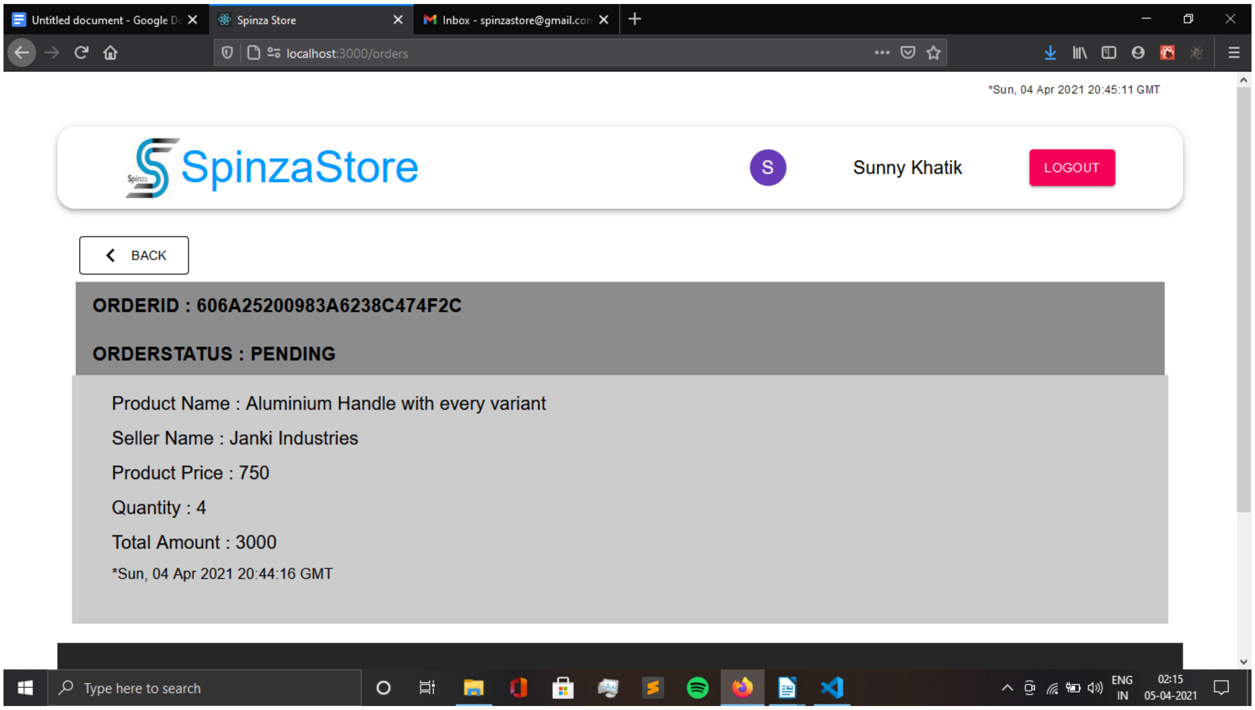
Quantity * 4

Transport Name * Surya Export

City * Kanpur

State * UP

AMOUNT : 3000



*Sun, 04 Apr 2021 20:45:11 GMT

ORDERID : 606A25200983A6238C474F2C

ORDERSTATUS : PENDING

Product Name : Aluminium Handle with every variant

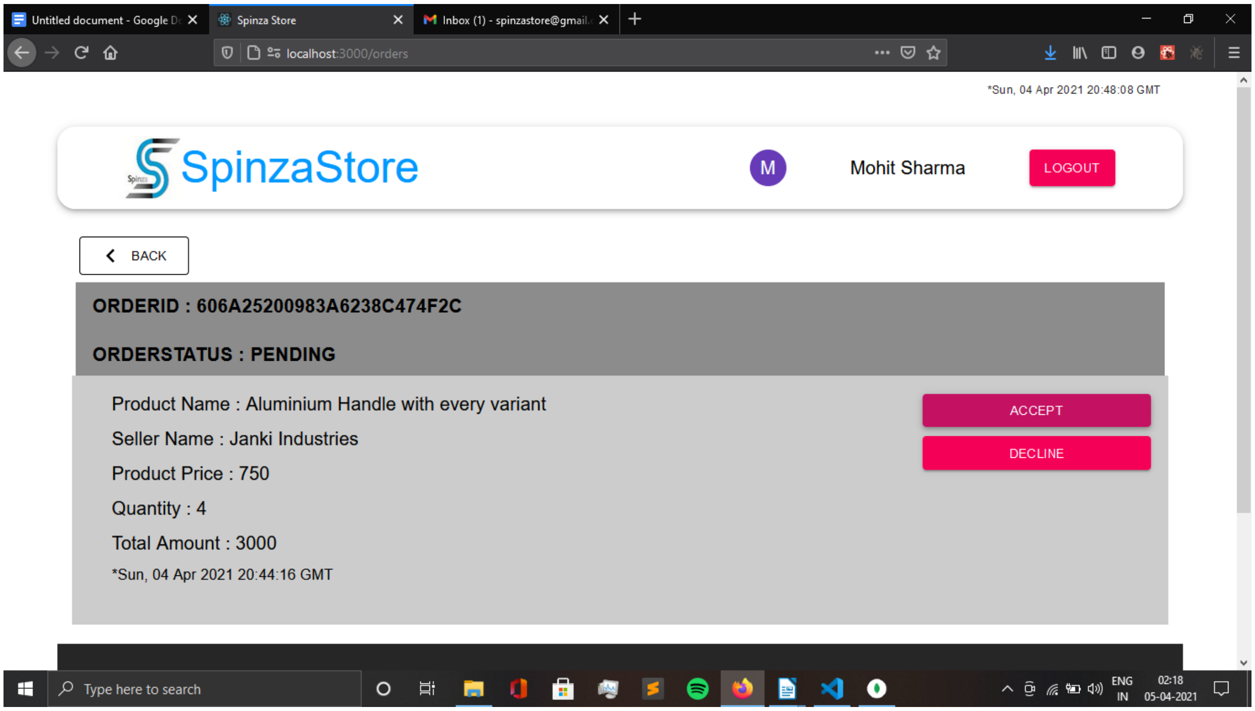
Seller Name : Janki Industries

Product Price : 750

