

# **CUSTOMIZED LAB**

## **AN INTERNSHIP REPORT**

*Submitted By*

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*In partial fulfilment for the award of the degree of*

**BACHELOR OF ENGINEERING**

*in*

**Computer Engineering**

**Madhuben and Bhanubhai Patel Institute of Technology**



**Gujarat Technological University, Ahmedabad**

**May, 2023**



## **Madhuben and Bhanubhai Patel Institute of Technology**

**New Vallabh Vidyanagar, 388121**

### **CERTIFICATE**

This is to certify that the internship report submitted along with the project entitled Customized Lab has been carried out by Yash Mukeshbhai Nakrani under my guidance in partial fulfilment for the degree of Bachelor of Engineering in Computer Engineering, 8th Semester of Gujarat Technological University, Ahmedabad during the academic year 2022-23.

Prof. Jayna Donga  
Internal Guide

Dr. Shital N Gondaliya  
Head of the Department

Date: 06-05-2023

To Whom It May Concern

This is to confirm that **Mr. Yash Nakrani**, a **B.E.** student at **Madhuben and Bhanubhai Patel Institute of Technology**, Anand, will be receiving training as a "Software Developer Trainee" from February 1 through May 06, 2023. During his ongoing training, he is working on the "**CUSTOMISED LAB**".


We wish him the very best in all his endeavors.

Thank You

With Regards,

Sincerely,

For, Bits Technolabs

  
Proprietor

**CEO, Rutvik Jadvani**  
**Bits Technolabs**



## **Madhuben and Bhanubhai Patel Institute of Technology**

**New Vallabh Vidyanagar, 388121**

### **DECLARATION**

I hereby declare that the Internship report submitted along with the Internship entitled Customized Lab submitted in partial fulfilment for the degree of Bachelor of Engineering in Computer Engineering to Gujarat Technological University, Ahmedabad, is a bonafide record of original project work carried out by me at Bits Technolabs under the supervision **of Mr. Pratik Solanki** and that no part of this report has been directly copied from any students' reports or taken from any other source, without providing due reference.

Name of the Student

Yash M Nakrani

Sign of Student

## ACKNOWLEDGEMENT

First, I would like to thank **Mr. Pratik Solanki**, mentor from Bits Technolab for giving me the opportunity to do an internship within the organization. I also would like all the people that worked along with me at Bits Technolab with their patience and openness they created an enjoyable working environment. It is indeed with a great sense of pleasure and immense sense of gratitude that I acknowledge the help of these individuals. I would like to thank my internal guide **Prof. Jayna Donga** and Head of the Department **Dr. Shital N Gondaliya** for his constructive criticism throughout my internship. And I am extremely great full to my department staff members and friends who helped me in successful completion of this internship.

Yash M Nakrani  
190630107084

## ABSTRACT

*In the present scenario, everyone focuses on the theoretical knowledge and this not the accurate way to study the basics of programming and Software Development Processes, one must understand that practical knowledge is also as much as important as compare to theoretical knowledge. As an Engineer, one must be aware about certain technical process also he must be aware of some non-technical work too such as management, effective communication with the colleague, manager etc.*

*Hence, to develop good engineers, our engineering curriculum consists of a course name 'Internship/Project' in 8<sup>th</sup> which helps to implement the theoretical knowledge into the practical ideas. Also, along with technical knowledge student also improves his/her non-technical skills. Also, by this training refresh our college study and relate the theory study which put it into practical knowledge.*

*Under this subject I work on Customized Lab during my internship. In this project I learn about many technologies like ReactJs, JavaScript and MongoDB. In this project I have developed Customized Lab, the primary objective of resource management is to ensure a seamless experience for the staff and other people associated with management and organizational goals. The objective of HRM is to ensure a stable work environment with data in one place and efficient operations.*

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## **OVERVIEW OF THE COMPANY**

## **CHAPTER - 1**

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- 1.1 Introduction of company
- 1.2 Description of company
- 1.3 Organization chart

## 1.1 INTRODUCTION OF THE COMPANY

Bits Technolabs began with the purpose of delivering custom app development services, but as time passed, we expanded our portfolio to include on-demand technology, IoT, and many more solutions, eventually becoming the world's leading mobile app development business. We are a custom app development company in India that revolutionizes businesses by combining design talent with innovation and cognition. We have been in the business for 6 years now and have gained the trust of more than 16 classified customers. We go above and beyond to make things happen for you. Our cutting-edge custom app development services make us your reliable technological partner. We design futuristic technology solutions for clients to assist them to overcome traditional and complicated app development-related issues.

## 1.2 DESCRIPTION OF THE COMPANY

- Name : Bits Technolabs Pvt Ltd.
- Address : Surat, Gujarat
- Establishment Year : 2020
- CEO : Rutvik Jadvani
- Number of employees: 20
- Work Area,
  - Mobile Application: Android, IOS, React Native, Flutter
  - Frontend: Angular, React Js, Vue Js, HTML/CSS
  - Backend: Node JS, PHP
  - Designing: Figma, Adobe XD, Photoshop, Illustrator
  - Cloud and Devops: AWS, GCP, Azure
- Something we are proud of,
  - **100+ Satisfied Customers**
  - **3+ Years of Expertise**
  - **500+ Projects Developed**

### 1.3 ORGANIZATION CHART

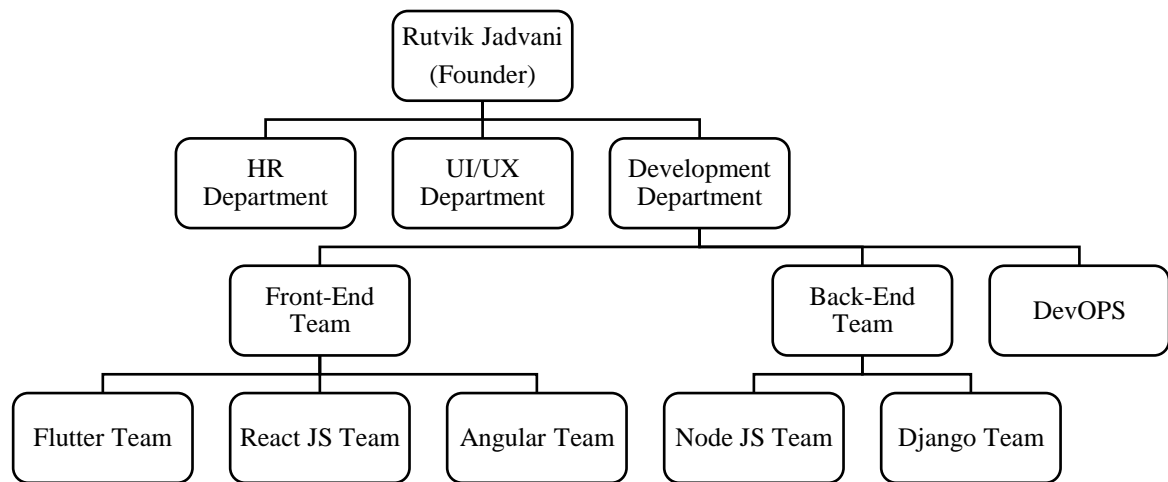


Fig. 1.1 Organization chart

## **DIFFERENT UNIT AND PROCESS OF THE ORGANIZATION**

## **CHAPTER – 2**

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- 2.1 Work being carried out in each department
  - 2.1.1 Project development approach
- 2.2 List of technical specifications of major equipment
- 2.3 Sequence of operation for manufacturing of product
- 2.4 Different stages of the production

## 2.1 WORK BEING CARRIED OUT IN EACH DEPARTMENT

### 2.1.1 Project Development Approach

The software development process employed for our project is the Iterative and Incremental Development model, which is also known as the Iterative Waterfall Development Approach. This approach was implemented as a response to the conventional waterfall model. It is a software development process that involves an iterative and incremental approach to project development, whereby software is developed and tested in phases, and the process is repeated until the final product is achieved.

The activities we followed for this project is listed below:

- Planning the work or objectives
- Analysis & Design of objectives
- Assessing and controlling risk
- Allocation of resources
- Organizing the work
- Database Designing

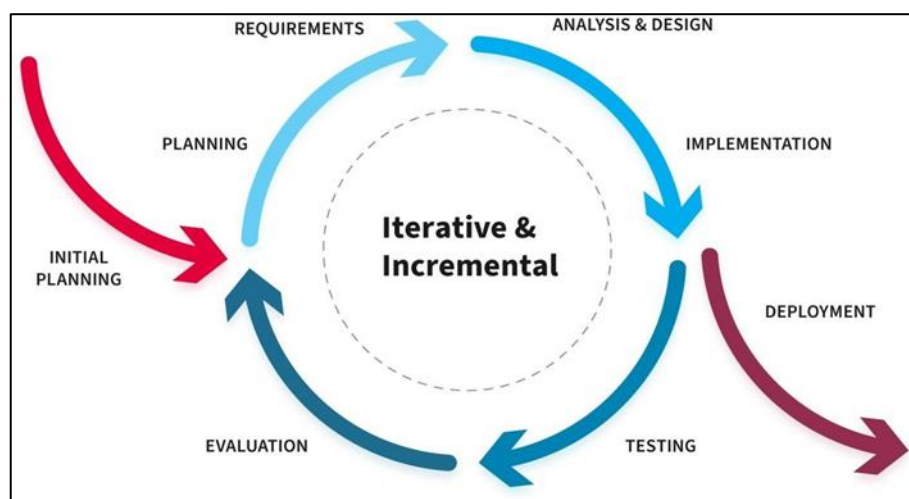


Fig. 2.1 Iterative & Incremental model

**Initial Planning**

In this phase, the project's feasibility is evaluated, and a decision is made on whether to proceed with the project or not. If the project is approved, the project's goals, objectives, scope, and constraints are defined, and a high-level project plan is created.

**Planning**

In this phase, the project plan is refined, and detailed planning is done for each phase of the project. This includes defining the tasks, assigning resources, estimating the time and cost required for each task, and creating a detailed project schedule.

**Requirements**

In this phase, the requirements for the software are identified and documented. This includes identifying the needs of the end-users, defining the features and functionality required, and creating use cases and user stories. The requirements are then reviewed and approved by the stakeholders.

**Analysis & Design**

In this phase, the software architecture and design are created. The architecture defines the structure of the software, including the different components and how they interact with each other. The design defines the specifics of how the software will function, including the algorithms, data structures, and user interfaces.

