18CSC206J – SOFTWARE ENGINEERING AND PROJECT MANAGEMENT

LAB RECORD

TILLMARK

TEAM MEMBERS

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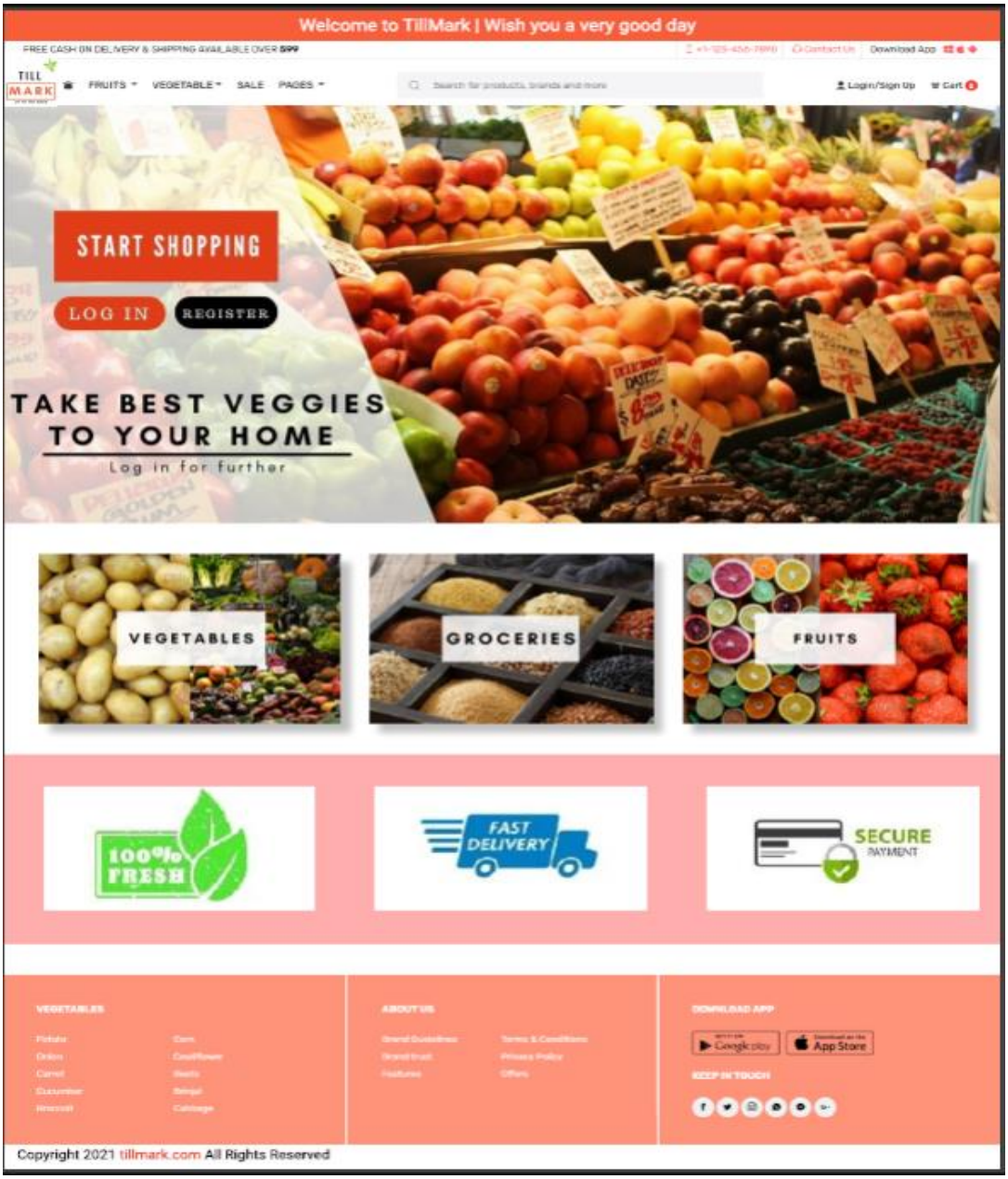
SCHOOL OF COMPUTING