Quantity : 4

Total Amount : 3000

*Sun, 04 Apr 2021 20:44:16 GMT



*Sun, 04 Apr 2021 20:48:08 GMT

ORDERID : 606A25200983A6238C474F2C

ORDERSTATUS : PENDING

Product Name : Aluminium Handle with every variant

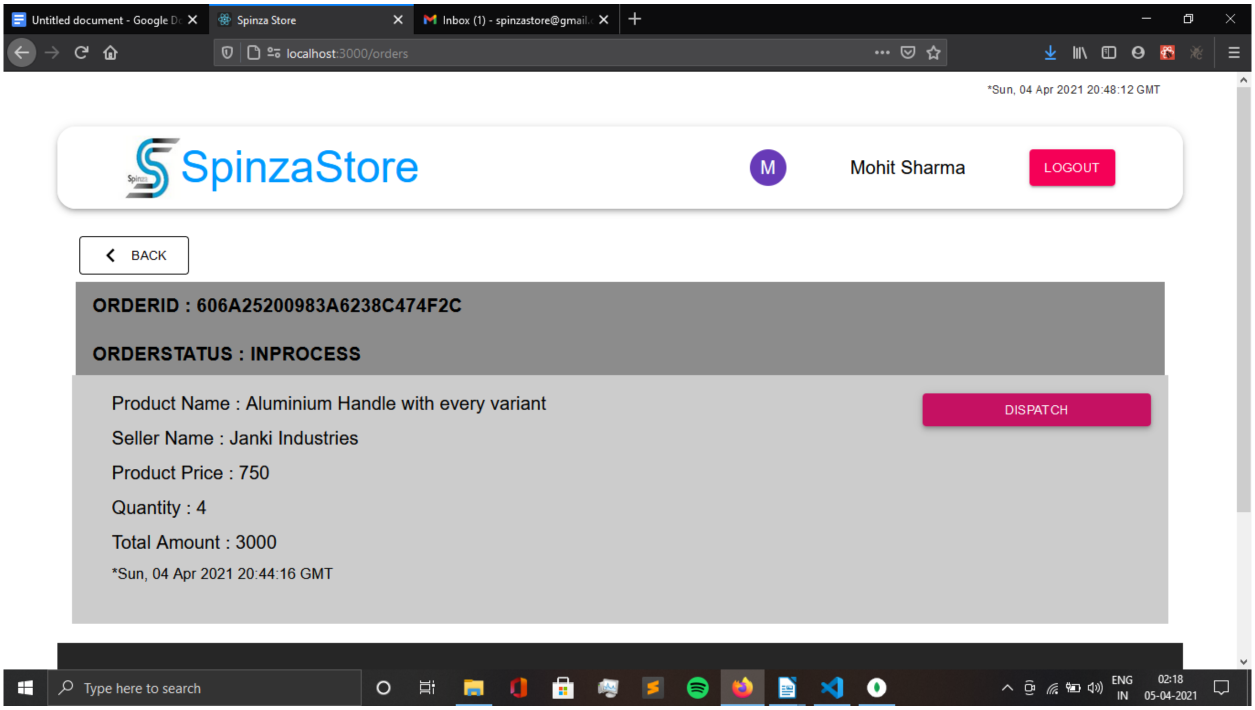
Seller Name : Janki Industries

Product Price : 750

Quantity : 4

Total Amount : 3000

*Sun, 04 Apr 2021 20:44:16 GMT