**Implementation**

In this phase, the software is developed based on the design and architecture created in the previous phase. This involves coding, testing, and debugging the software, and integrating different components of the software to create the final product.

**Schedule Representation**

Schedule representation is a crucial activity in software engineering, as it involves distributing the estimated effort required for the planned project duration among specific tasks. As part of our project planning process, we have developed a weekly schedule that is visually represented in the attached figure. This schedule outlines the tasks to be completed in each week of the project and the estimated effort required for each task, helping us to track our progress and ensure that the project is completed within the timeline.



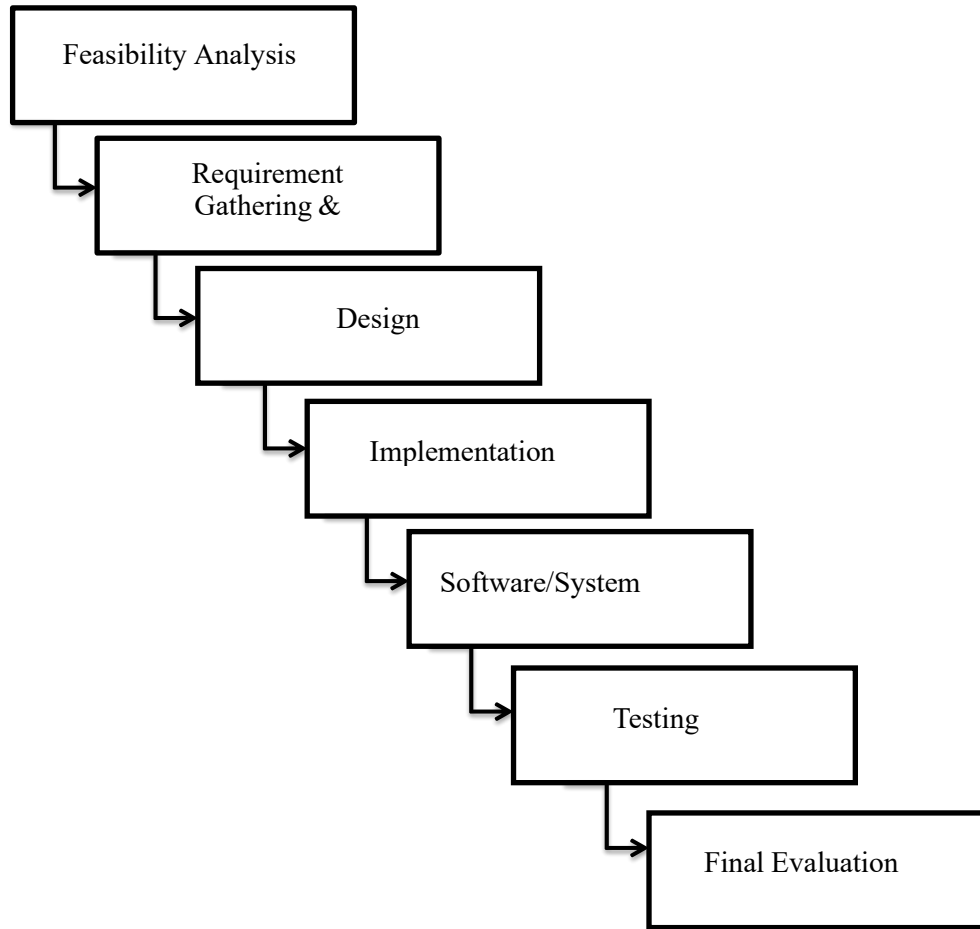


Fig. 2.2 Schedule representation

## 2.2 LIST THE TECHNICAL SPECIFICATIONS OF MAJOR EQUIPMENT USED IN EACH DEPARTMENT

Table 2.1 List of technical specification

Software Development	MobileApp Development	WebApp Development	Testing & QA
Shopify	React Native	MERN	DevOps
ML	Flutter	NodeJs	
IOT	Ios app	React	
Chatbot	Progressive	.Net	

## 2.3 SEQUENCE OF OPERATION FOR MANUFACTURING OF PRODUCT

In our company, we use agile methodology to implement the software or product in which software is delivered into different phases. Each phase has some new features in it. Each phase is easy to develop and manageable in short period of time. So, sequence of operation is given below:

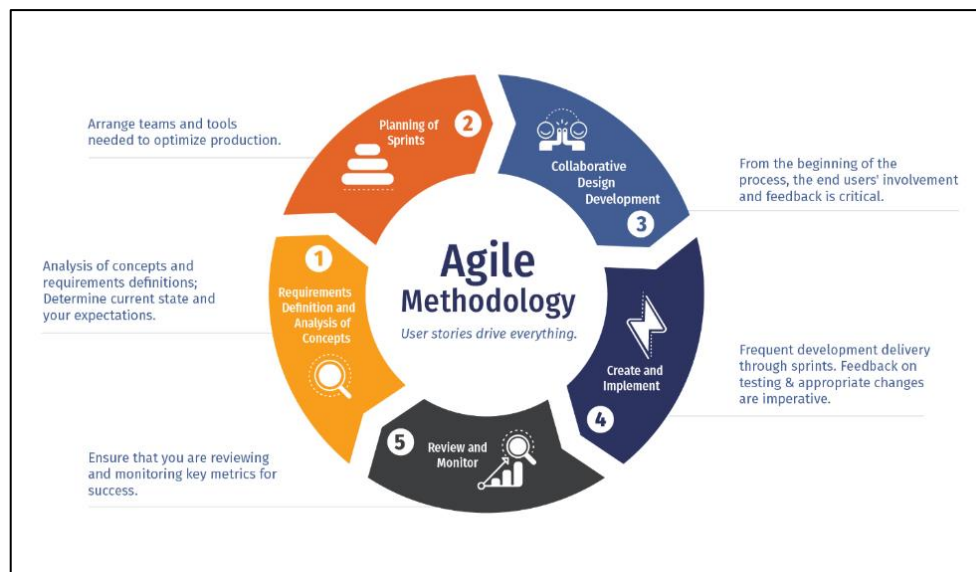


Fig 2.3 Agile Methodology

## 2.4 DIFFERENT STAGES OF THE PRODUCTION

The main stages of production are as per below:

- 1. Requirement analysis:** Gather software requirements based on customer and stack-holder feedback.
- 2. Planning:** Based on requirements make teams and arrange tools to optimized production of software.
- 3. Design:** Design UI/UX of software with involvement of user and stack-holder.
- 4. Implement:** Start implementation based on designing of software or product.
- 5. Testing and Feedback:** Do testing of complete product with all functionality and QA (Quality Assurance) for the product. Accept feedback from customer who use these product and work on it in next phase of software.

- 3.1 Internship Summary
- 3.2 Purpose
- 3.3 Objective
- 3.4 Scope/application
- 3.5 Technology used
- 3.6 Internship planning
  - 3.6.1 Project development approach justification
  - 3.6.2 Internship efforts and times
  - 3.6.3 Role and responsibility
- 3.7 Internship scheduling (Gantt chart)

### **3.1 INTERNSHIP SUMMARY**

This internship has been an excellent and rewarding experience. Needless To say, the technical aspects of the work I've done are not flawless and could be improved provided enough time. As someone with no prior experience in HTML, CSS, JavaScript and React JS whatsoever I believe my time spent in training and discovering new languages was well worth it and contributed to finding an acceptable solution to an important aspect of Front-end web designer. Two main things that I've learned the importance of our time-management skills and self-motivation.

### **3.2 PURPOSE**

This Software Requirements Specification will describe the processes and functions of the Customize Lab. Project is used to customize your product for example you can add symbole, design and text etc. in your product.

### **3.3 OBJECTIVE**

The main purpose of the project is You add any Type Of Design In to Your product. And you also order this product. You Can get same product which you Customize in site. And You can Also Add text in to Your Product. Also Customize the size of Symbol, design and Text.

### **3.4 SCOPE**

Customize Lab provides an interface for both Developer and also Customers. in this, You can only Buy Customize product. We can Give Simple product in to site. And customer can customize this product based on their requirement. If customer cannot customize the product then customer cannot purchase product from site.

### 3.5 TECHNOLOGY USED

The front end used in our project is HTML, CSS, JavaScript, Tailwind CSS, ReactJs and Next JS framework. The back end used Mongo DB, Node JS and Express JS framework. We follow the Iterative and Incremental model for developing this project.

- **Platform:** Any web browser
- **Framework:** ReactJs, NextJs
- **Language:** HTML, JavaScript
- **Database:** MongoDB, Firebase
- **Pipeline:** Manual Deployment
- **Environment:** Dev, Production

### 3.6 INTERNSHIP PLANNING

In the company we are using agile methodology for planning and implementation of project. Project planning is part of project management, which relates to the use of schedules such as Gantt chart so plan and subsequently report progress within the project environment. Planning is often used to organize different areas of a project, including project plans, workloads and the management of teams and individuals.

#### 3.6.1 Project Development Approach and Justification

The system is set up after the project requirements come to the company. The one person with good knowledge of tech and business does the finalize the proper requirements and then create the ruff prototype with help of designing team. Then we will prepare Figma for the same. After finalizing all things, the product technology gets decided, in this case, the client mentioned tech stacks are JavaScript, ReactJS, NodeJS.

Then we are using project management software like JIRA and create sprints according to priority and urgency. In that sprint, we decide the tasks that should be done. Here the company has followed the agile development. While the project is getting initial setup, the team gets formed and has been given the required information of projects so, they can start doing R & D on that. As everything gets finalized for sprint creation and approval from the client for sprints and business deals, Team Lead initializes the project base code and creates a version control system (like: GitHub) then the tasks get distributed to the developers.

In the initial stage, daily meetings are formed by Team Lead and make sure everything is working smoothly and every developer gets the objective and whether they are set on this project or not. For the first sprint, the release build gets uploaded once a week by the team lead OR whoever the task is assigned. Then after two release builds in a week, get uploaded. (Internal release). The release build gets a test by testers and as they get verified the build roll out for open testing. As sprints are closed the final build follows the same steps, but after open testing, the build gets rolled out as a release.

### **3.6.2 Internship Effort and Time**

Training Period :

- Learn basic HTML, CSS and version controlling system like GitLab, GitHub.
- Learn JavaScript main concept and React Fundamental.
- Learn about React component, JSX, CRUD operation and React DOM.
- Basic knowledge about NodeJS and its package manager npm & npx.