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

KATTANKULATHUR

MAY 2021

10. Demo


Welcome to TillMark | Wish you a very good day
FREE CASH ON DELIVERY & SHIPPING AVAILABLE OVER $99
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FRUITS
VEGETABLE
SALE
PAGES
Login/Sign Up
Cart
START SHOPPING
LOG IN
REGISTER
TAKE BEST VEGGIES TO YOUR HOME
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Week 1 : Business Case Template

THE PROJECT.

- The aim and the focus of this software are primarily to satisfy both farmers and customers.
- This idea is inspired and brought up after seeing the tragedy graph of farmer's massive suicide
- So, our project will be a boon for today's farmer's life

THE HISTORY

- The reason for their suicide is mainly not being fairly priced for their products and facing loan issues because of this.
- Because the prices of the basic requirements are increasing everyday, farmers don't receive proper income and customers don't get quality products at satisfying cost. Our software will focus on this point particularly

LIMITATIONS

- Cannot store perishable goods for a long time.
- Cold storage and storage space are required in large amounts
- Delivery should be done in a quick period because even the goods may expire.

APPROACH

- Programming languages:- HTML, CSS , python(framework :- Django).
- We need quality managers, to ensure to satisfy the farmers in any situation.
- Identify and meet the farmers, giving trust on Tillmark project.
- The transport required to send the goods to customers.
- And also the cold storage to store the goods.

BENEFITS

- The project is to satisfy both the farmers and the customers
- The customers will receive quality products directly from the farmers without any extra processing and pricing
- Whereas, The farmers will receive profit based on their product quality(without giving any extr money to government officer which happens in some states).
- By this process even organic farming will be promoted.

Week 2: Project Methodology and Stakeholder Identification/Analysis

1. Executive Summary

- The main objective of the project is to satisfy both the farmers and the customer
- The customer will receive quality products directly from the farmers without any extra processing.
- Whereas, the farmer's will receive profit based on their product quality.
- So, by this process even organic farming will be promoted.
- We have chosen the agile methodology. It is a practice that promoted continuous iteration of development and testing lifecycle of the project

2. Selection of Methodology

We have selected a agile development method, framework is SCRUM which concentrates specifically on how to manage task within a team-based development environment. Agile and Waterfall model are two different method s for software development process. Though they are different in their approach, both methods are useful at times, depending on the requirement and the type of the project.

2.1 Roles and Methods:-

SCRUM master:-

- Master is responsible for setting up the team, sprint meeting and removes obstacles to progress.
  Product Owner:-
- The product owner creates the backlog, prioritizes the backlog and is responsible for the delivery of the functionality at each iteration.
  Scrum Team:-
- Team manage its own work and organize the work to complete the sprint or cycle.

3. Stakeholder Management

2.1. Identification of Stakeholders

- Project Manager:-
  Plays the lead role in project estimation, execution, staffing, scheduling and motivating the team members. Project monitoring and control activities are undertaken once the development activities start by the project manager.

- Quality and development Team:-
  Teams have quality assurance testers who are responsible for reviewing each feature separately and the application as a whole. Scrum team is held accountable for the quality.

- Transport and Business Team:-
  The primary objective is helping businesses implement technology solutions in a cost-effective way by determining the requirements of a project, and communicating them clearly to stakeholders. Punctuality is the main role played by transportation.

- Customer:- Plays an important role in the project . Gives the feedback of the project and any helps in identifying the flaws in the product.