ORDERID : 606A25200983A6238C474F2C

ORDERSTATUS : INPROCESS

Product Name : Aluminium Handle with every variant

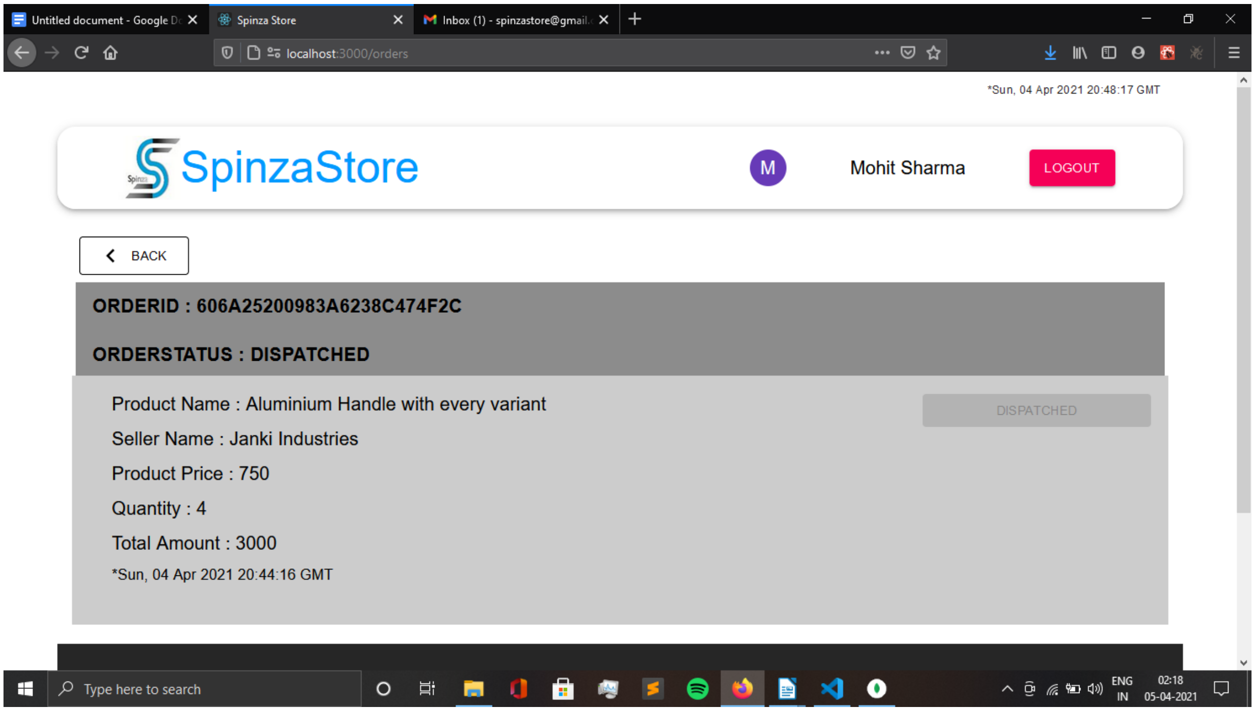
Seller Name : Janki Industries

Product Price : 750

Quantity : 4

Total Amount : 3000

*Sun, 04 Apr 2021 20:44:16 GMT



ORDERID : 606A25200983A6238C474F2C

ORDERSTATUS : DISPATCHED

Product Name : Aluminium Handle with every variant