Development Period :

- Planning project structure
- Develop Frontend
- Testing & fix bug
- Change & improve quality of code

### 3.6.3 Roles and Responsibility

#### **Roles,**

- I am working as a react developer-trainee in the company.
- Work with HTML, JavaScript and ReactJs
- Also Make Some Design of HRM System

#### **Responsibility,**

##### **Analysis:**

In System Analysis we studied in-depth analysis of requirements, requirement specification, final specification etc.

##### **Design**

While designing the system we had many meetings with our project leader and team member and got valuable input from them. During this time, we collected information from each transaction of the system and various tables from the database. Then did tasks like database design, screen design, report design etc.

##### **Developing**

After the system was designed, we started developing the system, for which we implemented the application structure and database structure with the help of our project leader. All the information we need in system development has been provided.

##### **Testing**

Prepared test data after system development and verified accordingly. In which we found defects in some places. To fix these shortcomings we decided to make modifications to the system.

##### **Modification**

After testing the system, I modified the system without getting the required output. Then I re-tested it. No defects were found.

### 3.7 INTERNSHIP SCHEDULING:

- Internship is divided into two phase I. Training Phase II. Development Phase
- In phase I spent 1 month for training time and remains 2 month for developing and testing website.
- Detailed weekly time scheduling of internship is given below.

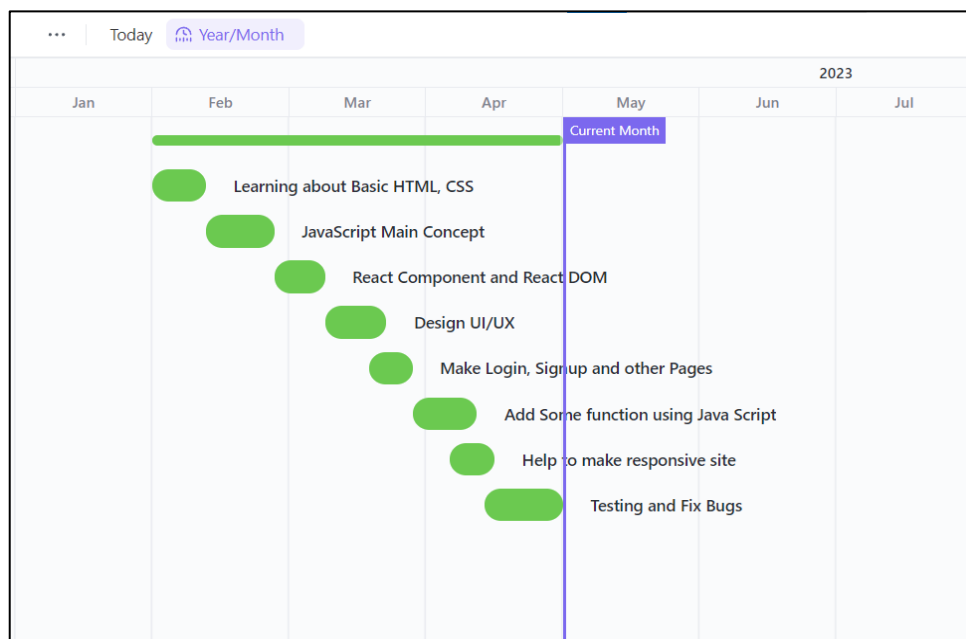


Fig. 3.1 Gantt Chart



- 4.1 Study of current system
- 4.2 Problem and weakness of current system
- 4.3 Requirement of new system
- 4.4 System Feasibility
- 4.5 Features of new system
- 4.6 List of main modules
- 4.7 Selection of hardware or software

## **4.1 STUDY OF CURRENT SYSTEM**

Customize Lab.Project is used to customize your product for example you can add symbol, design and text etc. in your product.

## **4.2 PROBLEM AND WEEKNESS OF CURRENT SYSTEM**

The HR Administration falls short of controlling the employee's activities in analyzing his/her strengths and weakness. The decision for appraisal of assigning next project to the employee or to train him/her to enhance the skills – where lies with proper projection. He is not provided with the detailed project information done or to be assigned based on Application.

## **4.3 REQUIREMENT OF NEW SYSTEM**

- System requirement states which kind of services, functions and facility should be given to users.
- We have determined the given requirements of the application should use a central database so that the data entered at a given node is available throughout the organization, depending on the access rights of the user.
- The performance of the application should be consistent and should use load sharing in order for the application to work smoothly without getting crashed.
- The application should have an interface that can be mapped to the physical document that are currently being used by the organization, so that the users does not get confused between the interface and physical form in use.

## **4.4 SYSTEM FEASIBILITY**

When a new project is proposed, it normally goes through feasibility assessment. Feasibility study is carried out to determine whether the proposed system is possible to develop with available resources and what should be the cost consideration. Facts considered in the feasibility analysis were.

- Technical Feasibility
- Economic Feasibility
- Behavioral Feasibility

### **Technical Feasibility**

Technical Feasibility deals with the hardware as well as software requirements. Technology is not a constraint to type system development. We have to find out whether the necessary technology, the proposed equipment has the capacity to hold the data, which is used in the project, should be checked to carry out this technical feasibility. The technical feasibility issues usually raised during the feasibility stage of investigation includes these

- This software is running in windows 2000 Operating System, which can be easily-installed.
- The hardware required is Pentium based server.
- The system can be expanded.

### **Economic Feasibility**

This feasibility study present tangible and intangible benefits from the prefect by comparing the development and operational cost. The technique of cost benefit analysis is often used asa basis for assessing economic feasibility. This system needs some more initial investment than the existing system, but it can be justifiable that it will improve quality of service.

- Thus, feasibility study should Centre along the following points:
- Improvement resulting over the existing method in terms of accuracy, timeliness.
- Cost comparison
- Estimate on the life expectancy of the hardware
- Overall objective of our project is economically feasible. It does not require much cost to be involved in the overall process. The overall objectives are in easing out the requirement processes.

**Behavioural Feasibility**

This analysis involves how it will work when it is installed and the assessment of managerial environment in which it is implemented. People are inherently resistant to change and computers have been known to facilitate change. The new proposed system is very much useful to the users and there for it will accept broad audience from around the world.

**4.5 FEATURES OF NEW SYSTEM****Add Design**

Using Design Customer can add design in Their selected product.

**Add Symbol**

Using Symbol Customer can add Symbol in Their selected product.

**Add Text**

Using Text Customer can add Text in Their selected product.

**Add Image**

Using Upload Image Customer can add Image form their side in Their selected product.

**4.6 LIST OF MAIN MODULES****For User Module**

- Can Add Design
- Can Add Symbol
- Can Add Text
- Can Add Images

**For Admin Module**

- Can manage profile
- Can add new projects
- Can add new tasks
- Can update tasks and projects
- Manage users

**4.7 SELECTION OF HARDWARE OR SOFTWARE****Software Requirement**

- Front End: Notepad++, Visual Studio Code, Postman, Chrome Browser
- Backend: Mongo DB Compass, NoSQL Booster

**Hardware Requirement**

- Processor: Intel(R) Core (TM) i3-6006U CPU @ 2.00GHz, 2000 MHz, 2 Core(s), 4 Logical Processor(s)
- System Memory: 8 GB Hard Disk

**5.1 System design and methodology****5.2 Database design****5.3 Structural view****5.3.1 Class diagram****5.4 Functional modeling****5.4.1 Data flow diagram****5.4.2 E-R diagram****5.5 Behavioral modeling****5.5.1 Use case diagram****5.5.2 Sequence diagram****5.5.3 Activity diagram**

## 5.1 SYSTEM DESIGN & METHODOLOGY

System Analysis is the process that decomposes a system into its component pieces for the purpose of defining how well those components interact to accomplish the set requirements.

The purpose of the System Design process is to provide sufficient detailed data and information about the system and its system elements to enable the implementation consistent with architectural entities.

## 5.2 DATABASE DESIGN

- Database design is a method of identifying the gaps and opportunities of designing a proper utilization method.
- Database design is the organization of data according to a database model. The designer determines what data must be stored and how the data elements interrelate.
- With this information, they can begin to fit the data to the database model.
- Database design involves classifying data and identifying interrelationships. This theoretical representation of the data is called an ontology. The ontology is the theory behind the database's design.
- Database designs provide the blueprints of how the data is going to be stored in a system. A proper design of a database highly affects the overall performance of any application.