2.2. Interest and Influence matrix

Interest	Influence
High	High
Low	Low
Low	High
High	Low

Low Interest, High Influence Keep them satisfied as they can be 'defenders' Help them engage more	**High Interest, High Influence** Engage them closely as they are key 'drivers'
Low Interest, Low Influence Low Priority as they are 'spectators'	**High Interest, Low Influence** Keep them informed as they can be 'blockers'

Stakeholder Name	Activity / Area / Phase	Interest	Influence	Priority (High / Medium/Low)
Project Manager	Planning , Executing, controlling	High	High	High
Quality and development team	Maintenance and quality of the project	High	Medium	High
Transport and Business Team	Transportation,Risk Management and cost estimation etc..	Low	Low	High
Customer	Product User	High	High	High

2.3. Communication Plan for Stakeholders

- Daily meetings held among the stakeholders.
- Risk factors, errors, and problems and business problems should be rectified on that day itself maximum to two days.
- Direct interaction and plans of the organization should be directly known to clients by ad through our software.
- Weekly meetings with workers among the organizations and eradication of their problems and satisfying their needs should be taken.
- Daily reports and business path and profits or loss should be submitted in the daily meetings held.

Week 3: REQUIREMENTS

1. Executive Summary

The primary scope is to provide the best and fresh vegetables to consumers directly from farmers at the lowest cost possible. We have to connect with the local transport system agencies, group of farmers, and other authorities to make this project be done smoothly**.**

2. Project Scope

S.No	Activities In Scope	Activities Out of Scope
1.	Fresh and quality products can be delivered.	Products cannot be delivered to customers beyond the range of 20 kms from the local Headquarters.
2.	Delivery beyond 20kms are done for the customers who have GOLD membership	Non-GOLD membership customers beyond 20kms might avail the offer of self-picking.
3.	Customers will be able to contact the delivery man via contact provided.	We cannot provide online tracking of the delivery.
4.	There will be a tremendous offer for the clients who purchase more than Rs.1000.	
5.	The farmers can avail the scheme after they have accomplished a certain amount of commercial enterprise with us.	

2.1. In Scope

- Every farmer will have a verified account in our website.
- Our managers will go and collect the information from the farmers then carry the goods of the farmers to our cold storage by transportation agencies.
- We will list the products on our site with minimum cost
- The consumers can login into our site
- Check the goods and see the details of the farmer(whom these goods belong to)
- Select the good and the quantity they want
- Select the area and if they are under our coverage area then okay
- Can pay through cash or any online method like UPI, Paytm, phone pe, etc
- Our delivery boy can deliver to their location

2.2. Out of Scope

- Unavailable products cannot be sent to the customers
- Who don't have mail-id, they cannot access our website.
- Those farmers who do not have account cannot avail schemes offered by the company.
- Perishable products cannot be stored more than 5 days.
- Due to storage issues there can be out of stock risks also.

3. Epics [Major Functions]

Epic (#)	Epic Description
E1	**Buying products from farmers**
E2	**Check the quality of the products**
E3	**Storage of products**
E4	**Maintenance of website**
E5	**Shipment of the products**

4. Requirements

Functional Requirements	Non Functional Requirements
1. An option for user authenticated login	1. The application should provide and user friendly
2 . An option to display market MRP and Till Mark MRP.	2. The application / website available 24/7 to access
3. A notification should be given to the user when the required product is available.	3. The application should be scalable
4. The payment option is required to pay in online or cash on delivery.	4. The data should be protected from unauthorized access.
5. The application should be licensed	5. Maintenance required for the application and be error free

4.1. Infrastructure Requirements

Requirement (#)	Requirement Specification	Department	Name of Business User / Project Team Member	Status
IR1	***Cold storage.***	***TRANSPORT, STORAGE AND BUSINESS TEAM***	**TRANSPORT AND BUSNINESS HEAD – RAJMUN KHAN**	DEPLOYED
IR2	***Computers or Laptops with high Internet Connectivity.***	***QUALITY AND DEVELOPMENT TEAM***	**QUALITY AND DEVELOPMENT HEAD – SAI VINAY**	DEPLOYED
IR3	***Needed a headquarters in the middle of the city with a storage Facility.***	***PROJECT DEVELOPMENT TEAM***	**PROJECT HEAD – G.VIBHUKUMARAN**	IN DEVELOPMENT

