

ORDER TRACKING AND ANALYSIS SYSTEM

MINOR PROJECT REPORT

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD
OF THE DEGREE OF

BACHELOR OF TECHNOLOGY
(Computer Science and Engineering)



Submitted By:

Arshdeep Kaur (1805161)
Divneet Kaur (1805169)
Manjot Kaur (1805197)

Submitted To:

Prof. Inderjit Singh Dhanoa
Assistant Professor

**Department of Computer Science and Engineering
Guru Nanak Dev Engineering College
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Abstract

Order Placing and Tracking System is developed by keeping in mind the requirements of small scale industries. This system will organize their data and will help in easy management. It comprises two main modules, Authentication module and Order module. In the Authentication module, the customers of the organisation who want to work with them will be able to register themselves for the organisation and if their data is validated, their registration will be successful. They can further login with their credentials. In their account, all of their data of orders purchased (current or previous) will be maintained. They can further place orders at any time by filling up their requirements for the product. An invoice will be generated for their order. They can also track the minute details of their order until delivery. The whole system is developed and secured using Django Web Framework. HTML Forms played an important role in the development. Hence, It's validation is maintained at every point. In case of errors, It will display a warning message and in case of success, It will display a successful completion message. The Backend Email system is also developed as a part of this project. The unauthorized consumers can contact the organisation by filling the Contact form given on the home page. For frontend, HTML, CSS, JavaScript languages are used and for the backend, python is used. Database is handled by sqlite3 (inbuilt in Django).

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Arshdeep Kaur

Divneet Kaur

Manjot Kaur

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CHAPTER-1

INTRODUCTION

1.1 Introduction

In this project, we have automated the order tracking and management system in small scale industries. This project is developed with reference to Ludhiana based Flexible Packaging Company. This company takes orders of different types of packaging goods. These can be used for packing food items as well as garments or any other products. According to the requirement, the customer places their orders. Company on receiving that order starts working on that order and every step of processing is updated on the Track Order section of the customer's account. There will be two sides of working, Customer side and the company side. We will develop an interactive easy communicable platform between customers and company owners. From the customers' end, they will be able to track their placed orders, keep a record of previous orders. From the company's end, they will be able to update the status of the ongoing orders. Different links for updating the status of ongoing orders for different orders will be created. In this way, customers will get an idea of when they will receive their orders and their requirements will be fulfilled.

1.2 Project Category

Our project is an Industry Automation project and a web based application. It is using Django Framework for handling backend as well as database. This is basically designed for small scale industries for organizing their work and data.

1.3 Objectives

- To accept and track orders with the display of tentative delivery dates.
- To provide the choice of customized design for specific products.
- To show the Purchase history to the Customers.

1.4 Need Of Well-organised System:

Order tracking system is popularly used to show the customers details of their order. It is quite popular in the E-commerce sector. The main idea of this project is to introduce this automated system in industries as well. In most of the small scale industries, orders are taken manually till today. Providing them will be such a platform where customers can easily place their orders and producers can also work according to their customers needs. This eliminates the chances of error and also increases the profit of the organization.

Also, all the data will be stored in the databases. They no longer have to maintain manual records or update each entry in the computer system. This software will also reduce their time and maintenance cost. All their previous data will be stored in an organized manner.

1.5 Proposed System

Order Placing and Tracking System is developed by keeping in mind the requirements of small scale industries. This system will organize their data and will help in easy management. It comprises two main modules, Authentication module and Order module. In the Authentication module, the customers of the organisation who want to work with them will be able to register themselves for the organisation and if their data is validated, their registration will be successful. They can further login with their credentials. In their account, all of their data of orders purchased (current or previous) will be maintained. They can further place orders at any time by filling up their requirements for the product. An invoice will be generated for their order. They can also track the minute details of their order until delivery.

1.6 Unique features Of The System

- Easy communication between customers and company through email.
- Authentication system.
- Place order.
- Track Order
- Validation system.

CHAPTER-2

REQUIREMENT ANALYSIS AND SPECIFICATION

2.1 Feasibility Study

After doing the project, placing the order and tracking the system, studying and analyzing all the functionalities of the system the next task is to do the feasibility study for the project . All projects are feasible -given unlimited resources and infinite time . Feasibility study includes consideration of all the possible ways to provide a solution to the given problem . The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on future upcoming requirements .

- **ECONOMICAL FEASIBILITY:** This is a very important aspect to be considered while developing a project . We decided on the technology based on the minimum possible cost factor . All software costs have to be borne by the organization . Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for the system.
- **TECHNICAL FEASIBILITY:** This include the study of function performance and constraints that may affect the ability to achieve an acceptable system For this feasible study we studied complete functionality to be provided in the system and checked if everything was possible using different types of frontend and backend platform .
- **OPERATIONAL FEASIBILITY:** The proposed system is fully GUI based that is very user friendly and all inputs to be taken all self -explanatory even to a layman.As far our studies is concerned the clients are comfortable and happy as the system has cut down their loads and doing .

2.2 Software Requirement Specification Document

1.Functional Requirements:

- 1.1. The system should allow users to log in.

They shall enter their username and password.

The information given shall be valid.

Access shall be granted/denied.

- 1.2. The system should enable users to register.

collect user information (Name, phone number,organization name, organization address, email, password etc.).

Check if information is valid:

Password is not empty.

Email hasn't been used before.

If information is valid, save and add the user to the database.

- 1.3 The system should enable administrators to log in.

The user shall enter their username and password.

The information given shall be valid.

Access shall be granted/denied.

1.4. The system should allow administrator to manage Users

The system enables administrators to access databases and add new customers.

The system enables the administrator to delete any user due to some rules from the database.

The system enables the administrator to change user information like name, email, password, etc.

1.5. The system should allow the administrator to manage & access databases.

The system enables administrators to access databases and manage database information.

2. Non-functional Requirements :

(a) Reliability

The system should be available when requested for service by users.

The system should work 24/7, it should always be up and running so that whenever the user wants to use it, it's available.

(b) Performance

The system must have a good response time.

The load time for the user interface should take less time..

The log in information should be verified within five seconds.

The system should be able to achieve a lot in a specified amount of time.

It should be able to respond to multiple numbers of people at the same time.

The system must run error free while operating with a huge set of data.

(C) Security and Privacy.

We are using SQL so that the data will be kept in the organization itself which will not require third party login and that will boost the security of the system.

The data of the user as well as the company's data will be safe with this measure.

2.3 Validation

Validation is the process of checking whether the software product is up to the mark or in other words the product has high level requirements. It is the process of checking the validation of a product i.e. it checks what we are developing is the right product. It is validation of actual and expected product. Validation is the Dynamic Testing.

Validation Testing ensures that the product actually meets the client's needs. It can also be defined as to demonstrate that the product fulfills its intended use when deployed in an appropriate environment.

Testing Performed:

1. Functional testing

Testing hyperlinks

Testing UI workflows

- Input Data Validation
Validate HTML & CSS.
- 2. Interface Testing
 - Application
 - Web Server
 - Database
- 3. Compatibility Test
 - Device Compatibility
 - Browser Compatibility
- 4. Security Testing
 - Unauthorized Data Access
 - URL Manipulation
 - Denial of Service

2.4 Expected Hurdles

- 1. Choosing a proper software to store data.
- 2. Handling different pages.

2.5 SDLC Model To Be Used

When it comes to software development, Iterative Waterfall is the most traditional and sequential choice. Although it's usually viewed as an "old school" or outdated method, Iterative Waterfall was one of the most prominent methodologies for several decades because of its plan-driven approach.

Iterative Waterfall requires plenty of structure and documentation up front. It is divided into self-contained stages or steps. The first stage is vital, requiring a full understanding by both developers and customers of the project's demands and scope before anything begins. The stages are relatively rigid and often follow this sequence: determine the project's requirements and scope, analyze those requirements, design, implement, test, deploy and finally, maintain.

There's a flexibility with this approach, meaning what is decided by the customer and developer at the beginning must be seen through. Should any changes need to be made or mistakes addressed toward the end stages, the Iterative Waterfall method doesn't require a full restart.

Typically, one stage must be finished before the next can begin, which can help with organization and assignments. And because the full scope of the project is understood in advance, software progress can easily be measured.

CHAPTER-3

SYSTEM DESIGN

3.1 Design Approach

In the project we used an object-oriented design approach, the system is viewed as a collection of objects (i.e. entities). The state is decentralized among the objects and each object manages its own state information. For example, in our Software, each customer may be a separate object with its own data and functions to operate on these data. In fact, the functions defined for one object cannot refer to or change data of other objects. Objects have their own internal data which define their state. Similar objects constitute a class. In other words, each object is a member of some class. Classes may inherit features from super classes. Conceptually, objects communicate by message passing.