## 5.3 STRUCTURAL VIEW

### 5.3.1 Class Diagram

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

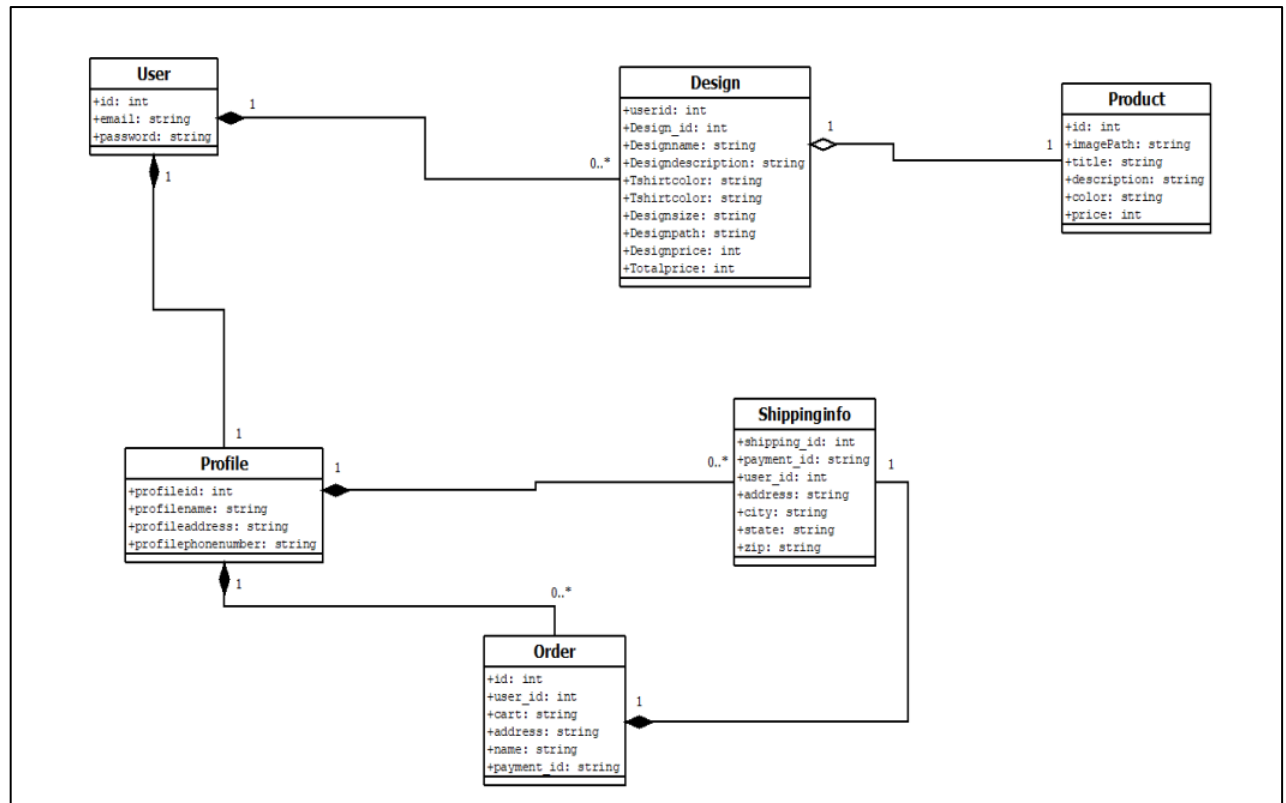


Fig 5.1 Class Diagram



## 5.4 FUNCTIONAL MODELING

### 5.4.1 Data Flow Diagram

DFD Level 0,

Level 0 DFDs, also known as context diagrams, are the most basic data flow diagrams. They provide a broad view that is easily digestible but offers little detail. Level 0 data flow diagrams show a single process node and its connections to external entities.

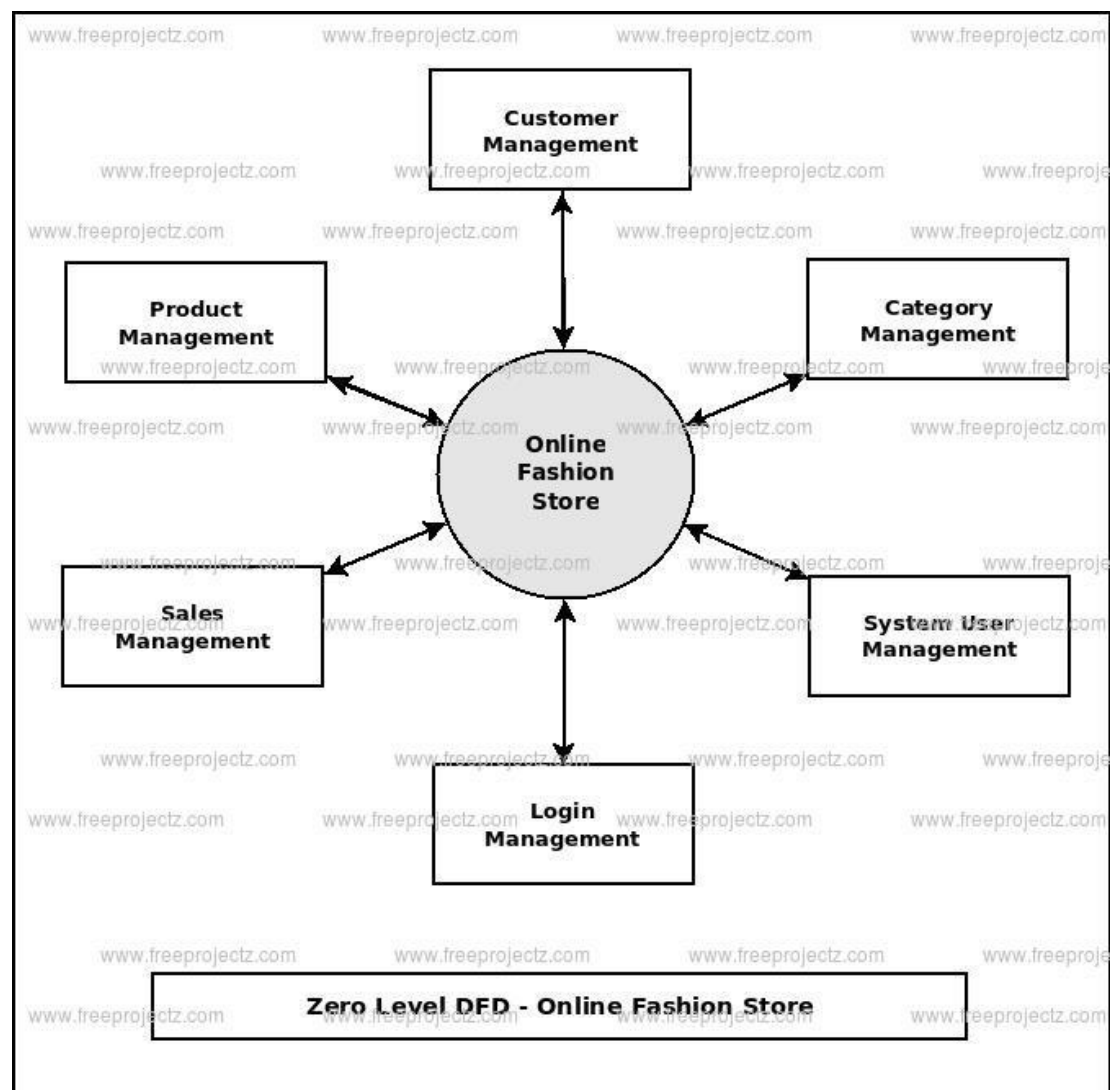


Fig 5.2 DFD Level 0

## DFD Level 1

A level 1 DFD notates each of the main sub-processes that together form the complete system.

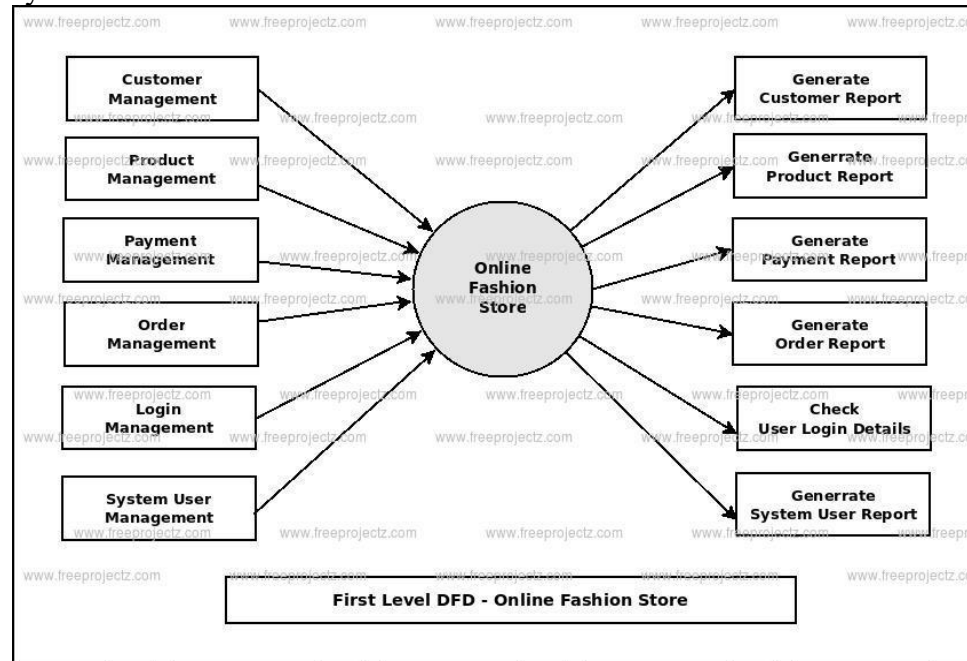


Fig 5.3 DFD Level 1

## DFD Level 2

This level two data flow diagram (DFD) template can map out information flow, visualize an entire system, and be shared with your stakeholders.