4.2 Requirement definition in Agile [Optional … Use according to methodology chosen by student]

User Story	Acceptance Criteria	Size of User Story
As a customer, I want to be able To cancel my order before it is delivered.	**Customers with GOLD-Membership Will be refunded without any extra cost.** **Customers without GOLD Membership will not be fully Refunded (10%willbededucted).**	***Medium***
As a customer, I want to know What if I get stuck in the payment gateway.	**Customers will get there fund in 3-10 Business days.**	***Medium***
As a customer, I want to know What the payment methods Available in the gateway are.	**Customers can pay their bill using credit/debit card, any UPI methods Cash on delivery is not available due To the current situation.**	***Easy***

WEEK 4 :-

Project Management Plan, Effort and Cost Estimation and Team Formation

1. Executive Summary

While private labels may be called a key differentiator in terms of inventory and allows **TILLMARK** a lot of price flexibility, its primary focus is on the technology stack that powers the end-to-end operations from procurement, distribution, supply, delivery, payments and returns.

2. Project Management Plan

Describe the key issues driving the project. Summarize the results of the project identification stage (e.g. feasibility assessment and business case). Summarize the solution selected from the Business Case. Define the objectives of the project and the intended business results. Define quantitative and measurable objectives that can be used as criteria by which key stakeholders will judge the success of the project. Some of this information can be extracted from the project charter.

TILLMARK is going to change how Indians get their daily groceries. On the face of it, **TILLMARK** seems like a web-based supermarket, but the business model runs deeper than simply listing products from other sellers.

So, The website designed by our team is for the customers to Login and buy the products they need. And the other part of the website is to monitor and serve the customers. Another other part of website will be used by Quality managers, transport department and delivery department for the official login purpose.

Integration Management	Governance Framework Project Team Structure Roles & Responsibilities of Team Change Management (Change Control, Issue Management) Project Closure
Scope Management	Scope Statement Requirement Management (Gathering, Control, Assumption, Constraint Stakeholder) Define Deliverable Requirement Change Control Activities and Sub-Tasks
Schedule Management	Define Milestones Schedule Control
Cost Management	Estimate Effort Assign Team Budget Control
Quality Management	Quality Assurance: Quality assurance will be managed including governance, roles and responsibilities, tools and techniques and reporting Quality Control: Specify the mechanisms to be used to measure and control the quality of the work products
Resource Management	Estimate and Manage the need People: People & Skills Required Finance: Budget Required Physical: Facilities, IT Infrastructure

Stakeholder	Identifying, Analyzing, Engaging Stakeholders
Communication Management	Determine communication requirements, roles and responsibilities, tools and techniques. [Type of Communication, Schedule, Mechanism Recipient]
Risk Management	Identifying, analyzing, and prioritizing project risks
Procurement Management	Adhering to organization procurement process

1. Estimation

1.1. Effort and Cost Estimation

WBS	Activity	Activity Description	Sub-Task	Sub-Task Description	Effort (in hours)	Cost in INR
Website Frame	GOLD CUSTOMERS AND NON GOLD CUSTOMERS CAN BE IDENTIFIED	Website Development	Providing the user two step verification	To create desktop level website using HTML,CSS,SEO	24	25,000
Quality Frameworks	BASED UPON THE QUALITY FARMERS ARE GIVEN BONUS	Purchasing	Farmers details are enrolled so next time its not required	Collecting the farm products from the farmers	2	7,75,000
Transport and facilities frame	Coldstorage Facility is available.	Transport	Will be as fresh as possible .	Delivering the product to customers within 20 kms radius.	12	2,00,000

Basic COCOMO model

KLOC=12(approx.)