Even though object-oriented and function-oriented approaches are remarkably different approaches to software design, yet they do not replace each other but complement each other in some sense. For example, in this software we apply the top-down function oriented techniques to design the internal methods of a class, once the classes are identified. In this case, though outwardly the system appears to have been developed in an object-oriented fashion, inside each class there may be a small hierarchy of functions designed in a top-down manner.

3.2 Detail Design

Detailed design deals with the implementation part of what is seen as a system and its sub-systems. It is more detailed towards modules and their implementations. It defines the logical structure of each module and their interfaces to communicate with other modules.

Directory Minor Project Contains 4 sub-Directories:

1. Customers : This is the app directory. It contains:

Models.py : stores the database schema for all the tables

Views.py : Handles the backend functionality such as Form data, rendering templates as per client request of different pages. Also sends the data along with templates.

Urls.py: Stores the urls of all the templates and calls the functions defined in views.py assigned against a url.

Admin.py: registers our tables in this file in order to create them in the backend.

2. Minor Project: This directory and its code is automatically generated by Django.

3. Templates: This directory contains all the HTML files rendered by views.py in Customers directory. In our project. It has:

Base.html : Contains the common elements in all HTML templates. Further used for Template Inheritance

Home.html

Register.html

Login.html

Products.html

Base_1.html

Logged Products.html

Trackorder.html

Profile.html

Desc.html

Product1.html

Product2.html

Product3.html

Product4.html

Product5.html
Product6.html
Summary.html
Dashboard.html

4. Static: This directory contains all the static files that are CSS, JS files and also the images used in the development. It contains 3 sub-directories:

CSS: It contains all the .css extension files. It contains

Base.css
Home.css
Products.css
Register.css
Login.css
Base_1.css
Desc.css
Tracker.css
Summary.css
Order.css
Profile.css

JS: It contains all JavaScript(.js) files:

Products.js
Desc.js
Aos.js

IMG: It contains all the images used in the development.

3.3 System Design using various Structured analysis and design tools

3.3.1 Flowchart

A flowchart is a picture of the separate steps of a process in sequential order. It is a generic tool that can be adapted for a wide variety of purposes, and can be used to describe various processes, such as a manufacturing process, an administrative or service process, or a project plan.

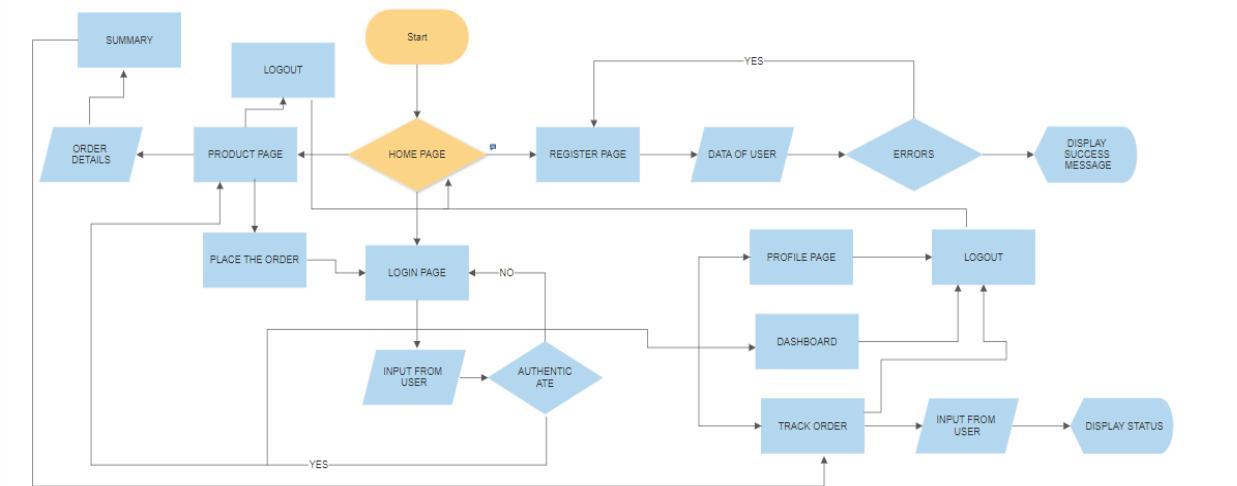


Fig 3.1 flowchart of Software

3.3.2 Data Flow Diagram

A data flow diagram is a graphical view of how data is processed in a system in terms of input and output.

The Data flow diagram (DFD) contains some symbols for drawing the data flow diagram.

Table 1:Data Flow Diagram Symbol

Symbol	Description
→	Data Flow – Data flow is pipelines through the packets of information flow.
○	Process : A Process or task performed by the system.
[]	Entity : Entities are objects of the system. A source or destination data of a system.
—	Data Store : A place where data to be stored.

LEVELS OF DFD:

- Level 0 - Highest abstraction level DFD is known as Level 0 DFD, which depicts the entire information system as one diagram concealing all the underlying details. Level 0 DFDs are also known as context level DFDs.



Fig 3.2 Level 0 DFD of software

Level 1 - The Level 0 DFD is broken down into more specific, Level 1 DFD. Level 1 DFD depicts basic modules in the system and flow of data among various modules. Level 1 DFD also mentions basic processes and sources of information.

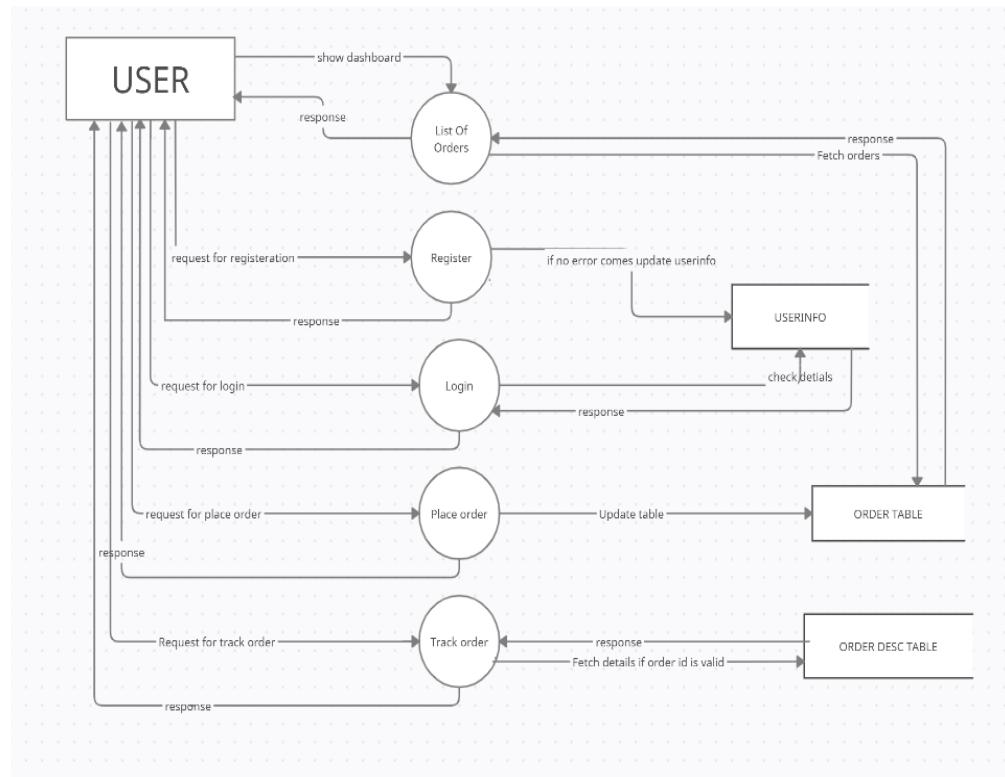


Fig 3.3 Level 1 DFD of software

- Level 2 - At this level, DFD shows how data flows inside the modules mentioned in Level 1.
Higher level DFDs can be transformed into more specific lower level DFDs with deeper levels of understanding unless the desired level of specification is achieved.

3.4 User Interface Design

Design of this software is User interface, that is the front-end application view to which user interacts in order to use the software. User interface is part of software and is designed such a way that it is expected to provide the user insight of the software. UI provides a fundamental platform for human-computer interaction.

UI is broadly divided into two categories:

- Command Line Interface
- Graphical User Interface

In this software we use Graphical User Interface, that provides the user graphical means to interact with the system. Using GUI, the user interprets the software.

Typically, GUI is more resource consuming than that of CLI. With advancing technology, the programmers and designers create complex GUI designs that work with more efficiency, accuracy and speed.

There are a number of activities performed for designing user interfaces. The process of GUI design and implementation is similar to SDLC. Any model can be used for GUI implementation among Waterfall, Iterative or Spiral Model.

A model used for GUI design and development should fulfill these GUI specific steps.