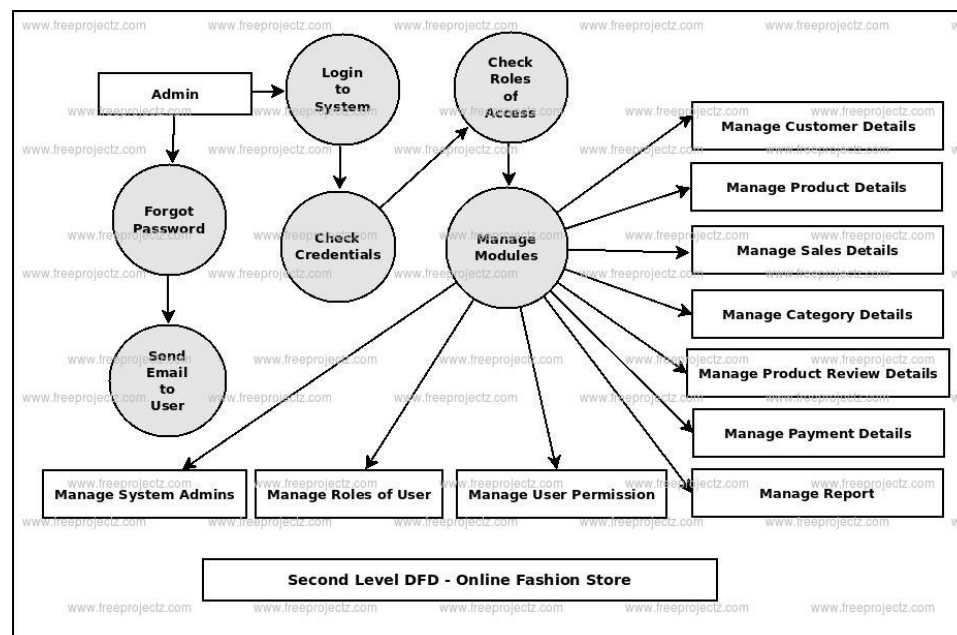


Fig 5.4 DFD Level 2

### 5.4.2 Entity Relationship Diagram

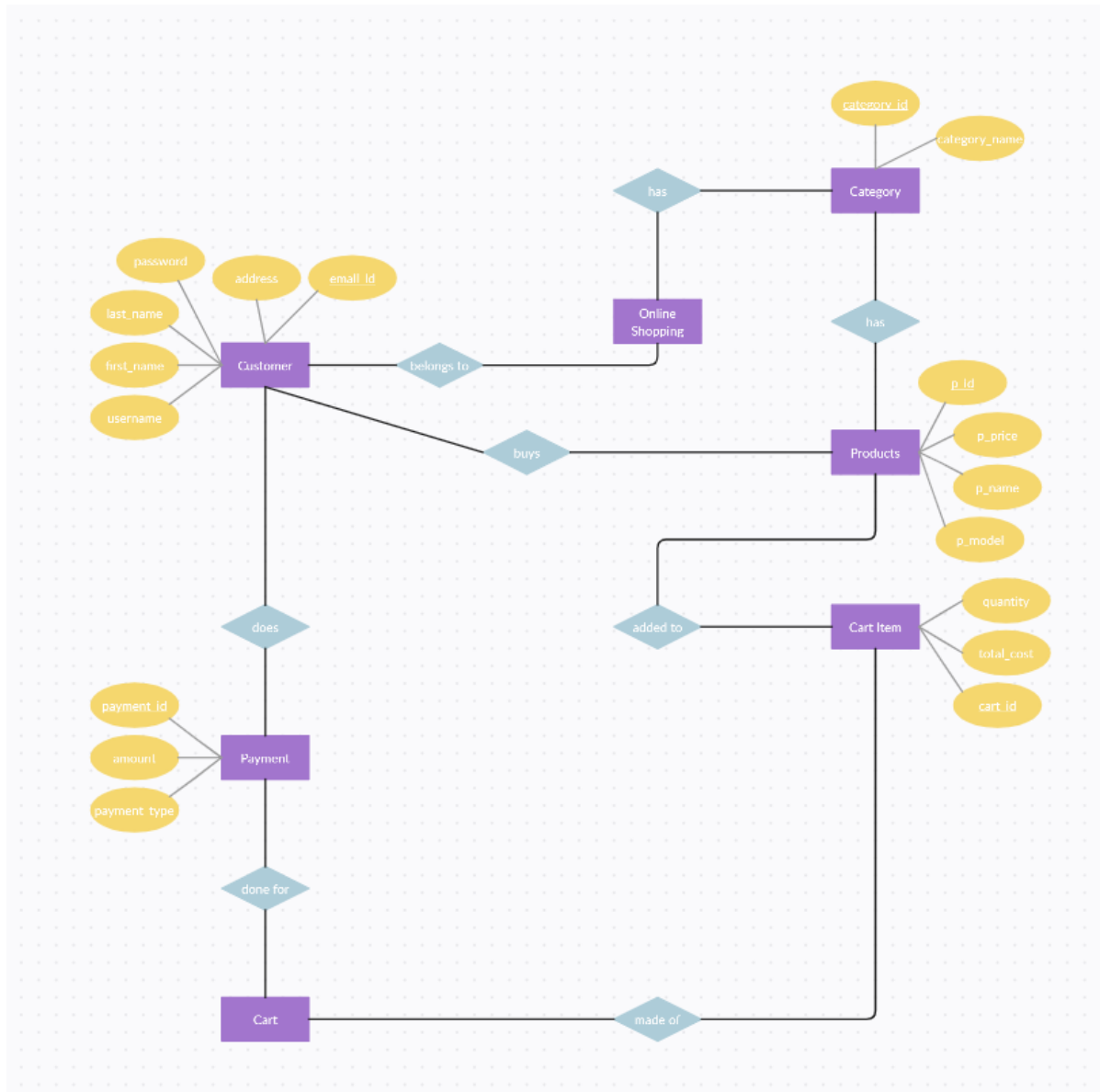


Fig.5.5 E-R Diagram

## 5.5 BEHAVIORAL MODELING

### 5.5.1 Use-case Diagram

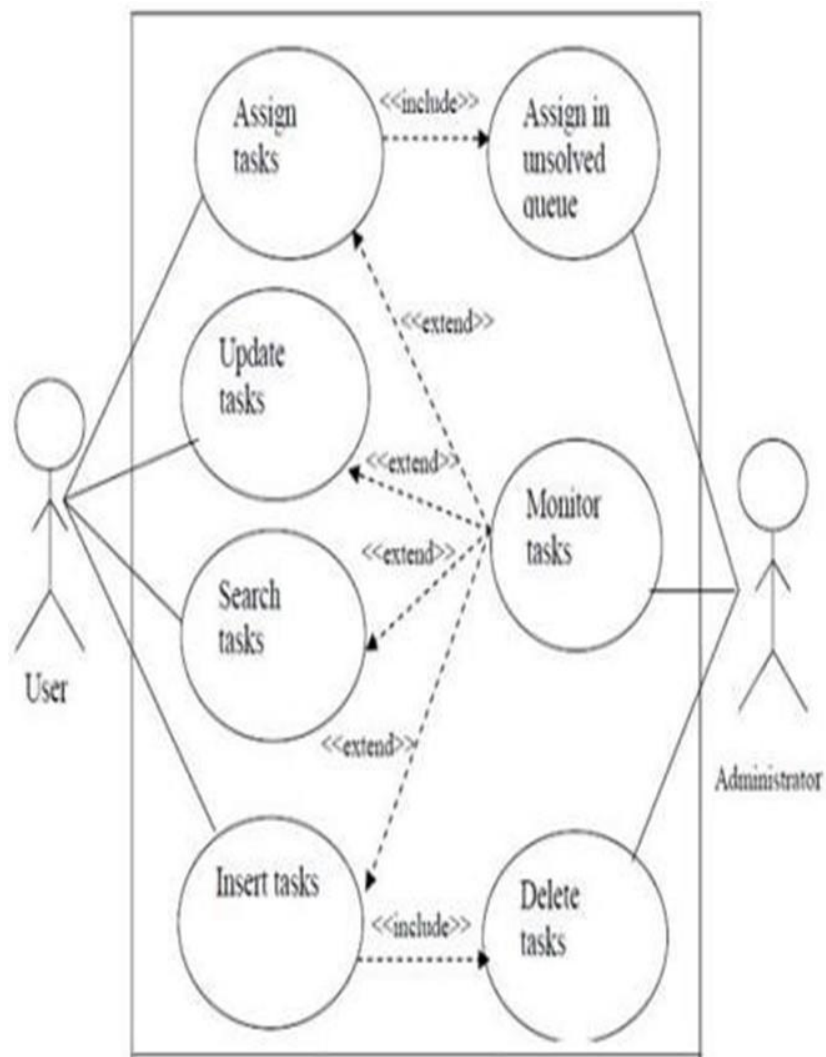


Fig 5.6 Use-case Diagram

### 5.5.2 Sequence Diagram

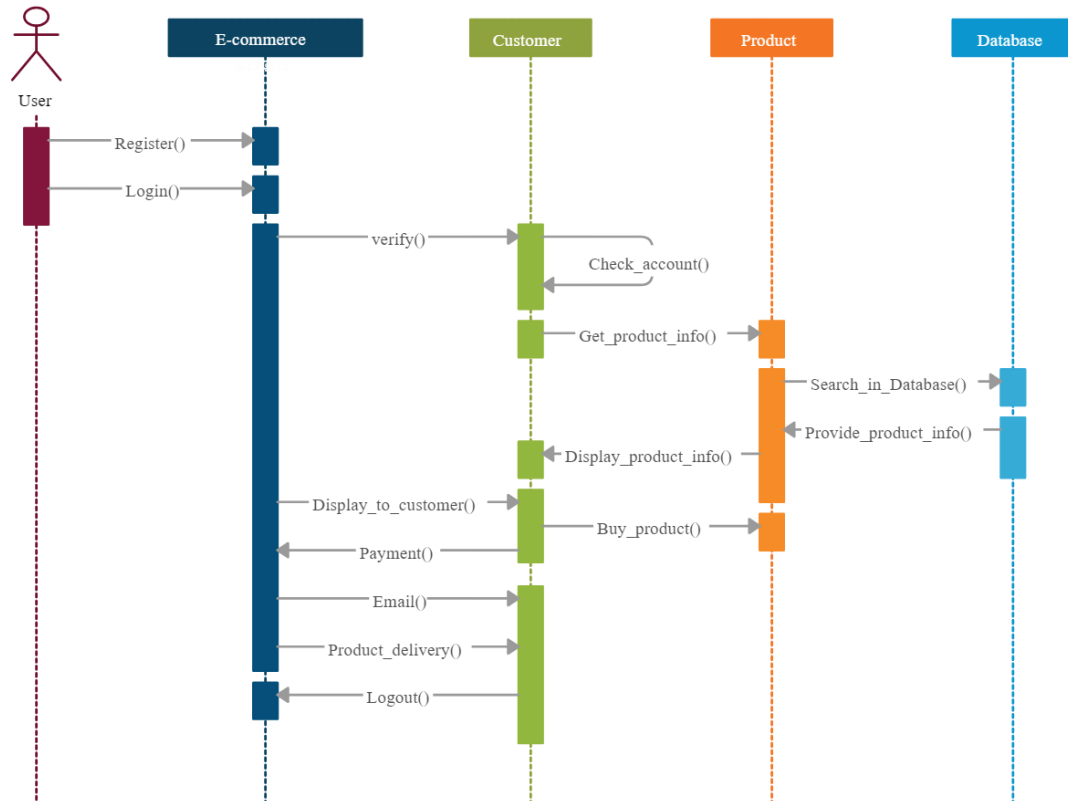


Fig 5.7 Sequence Diagram

### 5.5.3 Activity Diagram

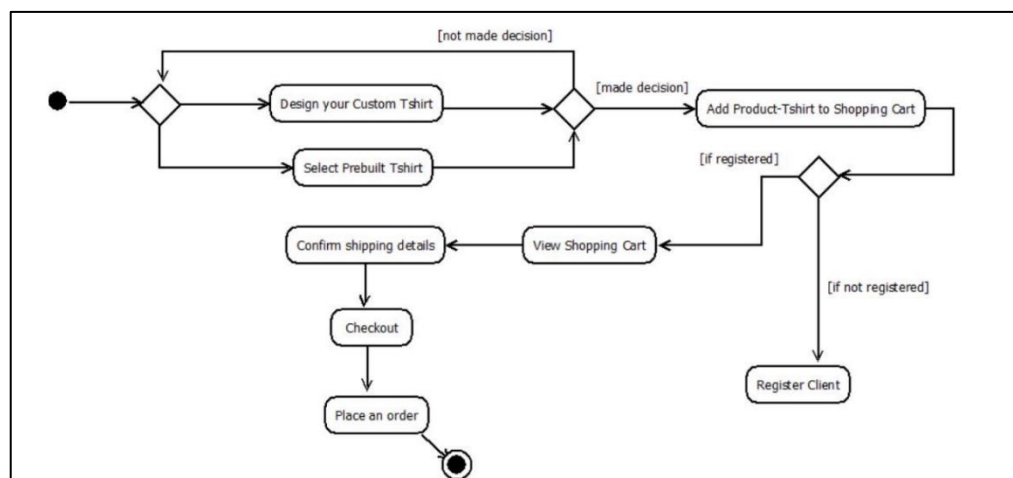


Fig 5.8 Activity Diagram

- 6.1 Implementation Platform / Environment
- 6.2 Program / Module specification
- 6.3 Finding / Result
- 6.4 Result analysis

## **6.1 IMPLEMENTATION PLATFORM / ENVIRONMENT**

- Our project is suitable to all type of users like single and multi-users.
- Multi-users are allowed to operate the website at the same time.
- We provide the interface which is user friendly.
- We have GUI (graphical user interface) by which all type of users can easily access the Website.
- One user at a time and also multi users can access the website at the same time and use all the services.
- If we don't provide the GUI in the website then user won't like our website.
- For better performance and reliability, we have to include GUI in the website.
- So, for the more security and performance we have to use the GUI.