Since KLOC is 12 it is an Organic COCOMO model

Effort = a(KLOC)^b

=2.4(12)^1.05

=36.6 PM

Development time = c(Effort)^d

=2.5(36.61)^0.38

=9.8 months

Effort Staff Size = Effort/Development

=36.6/9.81

=3.73 persons

Productivity = KLOC/Effort

=12/36.6

=0.32 KLOC/PM

Since 36.6 we have took approximately for 38 for convenience.

Effort (hr)	Cost (INR)
38	13,00,000

1.2. Infrastructure/Resource Cost [CapEx]

Infrastructure Requirement	Qty	Cost per qty	Cost per item
Farm Product	**BASED ON RECEIVEING**	7,75,000	7,75,000
People's Salaries	**NUMBER OF WORKERS IN COMPANY**	3,00,000	3,00,000
Transport	**2 VEHICLE PER DISTRICT**	2,00,000	2,00,000

2. Maintenance and Support Cost [OpEx]

Category	Details	Qty	Cost per qty per annum	Cost per item
Buildings	Cold Storages	2	1,75,000	1,75,000
License	Government License,Server,Database	3	50,000	50,000
People	Web Developer , Delivery people , Customer support	4	3,00,000	3,00,000

3. Project Team Formation

3.1. Identification Team members

Name	Role	Responsibilities
G.Vibhukumaran	Project Sponsor/Head	Provides business context, expertise, and guidance to the project manager and the team.
B.Sai Vinay	Project Manager/ Quality based	Ensure the projects are on time, on budget, and within scope.
RajmunKhan	Transport Head/Business Analyst	Bridging the gap between IT and the Business.
G.Vibhukumaran	Technical Lead	ensure the smooth functioning of technical operations, monitor and evaluation.
RajmunKhan	Developer	Improves the efficient code and develop user interface.
B.Sai Vinay	Tester	Perform Testing for various test case, identifying flaws.

3.2. Responsibility Assignment Matrix

RACI Matrix	Team Members			
Activity	**Name (BA)**	**Name (Developer)**	**Name (Project Manager)**	**Key Business User**
User Requirement Documentation	A	C/I	I	R
	G.VIBHUKUMARAN	**RAJMUNKHAN**	**B. SAI VINAY**	**RAJMUNKHAN**