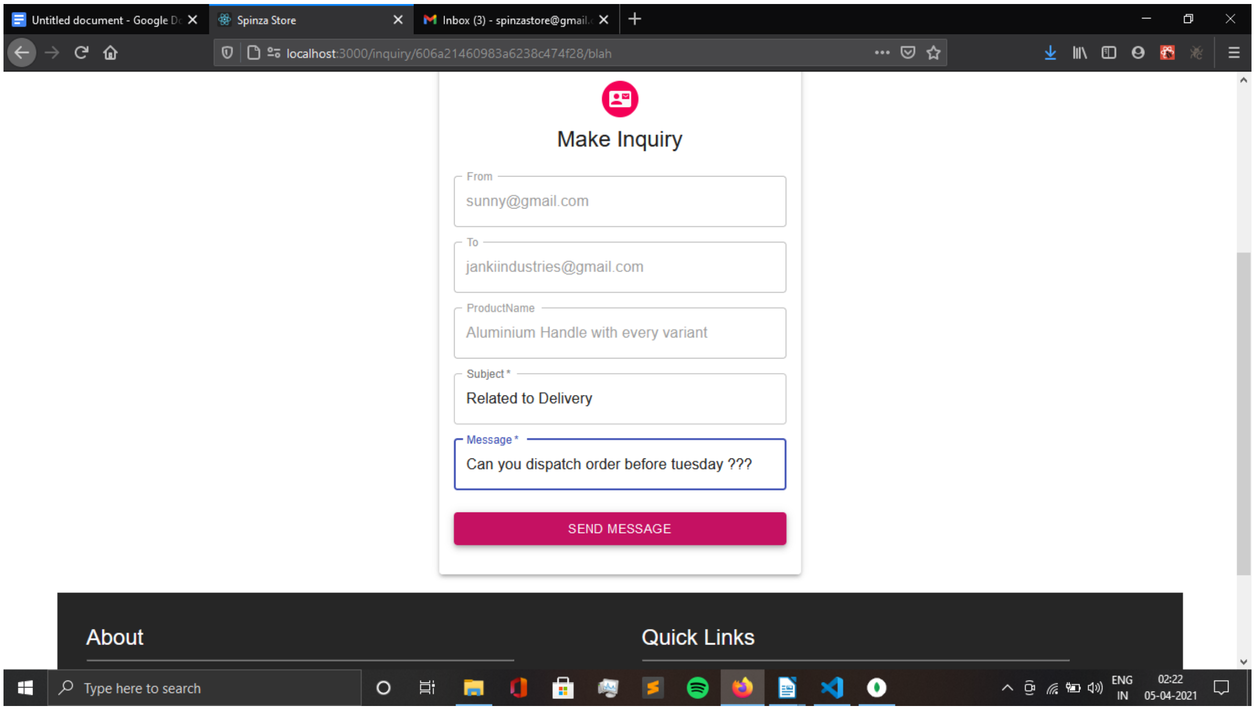
Seller Name : Janki Industries

Product Price : 750

Quantity : 4

Total Amount : 3000

*Sun, 04 Apr 2021 20:44:16 GMT


Untitled document - Google D
Spinza Store
Inbox (3) - spinzastore@gmail.
localhost:3000/inquiry/606a21460983a6238c474f28/blah
About
Quick Links
Type here to search
ENG
IN
02:22
05-04-2021