## **6.2 PROGRAM / MODULES SPECIFICATION**

- MONGO DB
- VS Code
- OS: Windows & MacOS

## **6.3 FINDING / RESULTS**

The result of this research paper is that now we can have our own web app system that is way strong and advanced than before and also will focuses on the main concern of the people of Bits Technolabs company. Also, the main issue i.e., trust and security has been taken under noticed in more effective ways followed by the facilitation options.

The proposed system has been tested in order to measure its usability, where the proposed system was tested by operating on Internet Explorer, Google Chrome, and Mozilla Firefox with the local host server. After given a brief explanation about how to use the system, the

employees of our company have been tested the proposed system. The aim of the proposed survey is to measure the user satisfaction about the proposed system and prove its usability.

In comparison with other studies, this research enables the participants to voice out their user experience through an in-depth conversation. This together with an understanding of anonymity allowed more richness in the data gathered.

## 6.4 RESULT ANALYSIS

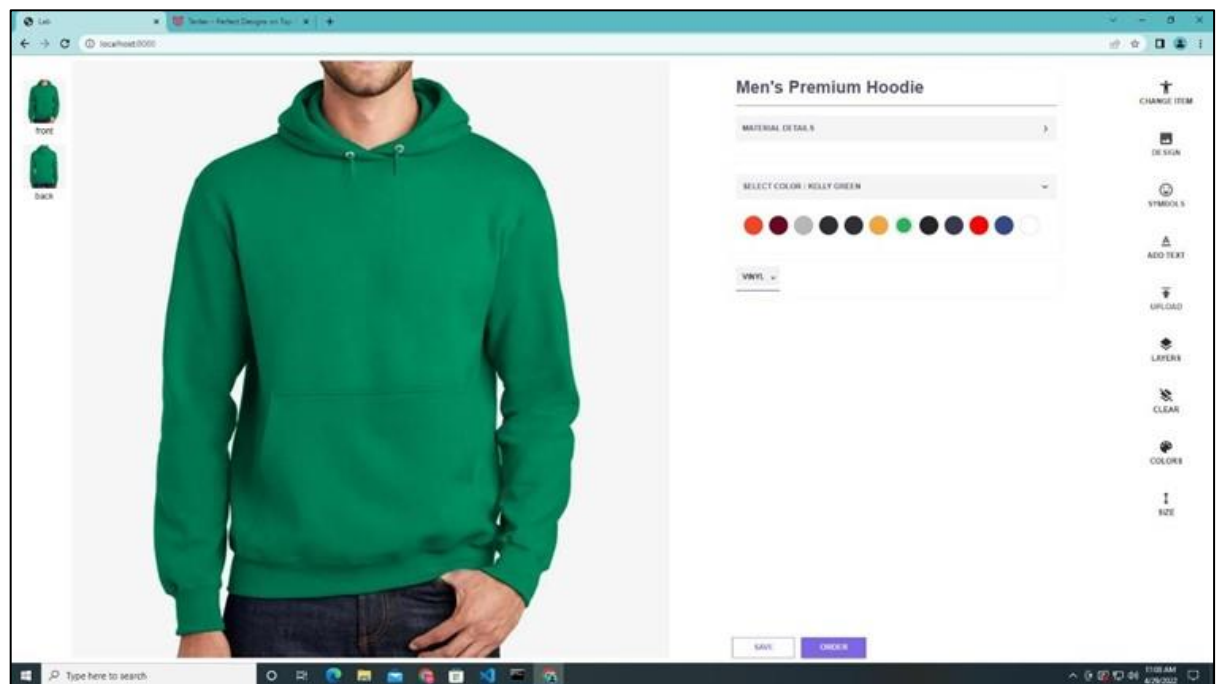


Fig 6.1 Main Page



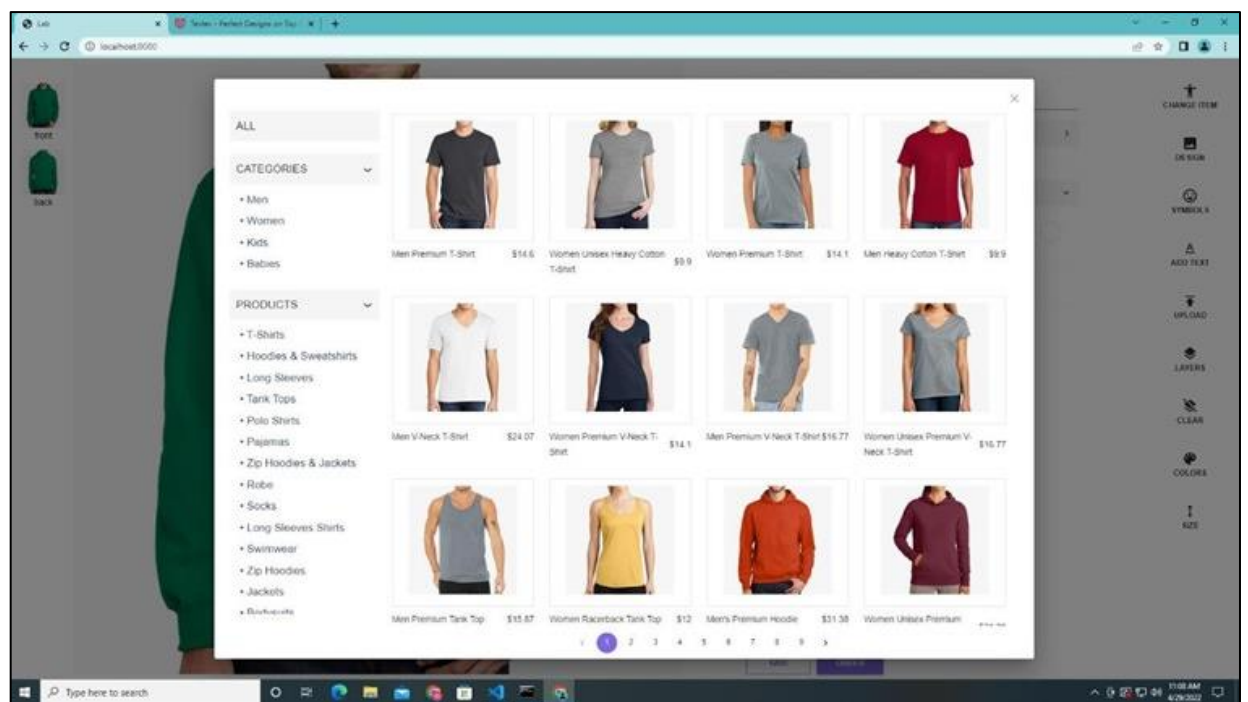


Fig 6.2 All Categories

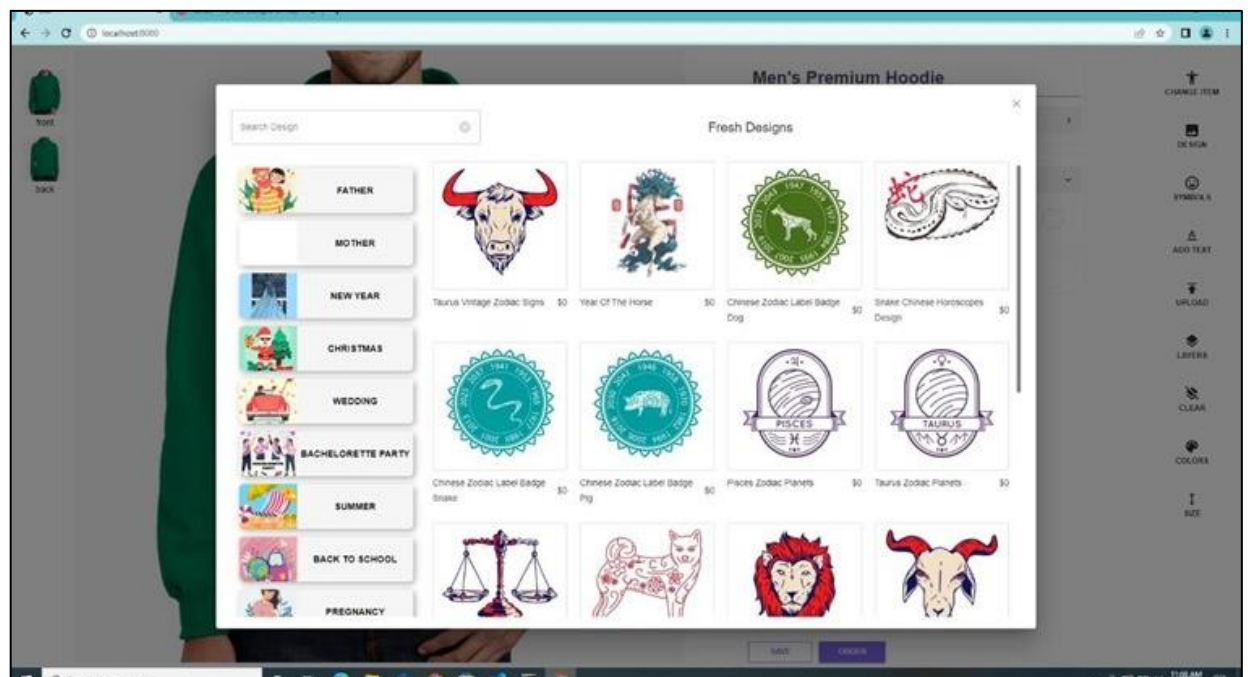


Fig 6.3 Design

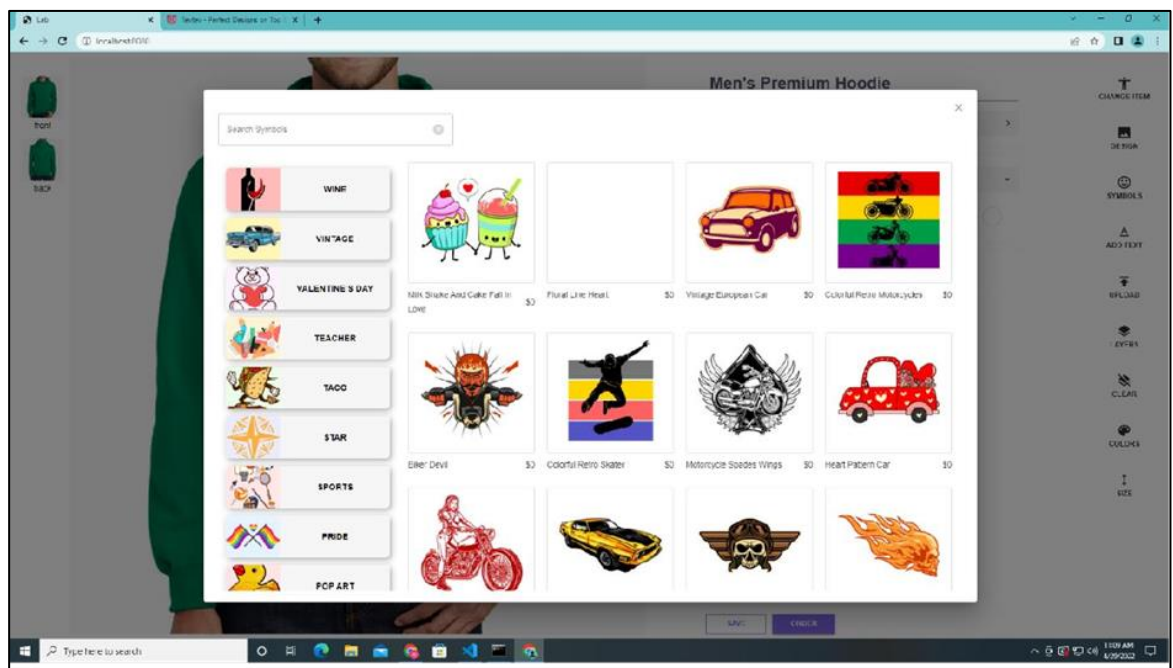


Fig 6.4 Symbols

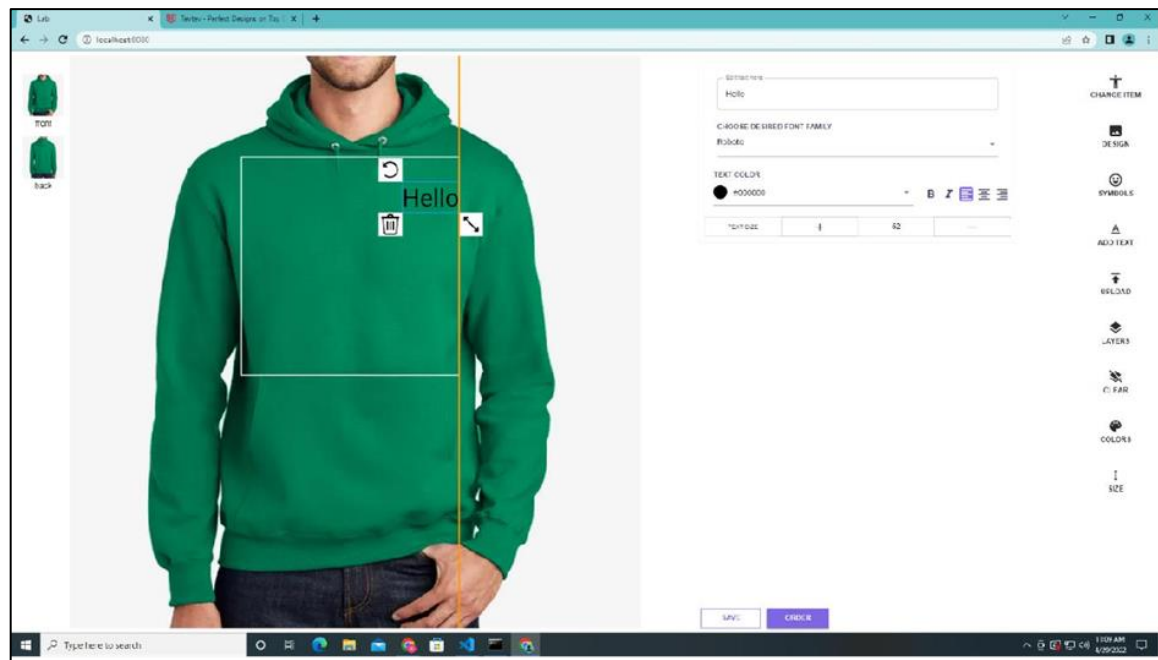


Fig 6.5 Add text

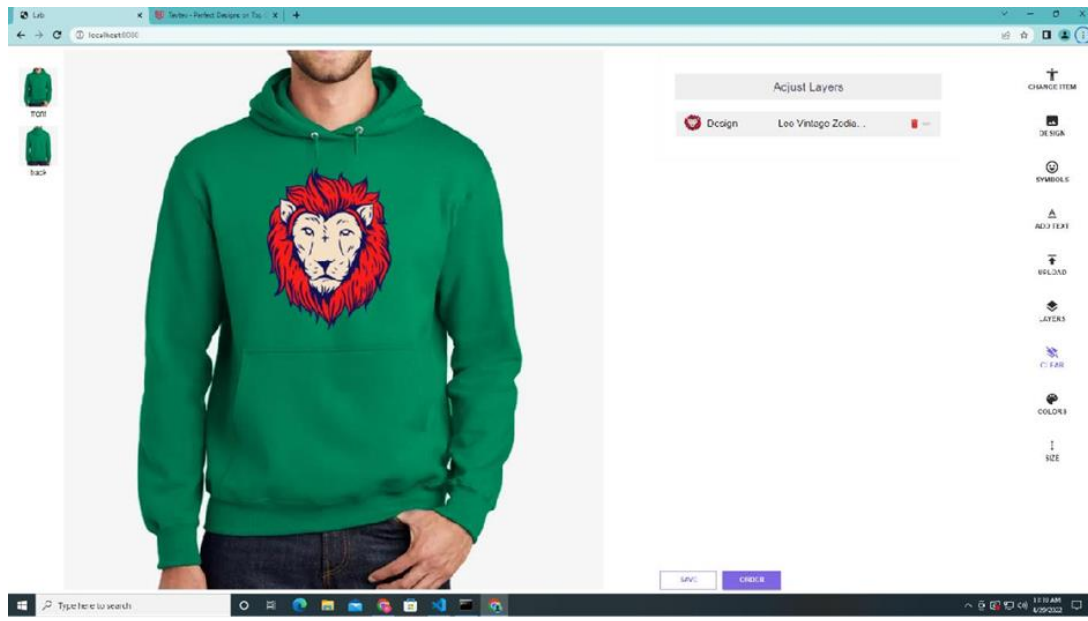


Fig 6.6 Layers

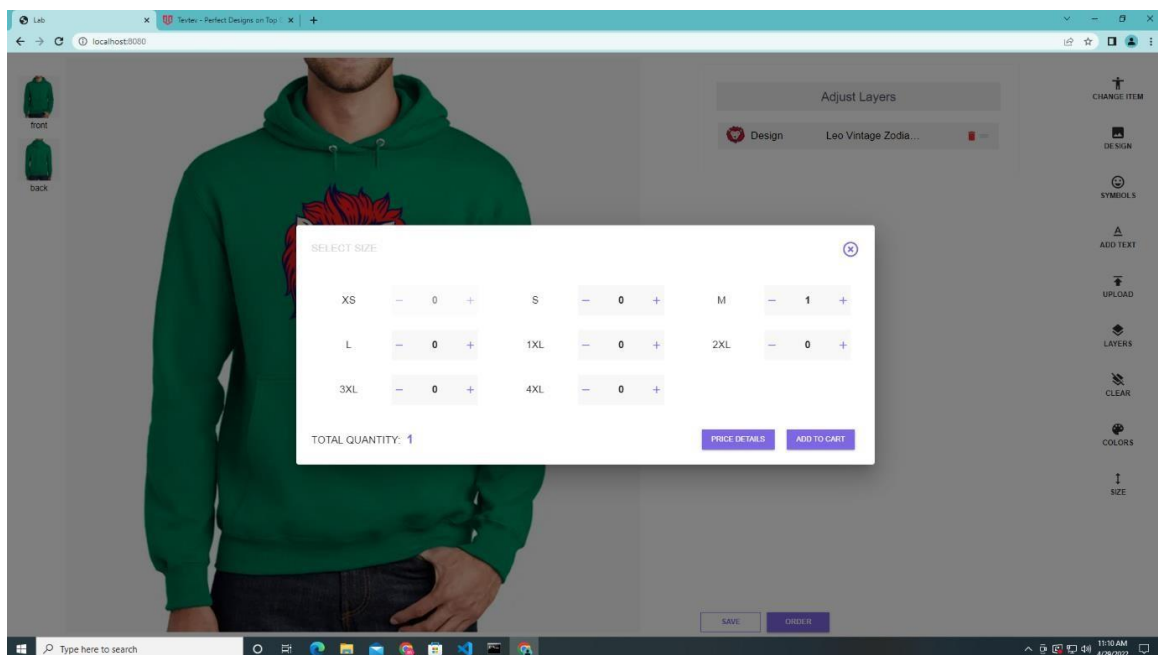


Fig 6.7 Total quantity with size

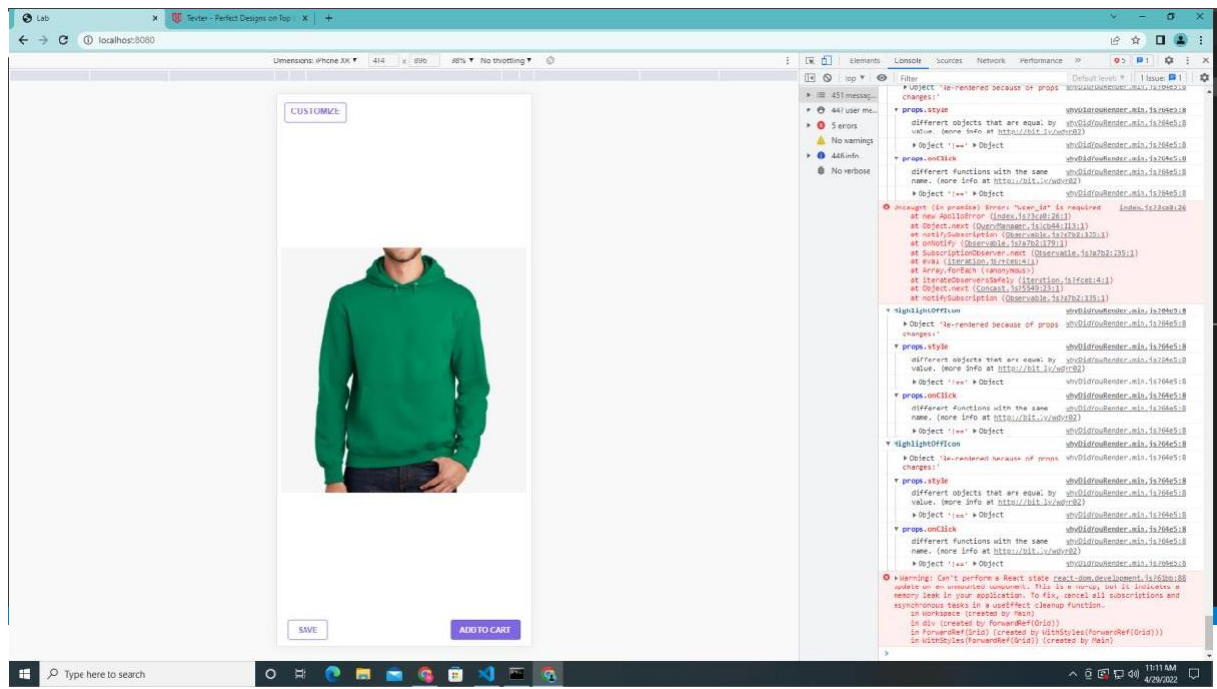


Fig 6.8 Main page of site (User side)

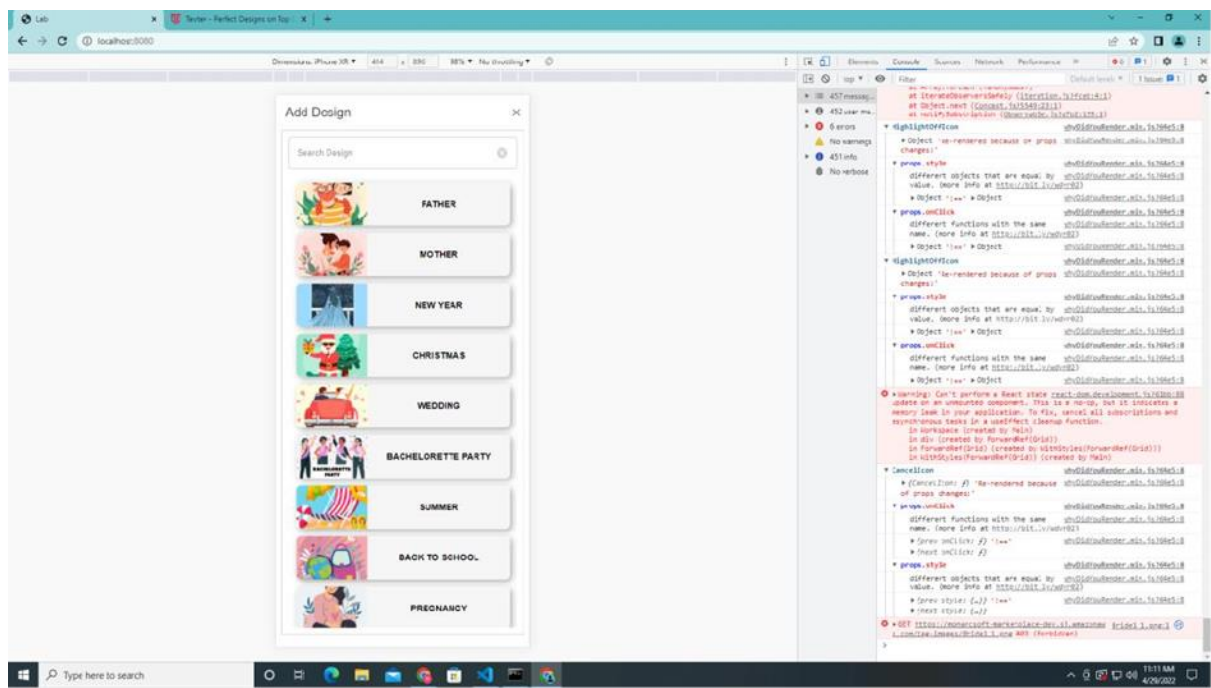


Fig 6.9 Design in mobile view

7.1 Testing plan and strategy

7.2 Test result and analysis

## 7.1 TESTING PLAN/ STRATEGY

### Testing Plan

The objective of the system testing is to ensure that all individual programs are working as expected, that the programs link together to meet the requirements specified and ensure that the computer system and the associated clerical and other procedures work together. Systems are not designed as entire systems but they are tested as single systems. The analyst must perform both unit and system testing.

Different types of testing methods are available. We have tested our system for different aspects like Does the application meet the goals for which it has been designed? This was a very important question that stood before us as the application was designed to be implemented on such a large network.

To fulfill its goal of being able to run on different systems we went through a series of tests at different places where this is supposed to be used the most. As we need to make our system efficient enough, we need to test it thoroughly.