A	Accountable
R	Responsible
C	Consult
I	Inform

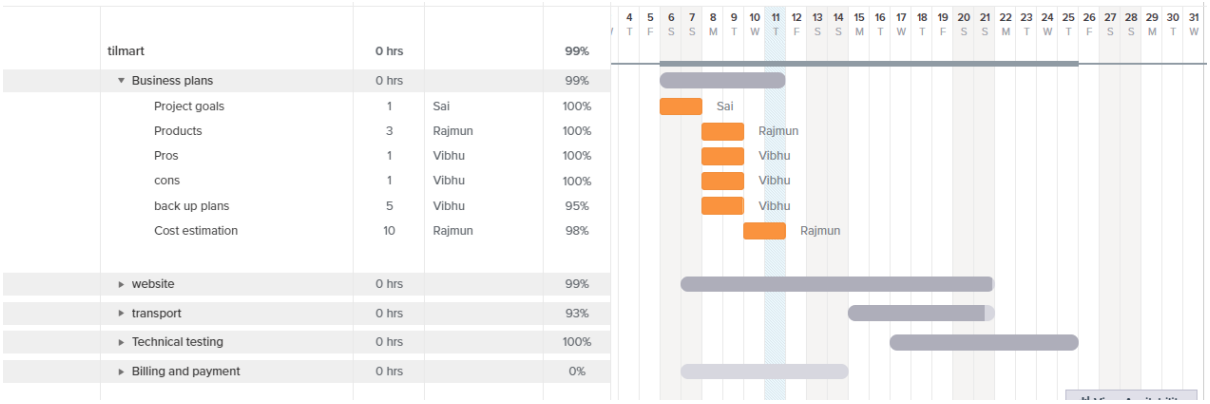
WEEK -5: *WBS And Risk Management Plan*

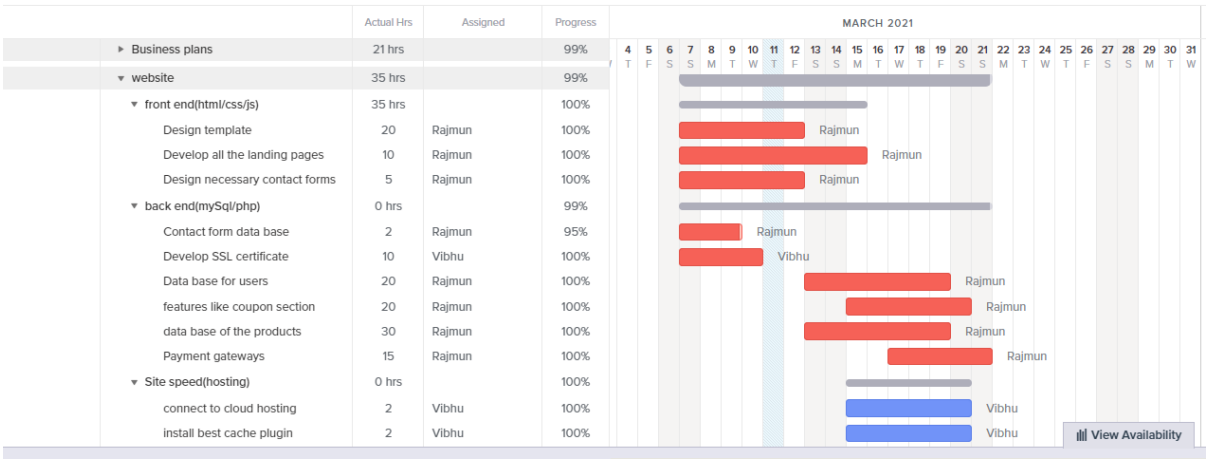
1. Executive Summary

- We have to make our websie working within the mid of march.
- The transport of the good from farmers to cold storage should be as soon as possible.
- The user experience of the website like page loading speed, UI UX, server down time, etc should be excelent.
- The availability of delivery boy almost everytime we get a order.
- Availabilty of the goods in cold storage and the 24/7 power supply to cold storage.
- A good level of maintenance
- The smooth and secured online money transaction should be provided

2. WBS With Project Schedule

Module (#)	Activity (#)	Sub-Task(#)	Assignee(s)	Planned Start Date	Planned End Date	Actual Start Date	Actual End Date	Status
Business Plans	Planing the upcoming goals	Products, Pros & cons, back up plans, cost estimation	Rajmun, Sai	6 March 2021	11 March 2021	6 March 2021	11 March 2021	99%
Web Site	Front end	Design template, Develop all the landing pages, Design necessary contact forms	Rajmun	7 March 2021	14 March 2021	7 march 2021	14 March 2021	100%
Web Site	Back end	Contact form data base, Develop SSL certificate, Data base for users, features like coupon section , data base of the products, Payment gateways	Rajmun	March 7 2021	21 March 2021	7 march 2021	21 March 2021	99%
Site Speed	Server	connect to cloud hosting, install best cache plugin	Vibhu kumaran	March 14 2021	20 March 2021	14 march 2021	20 march 2021	100%
Transport	Shift goods to cold storage	Goods packing, Sending to cold storage, Checking transport vehicles	Rajmun, sai	March 14 2021	21 March 2021	14 March 2021	20 March 2021	93%
Testing	Technical testings	site speed test, UI UX test, Sever downtime test	Sai Vinay	17 March 2021	25 March 2021	17 March 2021	25 March 2021	100%
Billing & cost estimation	Check The Update Of All Dep.	Make an cost estimation for everything	Vibhu kumaran	6 March 2021	14 March 2021	6 March 2021	14 March 2021	94%


tilmart 0 hrs 99%
Business plans 0 hrs 99%
Project goals 1 Sai 100%
Products 3 Rajmun 100%
Pros 1 Vibhu 100%
cons 1 Vibhu 100%
back up plans 5 Vibhu 95%
Cost estimation 10 Rajmun 98%
website 0 hrs 99%
transport 0 hrs 93%
Technical testing 0 hrs 100%
Billing and payment 0 hrs 0%
Sai
Rajmun
Vibhu
Vibhu
Vibhu
Rajmun