Make Inquiry

From: sunny@gmail.com

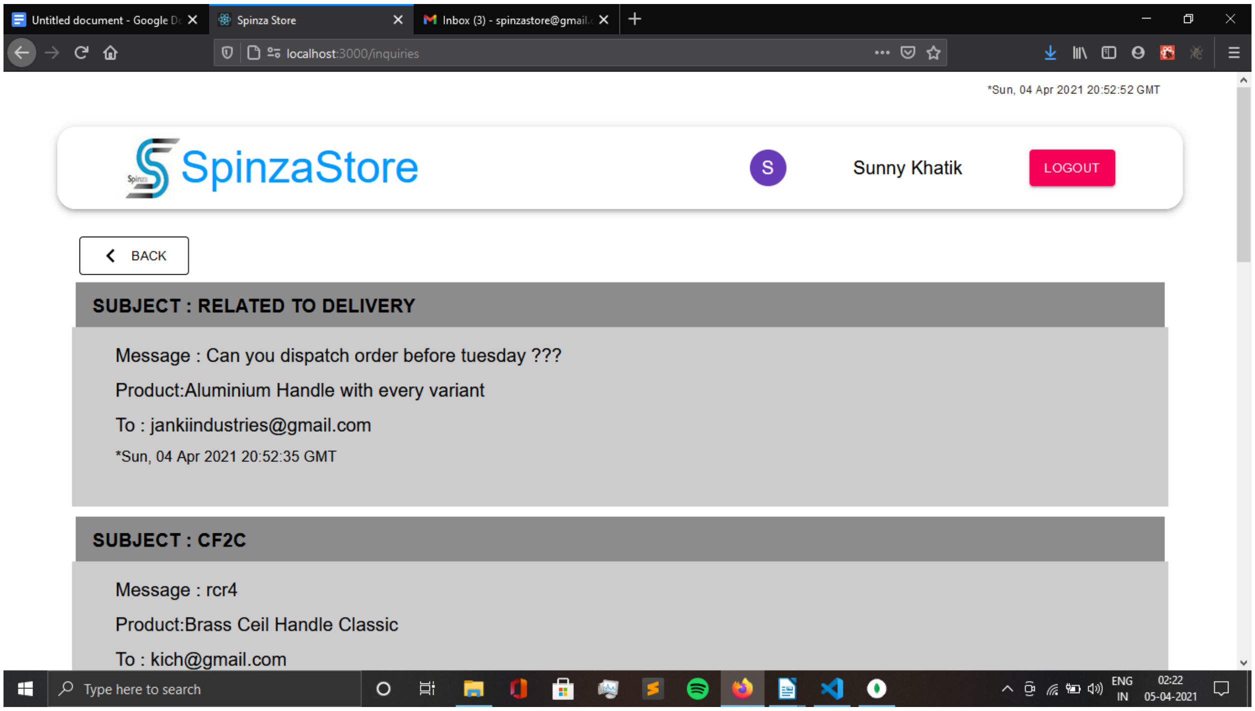
To: jankiindustries@gmail.com

ProductName: Aluminium Handle with every variant

Subject *: Related to Delivery

Message *: Can you dispatch order before tuesday ???

SEND MESSAGE



*Sun, 04 Apr 2021 20:52:52 GMT

SUBJECT : RELATED TO DELIVERY

Message : Can you dispatch order before tuesday ???