- GUI Requirement Gathering - The designers may like to have a list of all functional and non-functional requirements of GUI. This can be taken from users and their existing software solution.
- User Analysis - The designer studies who is going to use the software GUI. The target audience matters as the design details change according to the knowledge and competency level of the user. If the user is technical savvy, advanced and complex GUI can be incorporated. For a novice user, more information is included on how-to of software.
- Task Analysis - Designers have to analyze what task is to be done by the software solution. Here in GUI, it does not matter how it will be done. Tasks can be represented in a hierarchical manner by taking one major task and dividing it further into smaller sub-tasks. Tasks provide goals for GUI presentation. Flow of information among sub-tasks determines the flow of GUI contents in the software.
- GUI Design & implementation - Designers after having information about requirements, tasks and user environment, design the GUI and implement it into code and embed the GUI with working or dummy software in the background. It is then self-tested by the developers.
- Testing - GUI testing can be done in various ways. Organizations can have in-house inspection, direct involvement of users and release of beta versions are few of them. Testing may include usability, compatibility, user acceptance etc.

3.5 Database Design

3.5.1 E-R Diagram

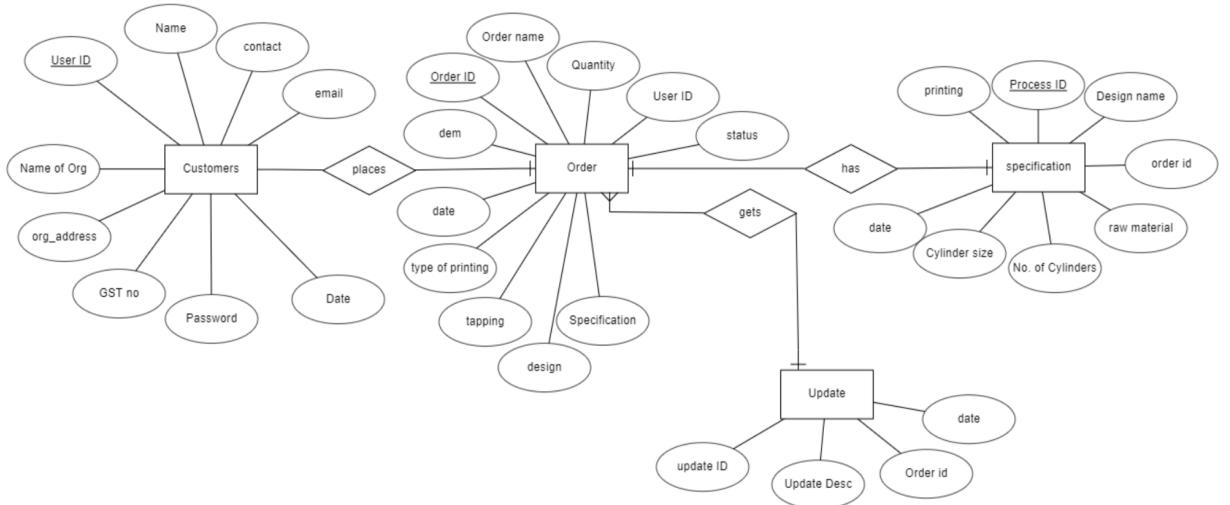


Fig 3.4 E-R Diagram of Database

3.5.2 Database Manipulation

Data manipulation refers to the process of adjusting data to make it organised and easier to read.

Data manipulation language, or DML, is a programming language that adjusts data by inserting, deleting and modifying data in a database such as to cleanse or map the data. Structured Query Language, is a language that communicates with databases. Data manipulation is a crucial function for business operations and optimisation. To properly use data and transform it into useful insights like analysing financial data, customer behaviour and performing trend analysis, you have to be able to work with the data in the way you need it.

In this project data is taken by the customer in forms and then gets stored into the table. The admin can add , update, alter or delete any data from the database.

3.6 Methodology

This project will basically deal with the data of an organization. For storing the data, we will be using SQLite database software. Our database will deal with four tables

Customers Table : Stores data of Register users

Fields	DataTypes
UserID	Number(IntegerField) - Primary Key
Name	Varchar(CharField)
Name_of_organization	Varchar(CharField)
Contact	Varchar(CharField)
Email	Varchar(EmailField)
GST_No	Varchar(CharField)
Password	Varchar(CharField)
Date	Date(DateField)

Order Table: Stores the Orders of Customers

Fields	DataTypes
OrderID	Number(AutoField) - Primary Key
Material	Varchar(CharField)
Dem	Varchar(CharField)
Size	Varchar(CharField)
Quantity	Varchar(EmailField)
Specification	Varchar(CharField)
Design	Varchar(CharField)
Type_of_print	Varchar(EmailField)
Tapping	Varchar(CharField)
Customer	Number(IntegerField)- Foreign Key
Status	Varchar(CharField, Default= 'ongoing')
Date	Date(DateField)

OrderUpdt Table: This table stores the progress of an order received from beginning till end and updates the Users

Fields	DataTypes
Updt ID	Number(AutoField) - Primary Key
Order_id	Number(IntegerField)-Foriegn Key

UpdtDesc	Varchar(CharField)
Date	Date(DateField)

There is a backend table - Order specification table.

The flow diagram shows how the system will work from registering consumers to order delivery. Here's a detailed explanation of this

1. Customers who wish to work with a company will register themselves on our website.
2. Customers will have the facility to register and login. In case they forget their password, there will be an option of resetting it as well
3. Their details will be verified by the company owners and accordingly, their account will be activated.
4. After registration, customers will login and select the type of order they want to place.
5. They will specify the details of the order including specifications and design on the product if any.
6. After the order is placed, tracking of order will take place in 5 main steps:
 - a. Order placed
 - b. Printing in process
 - c. Pouching
 - d. Slitting
 - e. Order delivered
7. Customers will be updated with the steps of tracking till order's delivery.

CHAPTER-4

IMPLEMENTATION, TESTING AND MAINTENANCE

4.1 Introduction to Languages, IDE's, Tools and Technologies used for Implementation

4.1.1 Introduction to Languages

HTML: HTML stands for HyperText Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. A markup language is used to define the text document within a tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g. HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text. HTML uses predefined tags and elements which tell the browser how to properly display the content. Remember to include closing tags. If omitted, the browser applies the effect of the opening tag until the end of the page.

CSS: Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page. CSS is easy to learn and understood, but it provides powerful control over the presentation of an HTML document. A CSS comprises style rules that are interpreted by the browser and then applied to the corresponding elements in your document. A style rule set consists of a selector and declaration block.

JavaScript: JavaScript is a lightweight, cross-platform, and interpreted scripting language. It is well-known for the development of web pages, many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements. JavaScript is the most popular language on earth. With advances in browser technology and JavaScript having moved into the server with Node.js and other frameworks, JavaScript is capable of so much more. Here are a few things that we can do with JavaScript:

Python: Python is a widely used general-purpose, high level programming language. It was created by Guido van Rossum in 1991 and further developed by the Python Software Foundation. It was designed with an emphasis on code readability, and its syntax allows programmers to express their concepts in fewer lines of code. Python is a programming language that lets you work quickly and integrate systems more efficiently. Python was designed for readability, and has some similarities to the English language with influence from mathematics. Python uses new lines to complete a command, as opposed to other programming languages which often use semicolons or parentheses. Python relies on indentation, using whitespace, to define scope; such as the scope of loops, functions and classes. Other programming languages often use curly-brackets for this purpose. Python 3.5 or above version is used.

4.1.2 IDE's

For Windows, Visual Studio with django installed is used for programming. For viewing results, any browser can be used.

For Linux, Vim and Gedit editors are used for writing the code and for the running/execution, terminal is used.

4.1.3 Tools and Technologies

1. Django Version 3.0.0 or above
2. Python Version 3.0 or above
3. Browser: Any
4. Operating System: Any
5. Visual Studio

4.2 Coding standards of Language used

A coding standard gives a uniform appearance to the codes written by different engineers. It improves readability, and maintainability of the code and it reduces complexity also. It helps in code reuse and helps to detect error easily. It promotes sound programming practices and increases efficiency of the programmers. Some of the coding standards are given below:

1. **Limited use of globals:** These rules tell about which types of data that can be declared global and the data that can't be.
2. **Standard headers for different modules:** For better understanding and maintenance of the code, the header of different modules should follow some standard format and information. their input output parameters
3. **Indentation:** Proper indentation is very important to increase the readability of the code. For making the code readable, programmers should use White spaces properly. Some of the spacing conventions are given below:
 - a. There must be a space after giving a comma between two function arguments.
 - b. Each nested block should be properly indented and spaced.
 - c. Proper Indentation should be there at the beginning and at the end of each block in the program.
 - d. All braces should start from a new line and the code following the end of braces also starts from a new line.
4. **Error return values and exception handling conventions:** All functions that encounter an error condition should either return a 0 or 1 for simplifying the debugging. On the other hand, Coding guidelines give some general suggestions regarding the coding style that to be followed for the betterment of understandability and readability of the code.
5. **Avoid using an identifier for multiple purposes:** Each variable should be given a descriptive and meaningful name indicating the reason behind using it. This is not possible if an identifier is used for multiple purposes and thus it can lead to confusion to the reader. Moreover, it leads to more difficulty during future enhancements.
6. **Code should be well documented:** The code should be properly commented for understanding easily. Comments regarding the statements increase the understandability of the code.
7. **Length of functions should not be very large:** Lengthy functions are very difficult to understand. That's why functions should be small enough to carry out small work and lengthy functions should be broken into small ones for completing small tasks.
8. **No use of GOTO statement:** GOTO statement makes the program unstructured, thus it reduces the understandability of the program and also debugging becomes difficult.