Actual Hrs
Assigned
Progress
MARCH 2021
Business plans 21 hrs 99%
website 35 hrs 99%
front end(html/css/js) 35 hrs 100%
Design template 20 Rajmun 100%
Develop all the landing pages 10 Rajmun 100%
Design necessary contact forms 5 Rajmun 100%
back end(mySql/php) 0 hrs 99%
Contact form data base 2 Rajmun 95%
Develop SSL certificate 10 Vibhu 100%
Data base for users 20 Rajmun 100%
features like coupon section 20 Rajmun 100%
data base of the products 30 Rajmun 100%
Payment gateways 15 Rajmun 100%
Site speed(hosting) 0 hrs 100%
connect to cloud hosting 2 Vibhu 100%
install best cache plugin 2 Vibhu 100%
Rajmun
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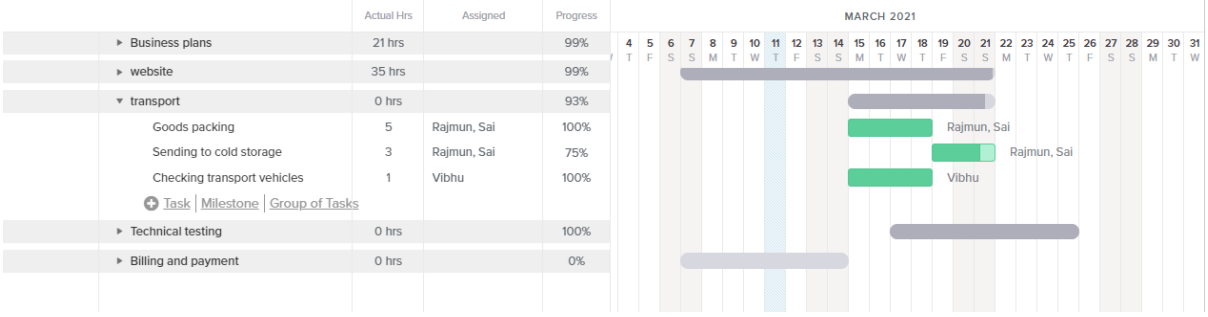
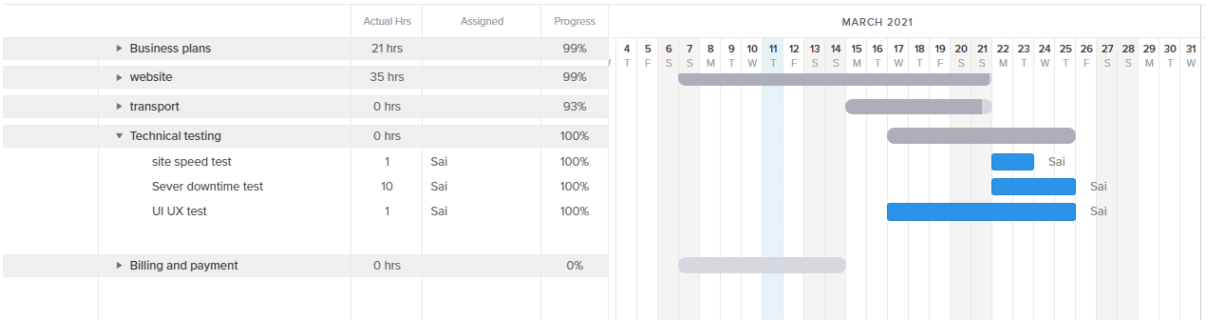
Vibhu
Vibhu
View Availability