Product:Aluminium Handle with every variant

To : jankiindustries@gmail.com

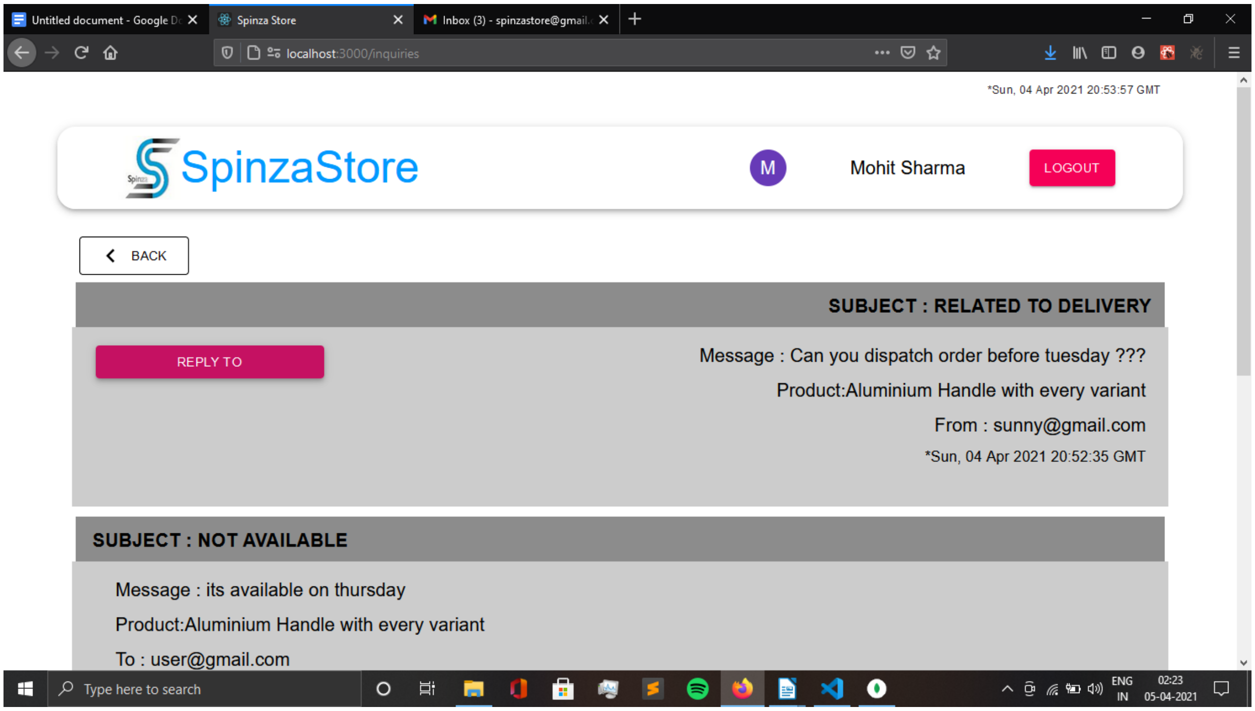
*Sun, 04 Apr 2021 20:52:35 GMT

SUBJECT : CF2C

Message : rcr4

Product:Brass Ceil Handle Classic

To : kich@gmail.com



*Sun, 04 Apr 2021 20:53:57 GMT

SUBJECT : RELATED TO DELIVERY

Message : Can you dispatch order before tuesday ???