4.3 Project Scheduling

4.3.1 Gantt Chart

A Gantt chart, or harmonogram, is a type of bar chart that illustrates a project schedule. This chart lists the tasks to be performed on the vertical axis, and time intervals on the horizontal axis. The width of the horizontal bars in the graph shows the duration of each activity. Gantt charts illustrate the start and finish dates of the terminal elements and summary elements of a project. Terminal elements and summary elements constitute the work breakdown structure of the project. Modern Gantt charts also show the dependency (i.e., precedence network) relationships between activities. Gantt charts are sometimes equated with bar charts. Gantt charts are usually created initially using an early start time approach, where each task is scheduled to start immediately when its prerequisites are complete. This method maximizes the float time available for all tasks

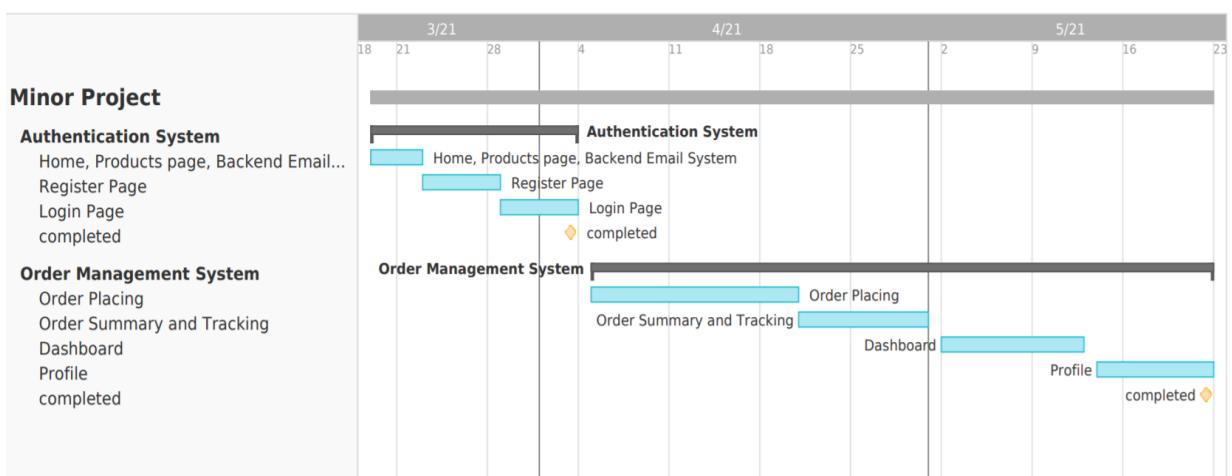


Fig 4.1 Gantt Chart of Project scheduling

4.4 Testing Techniques and Test plans

The goal of testing was to demonstrate that the program under control contains bugs. Testing must not be confused with debugging, which is the process of detecting and reducing the number of existing errors. Testing can never prove that a code is an error, but rather verify that errors exist. Therefore I need to consider the fact that the error might come from the test itself, while the tested code might be correct. Have to know what the results of the test will show before it has actually been performed. The one who is responsible for doing the testing has to be able to define what the outcome should be, if not, this will lead to bugs in either the program or the test or in both the program and the test. Bundled with so many capabilities, a Web Application had to pass through a series of validations to ensure quality. Not only all the UI flows require testing but also the interfaces like SOAP and REST APIs which enable customization at the client end. Tests performed are:

- 1. Functional Testing:** It is one of the most common testing techniques to check if the product works as the customer intended for and fulfills the requirements recorded in the developer's documentation. It includes the following tasks.

1.1. Testing UI Workflows.

Every web application has several business workflows which a tester can know from the requirement specification document. In our project, UI functionality is properly working. And the flow between the pages is maintained throughout.

1.2. Testing HyperLinks.

A web page may contain many types of links like the alternate, archives, external, help, icon, search, and tags. A tester needs to ensure all of them are working fine or else to report any dead link. Hyperlinks on Products, Register, Login page and in post login views are working properly and all the links are tested and maintained in urls.py.

1.3. Input Field Validation.

Input fields mostly appear on web forms to ask information from users. Some of them can be left blank and some can't. A tester has to verify the right behavior associated with them. Register form validates Phone number, Email, GST number. Login Page ensures that the credentials are valid and authorized. Track order and order place forms also perform in the same way.

1.4. Validate HTML & CSS

To ensure a website will run smoothly, it should have a clean HTML structure complemented with optimized CSS. If it lacks any of that, it would result in incorrect workflows and bad user experience. There are standard W3C practices for using HTML and CSS which the website should adhere to firmly.

2. Interface Testing.

Whether in waterfall or agile, interface testing is essential for ensuring a positive user experience. There are mainly three areas that a tester should target.

2.1 Application.

An application may give access either through the UI or via the SOAP/REST APIs. So, both the interfaces need thorough validation. Testers should ensure that all the requests reach the database and the response renders correctly at the client-end. Data from forms go to views.py and after processing and validation goes to the database and is saved.

2.2. Web Server.

Web server is the backend processing all the client requests. The Proper checks should be conducted to ensure that it should not decline any request made from either via UI or the REST API. All the requests are accessed and granted. Different privileges are granted to users and admin.

2.3. Database.

First, the database should respond to all queries sent via UI or APIs. And any change in data should not violate the data integrity. Also, there is a need to check if the data returned from the database is displaying correctly or not. Next, it should not permit any direct

access instead should return a proper access denial message. All the above mentioned functionalities are working fine.

3. Compatibility Testing.

Compatibility testing confirms the website design is compatible across different browsers and also on a variety of devices. It includes the following tests.

3.1. Browser Compatibility Testing.

This test makes sure that the web application can render successfully across different browsers like Chrome, FireFox, Safari, Internet Explorer. It helps in finding out HTML, CSS, JavaScript related issues.

3.2. Device Compatibility Testing.

This test confirms that the web application is responsive and works on devices of different shapes and sizes. Please note that it's not a native application test. Instead, it runs using the built-in device browser.

The screenshot shows a mobile application interface for 'CHERRY POLY PACK'. At the top, there is a red header bar with the company name 'CHERRY POLY PACK' and a menu icon (three horizontal lines). Below the header, the main content area has a light gray background. The first section is titled 'Current Orders' and contains a table with five rows:

Order ID	Order Name	Status
3	king	Track status
6	kidley	Track status
7	uniform packing	Track status
8	kidley	Track status
9	kidley	Track status

Below this is another section titled 'Previous Orders' with a table containing four rows:

Order ID	Order Name
1	bluedot
2	bluedot
4	kidley
5	bluedot

At the bottom of the screen, there is a footer bar with a light orange gradient. It features the company name 'Cherry Poly Pack' in bold red text. Below the name are four small links: 'Products', 'Your Orders', 'Profile', and 'Logout'. Further down, under the heading 'Stay in touch', are three social media links: an envelope icon for 'Cherrypolypack@gmail.com', another envelope icon for 'Cherrypolypack@yahoo.co.in', and a location pin icon for 'Ludhiana, Punjab'.

Fig 4.2 View from Ipad

The screenshot shows a web application interface for 'CHERRY POLY PACK'. At the top, there is a red header bar with the company name 'CHERRY POLY PACK' on the left and 'My Orders Products' with a dropdown icon on the right. Below the header, the main content area has a title 'Current Orders' followed by a table:

Order ID	Order Name	Status
3	king	Track status
6	kidley	Track status
7	uniform packing	Track status
8	kidley	Track status
9	kidley	Track status

Below this is another section titled 'Previous Orders' with its own table:

Order ID	Order Name
1	bluedot
2	bluedot
4	kidley
5	bluedot

Fig 4.3 View from Laptop

This screenshot shows the same application interface as Fig 4.3, but viewed on a mobile phone. The layout is adapted to a smaller screen. The 'CHERRY POLY PACK' logo is at the top left, and a menu icon (three horizontal lines) is at the top right. The 'Current Orders' section is displayed above the 'Previous Orders' section. Both sections use the same table structures as in Fig 4.3.