Finally, we tested the system with real-time data, for which it is actually designed. We are successful in satisfying our needs as it was designed according to client's requirements. But it is very necessary to maintain this application and so our work is not still over.

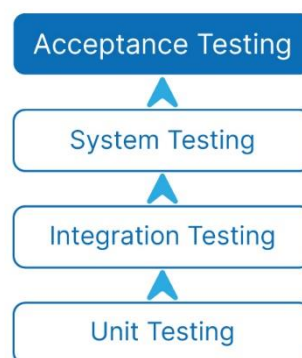


Fig 7.1 Testing Plan

### **Testing Strategy**

Once source code has been generated, the software must be tested to uncover as many errors as possible before delivery to the customer. Our goal is to design a series of test cases that have a high likelihood of finding errors. Software testing techniques provide systematic guidance for designing tests that (1) Exercise the internal logic of software components (2) Exercise the inputs and outputs domains of the program to uncover errors in program function, behavior and performance.

During the early stages of testing, a software engineer performs all tests. However, as the testing process progresses, testing specialists may become involved. Reviews and other activities can and do uncover errors, but they are not sufficient. Every time the program is executed, the customer tests it! Therefore, you have to execute the program before it gets to the customer with the specific intent of finding and removing all errors. In order to find the highest possible number of errors, tests must be conducted systematically and test cases must be designed using disciplined techniques.

### **Testing Objectives**

- Testing is a process of executing a program with the intention of finding an error.
- A good test case is one that has a high probability of finding an as-yet undiscovered error.
- A successful test is one that uncovers an as-yet undiscovered error.

### **Unit Testing**

Unit testing is a software development process in which the smallest testable part of an application, called units, are individually scrutinized for proper operation. Unit testing is often automated but it can also be done manually. This testing mode is a component of Extreme Programming (XP), a pragmatic method of software development that takes a meticulous approach to building a product by means of continual testing and revision. Unit testing involves only those characteristics that are vital to the performance of the unit under test.

This encourages developers to modify the source code without immediate concerns about how such changes might affect the functioning of the units or the program as a whole. Once all the units in a program have been found to be working in the most efficient and free manner possible, larger components of the program can be evaluated by means of integration testing.

### **System Testing**

Now, it is time for whole System testing. We have found some cosmetic bugs and minor bugs. We have fixed it and tested it again. We worked on each error and exception that we got while testing and most of them are resolved or handled programmatically.