Product:Aluminium Handle with every variant

From : sunny@gmail.com

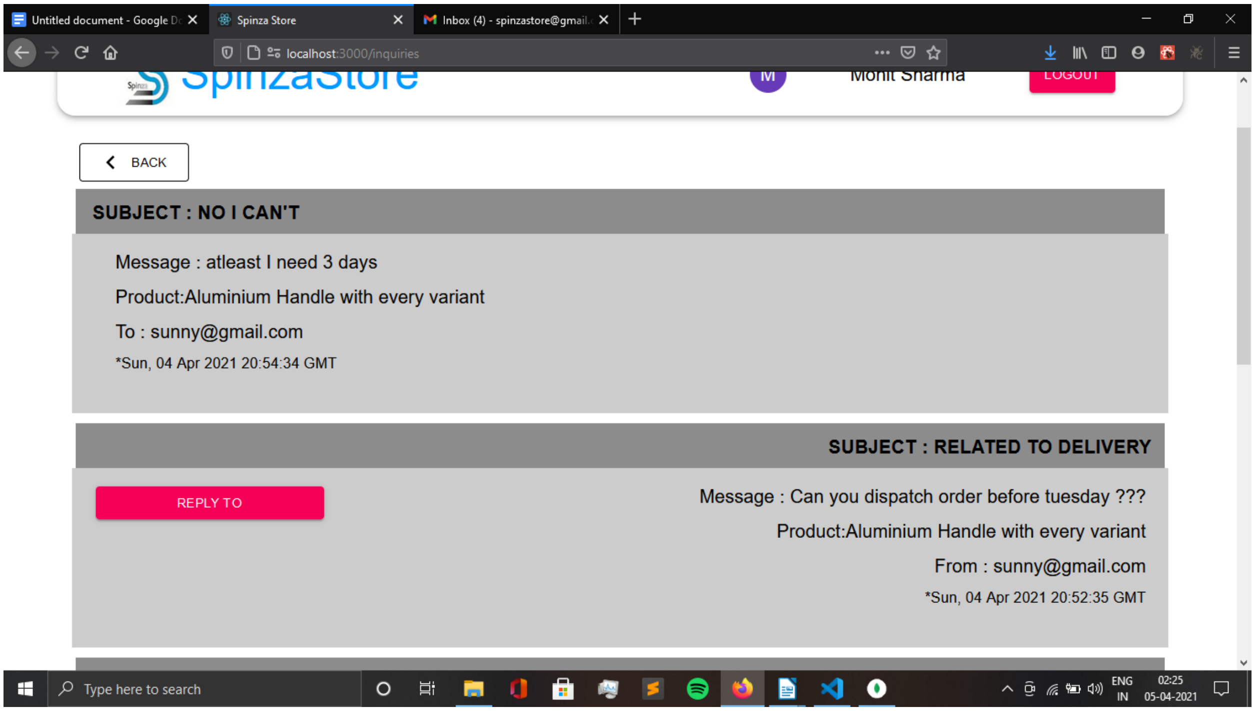
*Sun, 04 Apr 2021 20:52:35 GMT

SUBJECT : NOT AVAILABLE

Message : its available on thursday

Product:Aluminium Handle with every variant

To : user@gmail.com



SUBJECT : NO I CAN'T

Message : atleast I need 3 days

Product:Aluminium Handle with every variant

To : sunny@gmail.com

*Sun, 04 Apr 2021 20:54:34 GMT

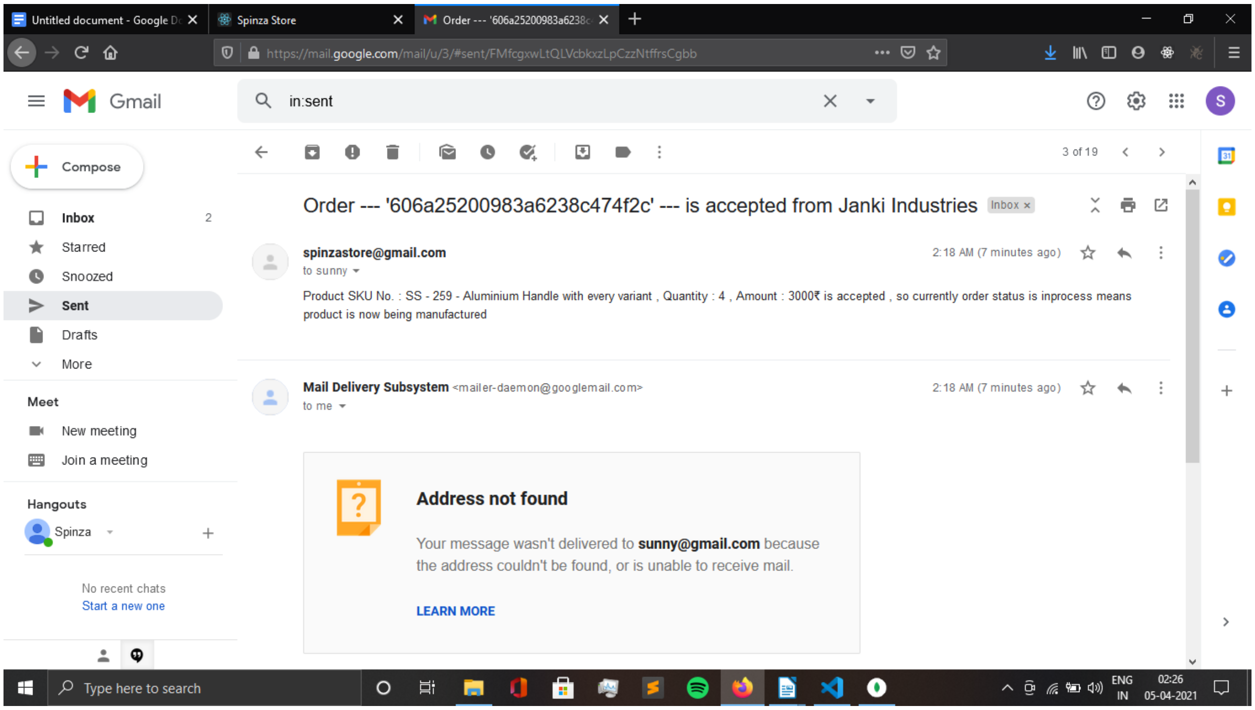
SUBJECT : RELATED TO DELIVERY

Message : Can you dispatch order before tuesday ???