Fig. 4.4 View from Phone

4. Security Testing

Security testing is crucial for all types of web applications. It makes sure the application won't allow unauthorized access to any of its resources that could break the site itself. And more importantly, it ensures that the sensitive information is safe and won't cause any social or financial damage to its users. Here, we are sharing some of the best security testing techniques which a tester can apply to uncover the security issues.

4.1. Unauthorized Data Access.

It is a technique which proposes to gain unauthorized access to data within an application. Such data leaks take place on servers or launched via networks. User and organisation rights are different and they can't access or destroy each other's data.

4.2. URL Manipulation.

This method modifies the website URL and steals important information. It happens when the application uses the HTTP GET method to exchange data between the client and the server. The information is passed in parameters in the query string. The tester can change a parameter value in the query string to check if the server accepts it. To avoid this, csrf_token is used and django ensures security of data.

4.3. Denial of Service.

It is a method to prepare conditions that make a machine or network resource unavailable to its legitimate users. Logged In Users are not allowed to access the admin panel. They further can't access any other user's data.

CHAPTER-5

RESULTS AND DISCUSSIONS

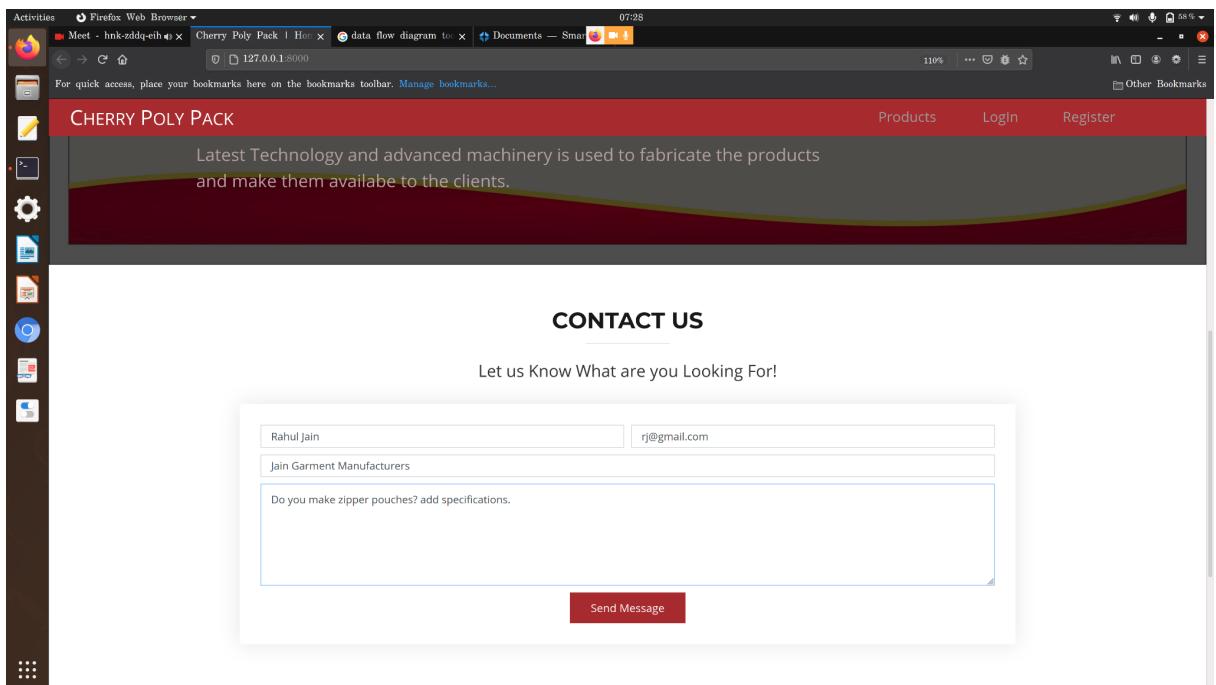


Fig 5.1 Home Page (1)

This is our Home Page of the system where we have a Contact form (Customers can have Any query, suggestion , they can directly contact the company.)

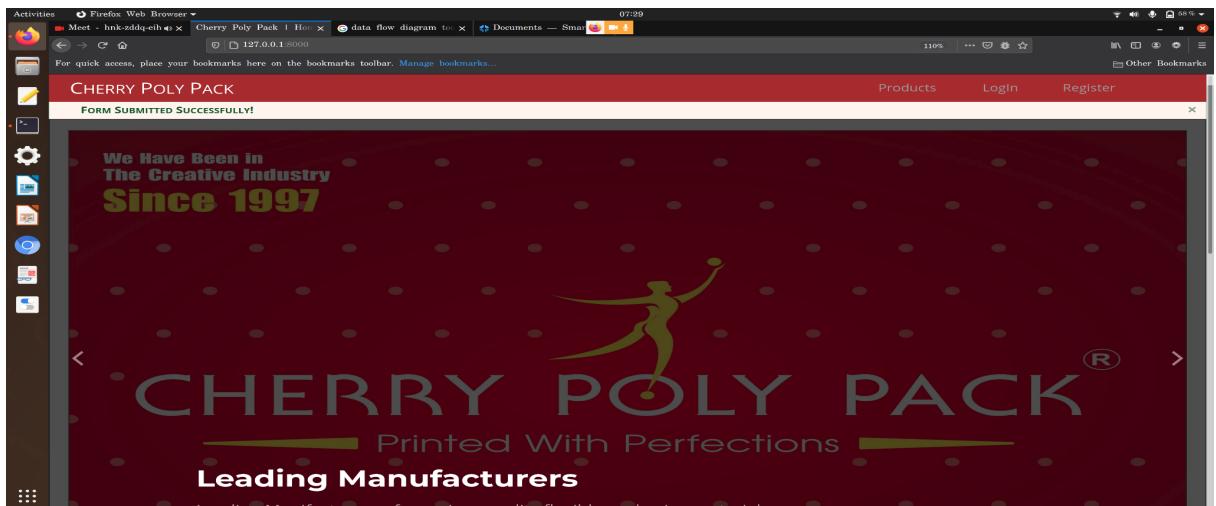


Fig 5.2 Home Page(2)

After submitting the form , a message will be popped on the screen ensuring the form has been submitted.

Fig 5.3 Register Page(1)

This is the Register Page of the system . Here all the validations are applied (e.g. length of mobile no must be equal to 10 , GST no. should be of length 15 , password and re-enter password should be same.)

Fig 5.4 Register Page(2)

In the above figure Password didn't match.

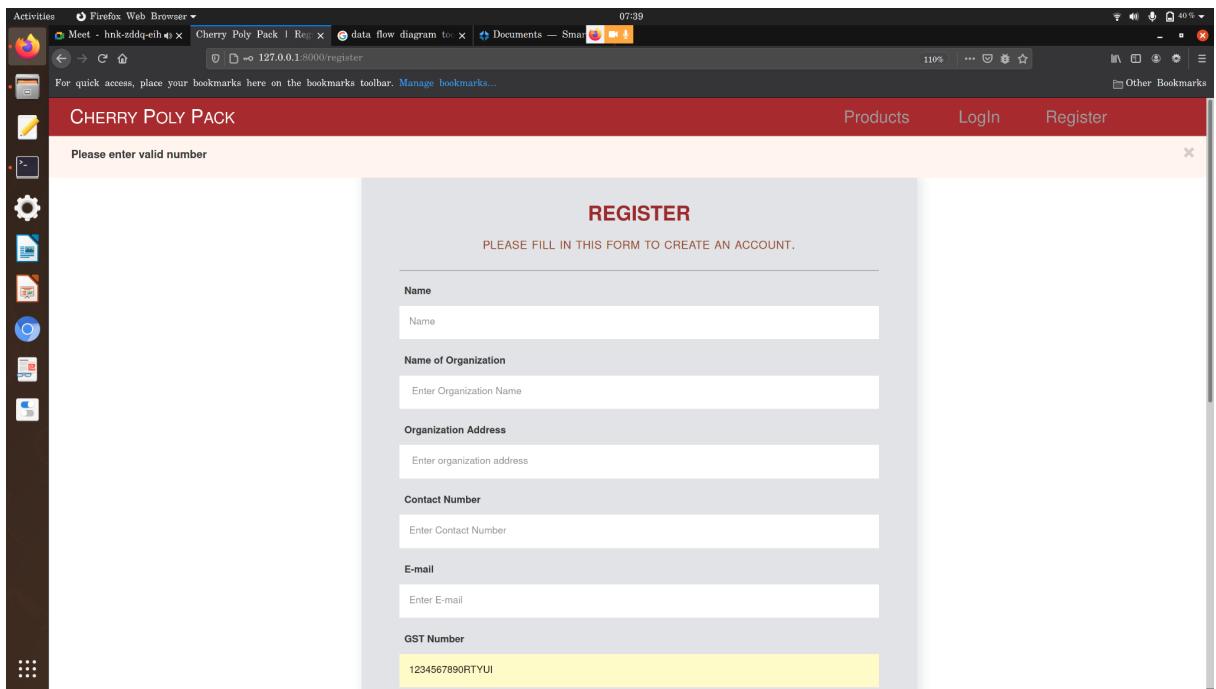


Fig 5.5 Register Page(3)
In the above figure the user enter invalid number.