### **Recovery Testing**

It is a system test that forces the software to fail in a variety of ways and verifies that recovery is properly performed.

### **Performance Testing**

It is designed to test the run-time performance of software within the context of an integrated system performance testing occurs throughout all steps in the testing process.

## **7.2 TEST RESULT AND ANALYSIS**

To minimize the number of errors in software, a rich variety of test design methods have evolved for software. These methods provide the developer with a systematic approach to testing. More importantly, methods provide a mechanism that can help to ensure the completeness of the test and provide the highest likelihood for uncovering errors in software.

**An engineering product can be tested in one of the two ways:**

- Knowing the specified function that product has been designed to perform, tests can be conducted that demonstrate each function is fully operational while at the same time searching for errors in each function.
- Knowing the internal workings of a product, tests can be conducted to ensure that “all gear mesh”, that is, internal operation are performed according to specifications and all internal components have been adequately exercised.



## **CONCLUSION AND DISCUSSION**

## **CHAPTER - 8**

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8.1 Overall Analysis of Internship Viabilities

8.2 Problem Encountered and Possible Solutions

8.3 Summary of Internship work

## **8.1 OVERALL ANALYSIS OF INTERNSHIP**

Software Development Life cycle (SDLC) can never be completed without encountering bugs in the coding phase. The bugs thus surfaced are to be fixed faster and go ahead with development. Bug tracking needs necessary information to resolve bugs faster. Making of web app is gives to learn various feature how industry team works and also learn how frontend is connect with backend. I have learned lots functionality during this project.

## **8.2 PROBLEM ENCOUNTERED AND POSSIBLE SOLUTIONS**

For calculating total numbers of hours, it was not showing so we added a calculate function so that it directly shows the total numbers of hours taken by the users.

## **8.3 SUMMARY OF PROJECT**

This internship has been an excellent and rewarding experience. The technical aspects of the work I've done are not flawless and could be improved provided enough time. As someone with no prior experience in HTML, CSS, JavaScript, Material UI, ReactJS and Node Js whatsoever I believe my time spent in training and discovering new languages was well worth it and contributed to finding an acceptable solution to an important aspect of web design and development. Two main things that I've learned the importance of our time-management skills and self-motivation.

## References

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