Product:Aluminium Handle with every variant

From : sunny@gmail.com

*Sun, 04 Apr 2021 20:52:35 GMT



Order --- '606a25200983a6238c474f2c' --- is accepted from Janki Industries Inbox ×

spinzastore@gmail.com 2:18 AM (7 minutes ago)
to sunny

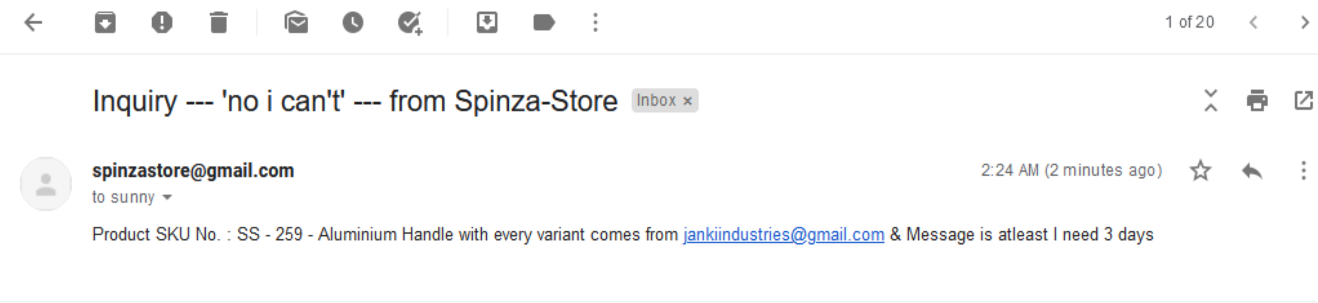
Product SKU No. : SS - 259 - Aluminium Handle with every variant , Quantity : 4 , Amount : 3000₹ is accepted , so currently order status is inprocess means product is now being manufactured

Mail Delivery Subsystem <mailer-daemon@googlemail.com> 2:18 AM (7 minutes ago)
to me

Address not found

Your message wasn't delivered to **sunny@gmail.com** because the address couldn't be found, or is unable to receive mail.

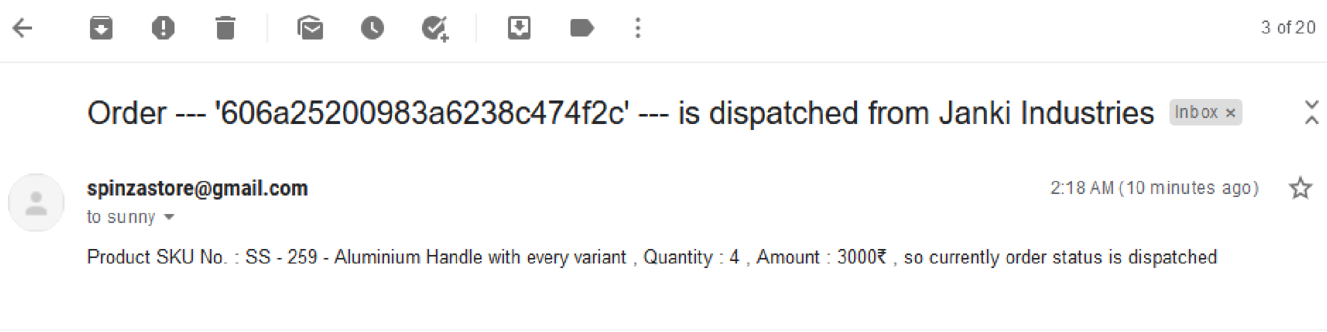
LEARN MORE



Inquiry --- 'no i can't' --- from Spinza-Store Inbox ×

spinzastore@gmail.com 2:24 AM (2 minutes ago)
to sunny

Product SKU No. : SS - 259 - Aluminium Handle with every variant comes from jankiindustries@gmail.com & Message is atleast I need 3 days



Order --- '606a25200983a6238c474f2c' --- is dispatched from Janki Industries Inbox ×

spinzastore@gmail.com 2:18 AM (10 minutes ago)
to sunny

Product SKU No. : SS - 259 - Aluminium Handle with every variant , Quantity : 4 , Amount : 3000₹ , so currently order status is dispatched

Conclusion & Future Work :

→ so, we have implemented the system but when System gets big means when there are many users then we have to take many servers or space…
→ We have to decrease the latency or increase the query speed in the database and make the user more compatible and reliable.
→ In Future we have to implement the Cart System and payment interface.
→ Next we have to make the UI more beautiful.
→ In the future we have to make product details in more detail and make category table, so that when searching we can easily make better search results.
→ Also, we have to show companyData to End-User. So that they can trust sellers.
→ when making an Inquiry we can provide a way to upload a file, photo . so that Inquiry can be easily explainable. Also we can add more photos in 1 product only (many angles).

References :

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