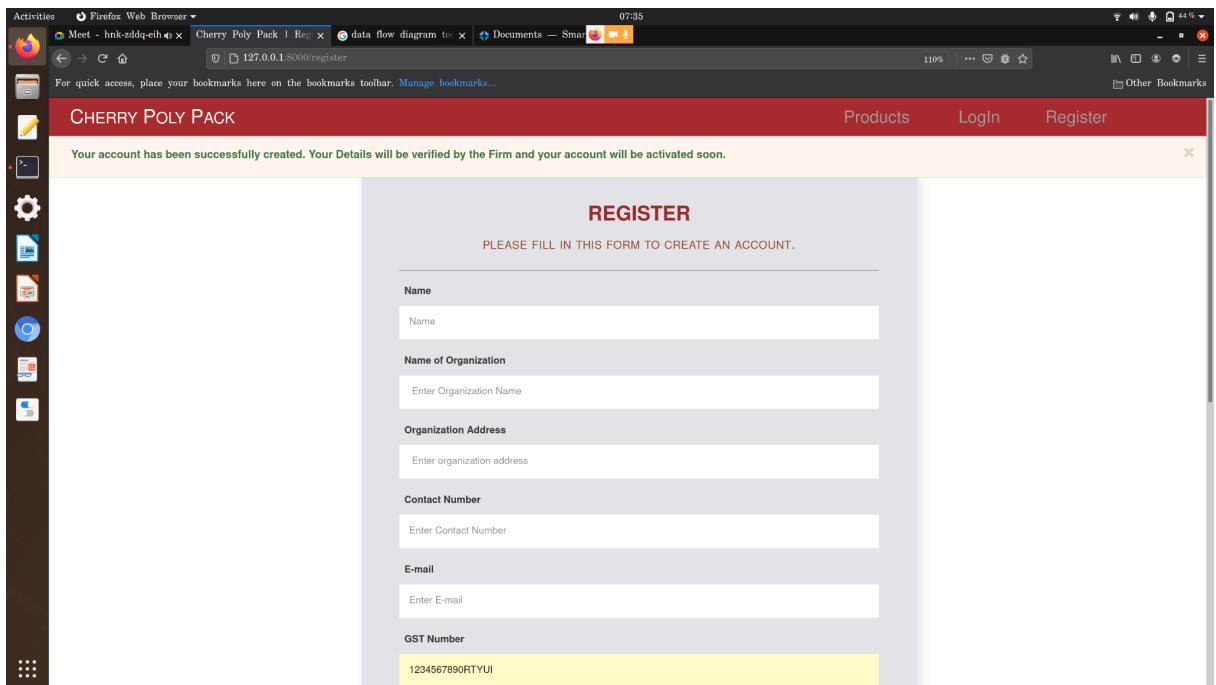


Fig 5.6 Register Page(4)
Customer is successfully registered.

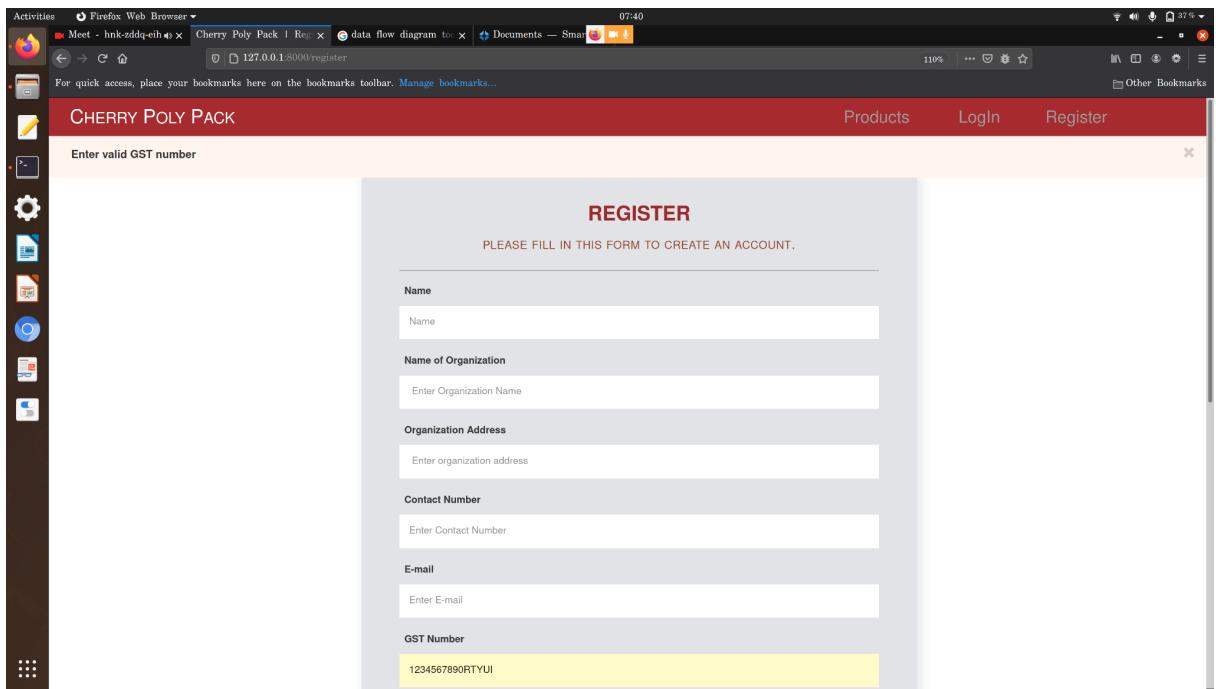


Fig 5.7 Register Page(5)
The GST number is not valid.

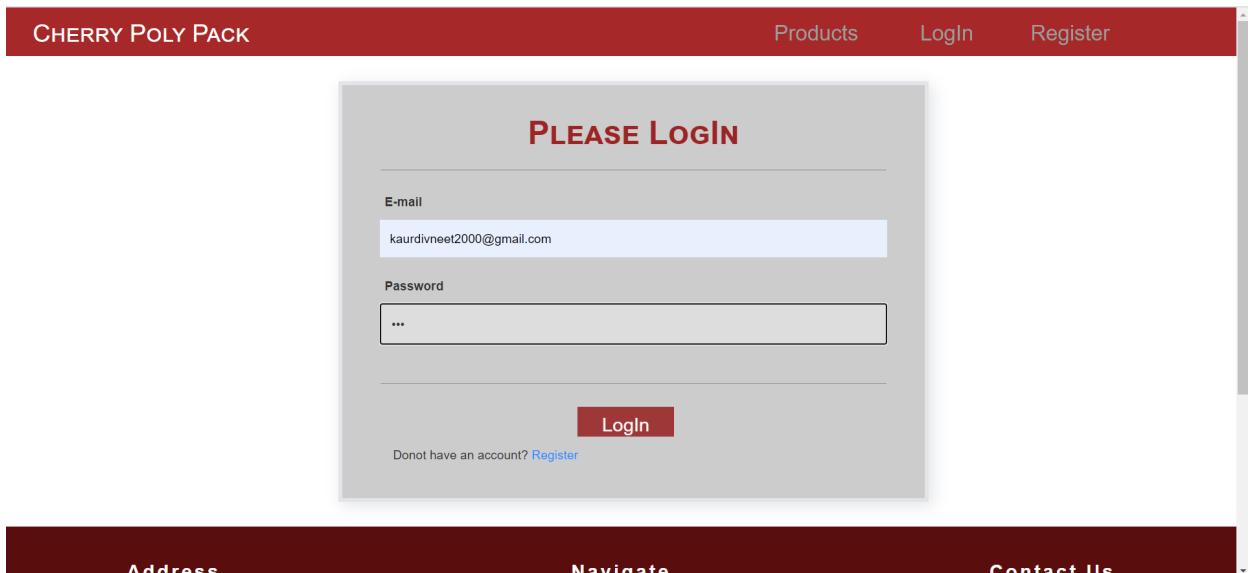


Fig 5.8 Login page(1)
This is the login page of the system. Customers will be placing their order only when they will be registered and their account status will be active.

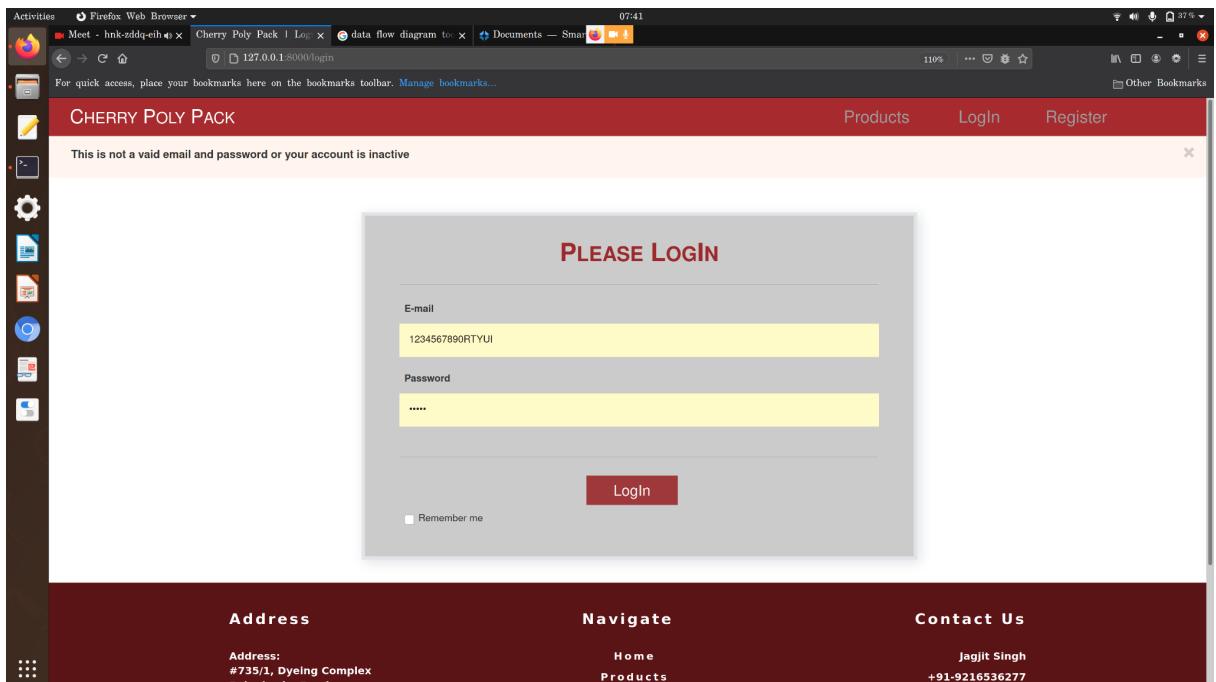


Fig 5.9 Login Page(2)
Only Organization has the power to change the status of the customer's account.

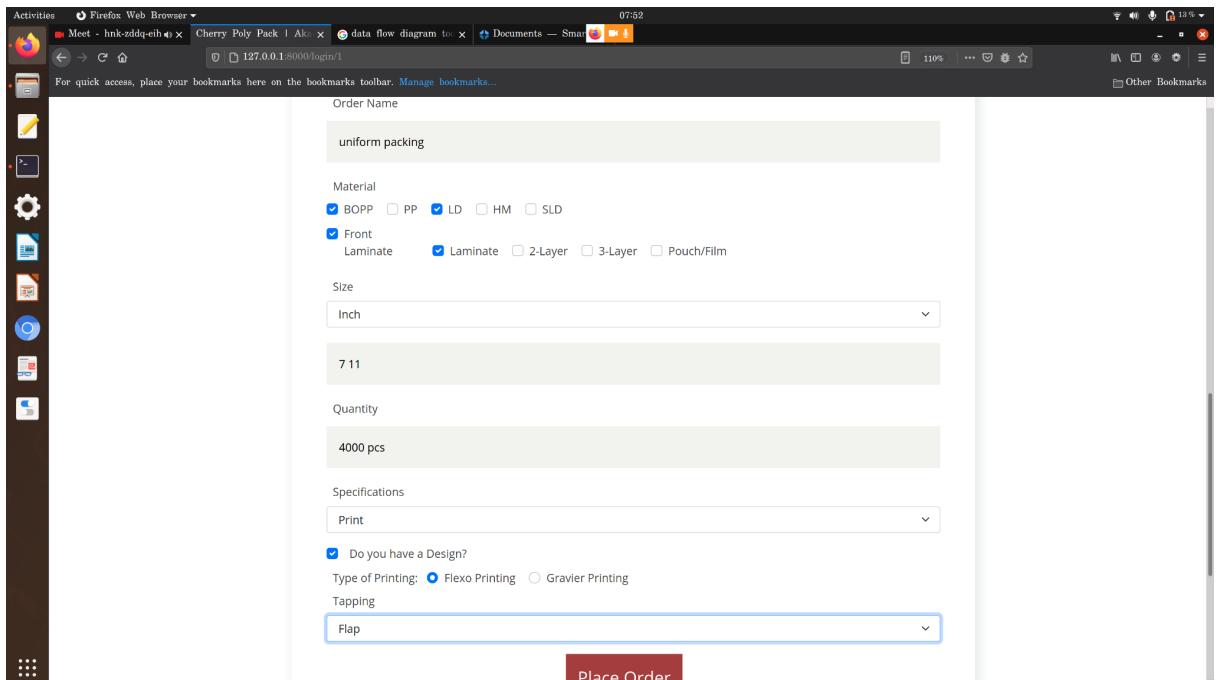


Fig 5.10 Order Placing
Order placing system, we provide the option of customised design of the order

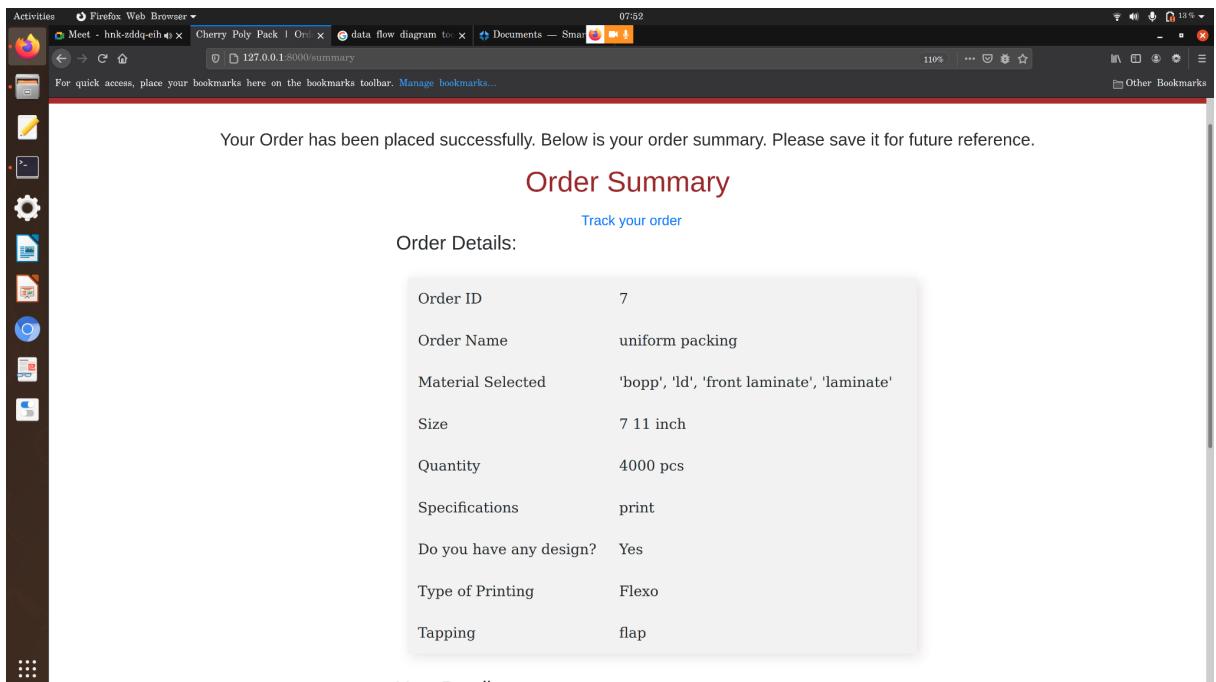


Fig 5.11 Order Summary
Customers are able to get print out of their order details

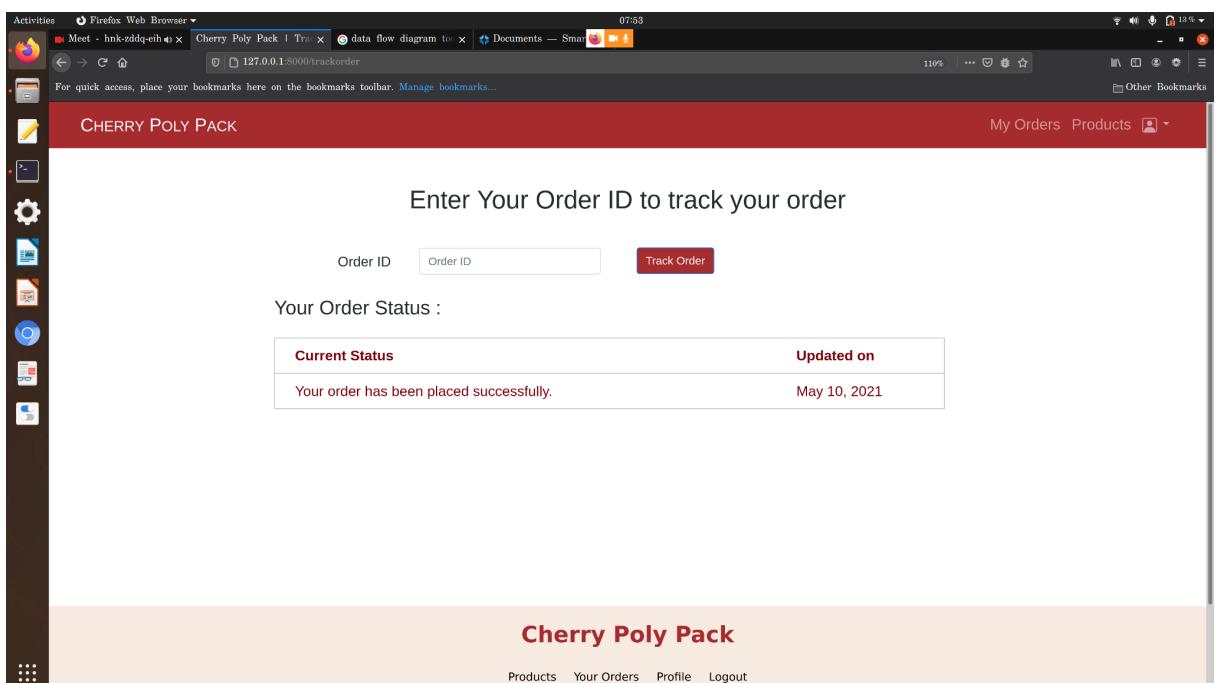


Fig 5.12 Order Tracking(1)
Orders can be tracked anytime ,whenever customers feel any delay or any information can directly contact the organization.

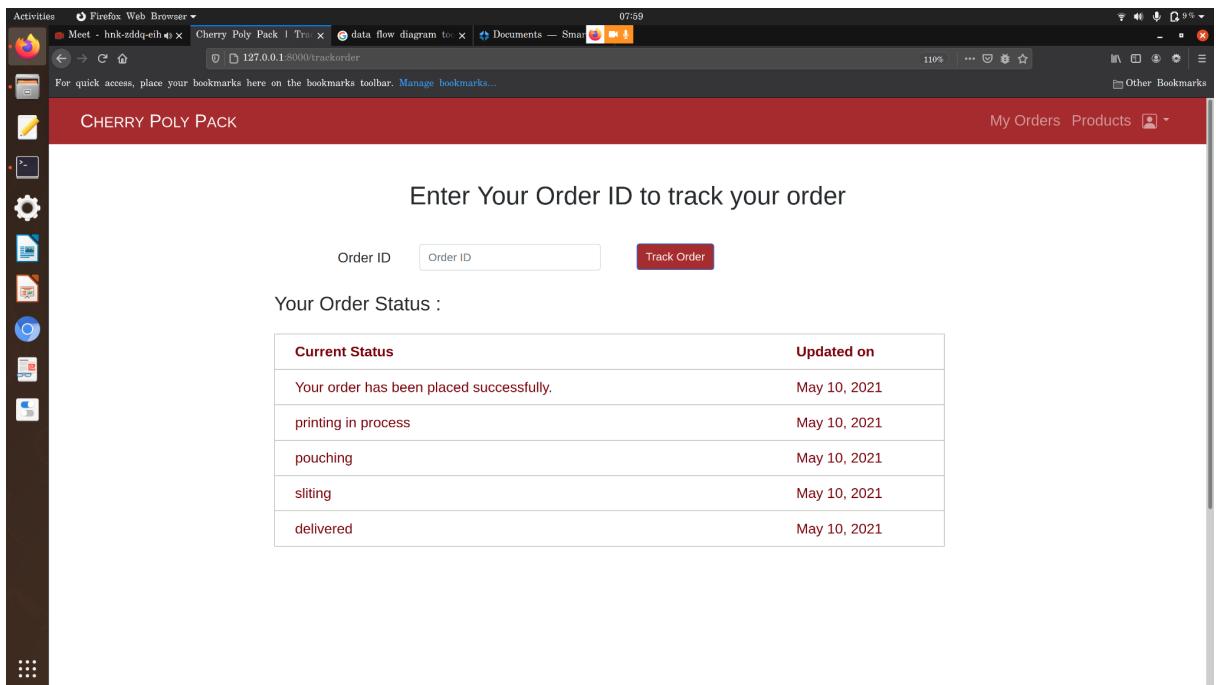


Fig 5.13 Order Tracking(2)

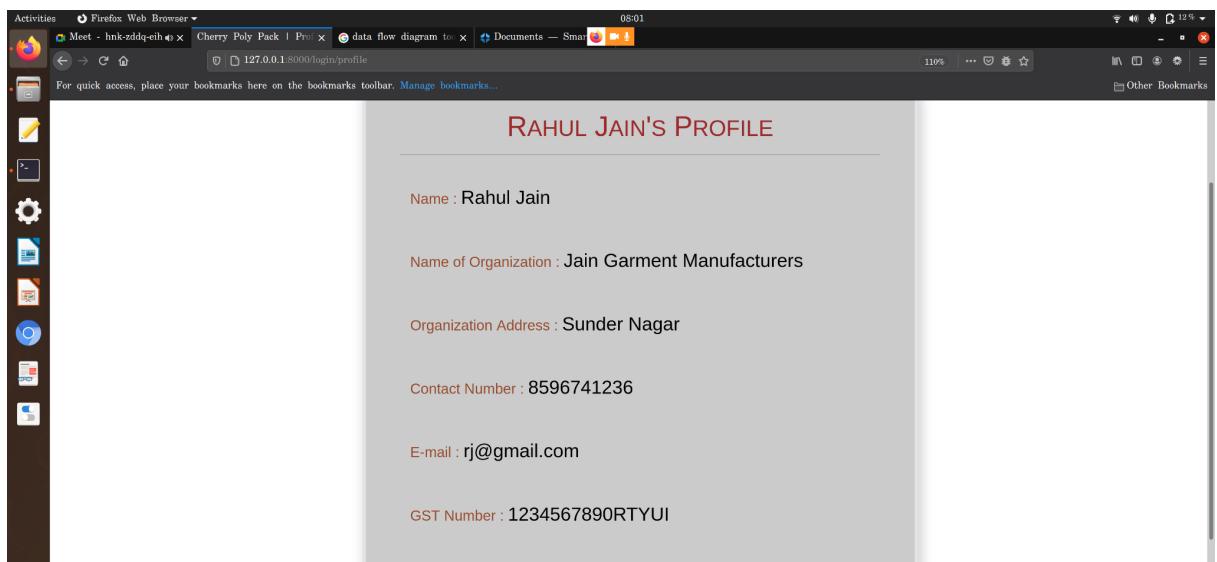


Fig 5.14 Profile Page

This is the profile page of the system , where the customer can see his/her profile .

The screenshot shows a web-based dashboard for a customer named Divneet kaur. At the top, there is a red header bar with the text "CHERRY POLY PACK" on the left and "My Orders Products" with a user icon on the right. Below the header, the page is titled "Current Orders". A table displays one order entry:

Order ID	Order Name	Status
1	Divneet kaur	Track status

Below the current orders section, there is a heading "Previous Orders" followed by the message "No Previous Orders".

Fig 5.14 Dashboard Page
Customer can view his current orders and purchase orders.

CHAPTER- 6

CONCLUSION & FUTURE SCOPE

6.1 Conclusion

Order tracking and analysis system is an interactive platform for a customer to view the products, place and track their order . Moreover he can directly contact the organization through the email system by just filling a contact form. Small scale industries which are handling data manually will have the maximum benefit because of the organized work and less time investment and more efficient system.

In the Authentication module, the customers of the organisation who want to work with them will be able to register themselves for the organisation and if their data is validated, their registration will be successful.

At the backend , there is a simple yet efficient database system in which all the entries are entered in an organized form and only the organization has the power to change it (e.g. change the status of the account if they wish to work , or if the customer wishes to change something on the orders).

Keeping the objectives in mind we have maintained a well organized dashboard page which shows the purchase history. Also, while placing an order option for customised design is provided. While order tracking, customers will get a tentative delivery date for an estimation when their order will get delivered.

6.2 Future Scope

We can convert this website in the form of an application in future. Also, we can add more features like payment, invoice generation, design uploading on this platform. This can further be used for making some analysis such as sales analysis, order analysis. Various different technical techniques can be applied for easier and faster order placement. A chatbot can also be introduced to handle customer queries on the spot.

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