Actual Hrs
Assigned
Progress
MARCH 2021
Business plans 21 hrs 99%
website 35 hrs 99%
transport 0 hrs 93%
Goods packing 5 Rajmun, Sai 100%
Sending to cold storage 3 Rajmun, Sai 75%
Checking transport vehicles 1 Vibhu 100%
Task | Milestone | Group of Tasks
Technical testing 0 hrs 100%
Billing and payment 0 hrs 0%
Rajmun, Sai
Rajmun, Sai
Vibhu


Actual Hrs
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Progress
MARCH 2021
Business plans 21 hrs 99%
website 35 hrs 99%
transport 0 hrs 93%
Technical testing 0 hrs 100%
site speed test 1 Sai 100%
Sever downtime test 10 Sai 100%
UI UX test 1 Sai 100%
Billing and payment 0 hrs 0%
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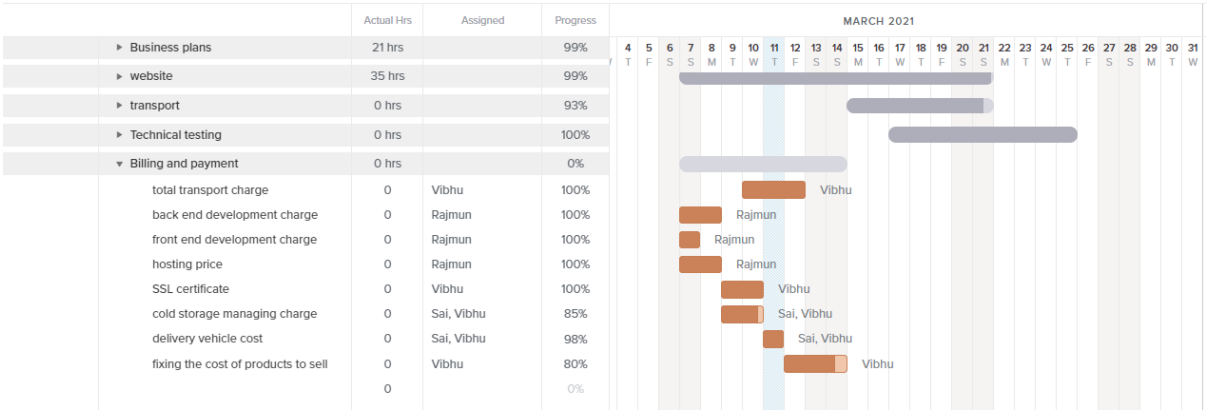


1. Risk Identification

- Checklist is a list of actions/points to be considered [Information can be used from the similar previous projects]

Updated technologies:

We have to be updated with the new technologies. Everyday some new thing is building up in the website sector and we have to keep out eyes on them. Or else the customer may think we are out dated brand and also it can affect the user interface of the website.

New Items:

We have to bring the new goods to the customers which ever comes new in market. Like January is the season of new potatoes, so we have to list the new potatoes on our site as soon as possible on January.

Server:

The servers play a great role in maintaing the website. We need a cloud based server to host our website there. The best options are WPS or Google cloud servers. They will help our site in not going down even after having loads of traffic at a time.

Transportation:

The vehicles on which the goods will be delivered should be checked perfectly before starting the delivery. And should be maintained nicely or else the vehicle may stop in the middle of delivery. This can cause late delivery which can impact our company’s reputaion.

Electric Supply:

Electricity plays a great role in cold storage in storing the goods. Some goods can not stay fresh more than 1 day without cool suroundings. We have to make sure we have the best electricity supply always or else it can be a huge damage.

Goods Out Of Stock:

Sometimes the goods can go out of stocks because of certains reasons like manager couldn't meet farmers, transportation didn't work from farmer's place to cold storage, etc. We have to try the best that goods never go out of stock and if in the worst cases it goes out of stockes, it should not be continued for a long time.

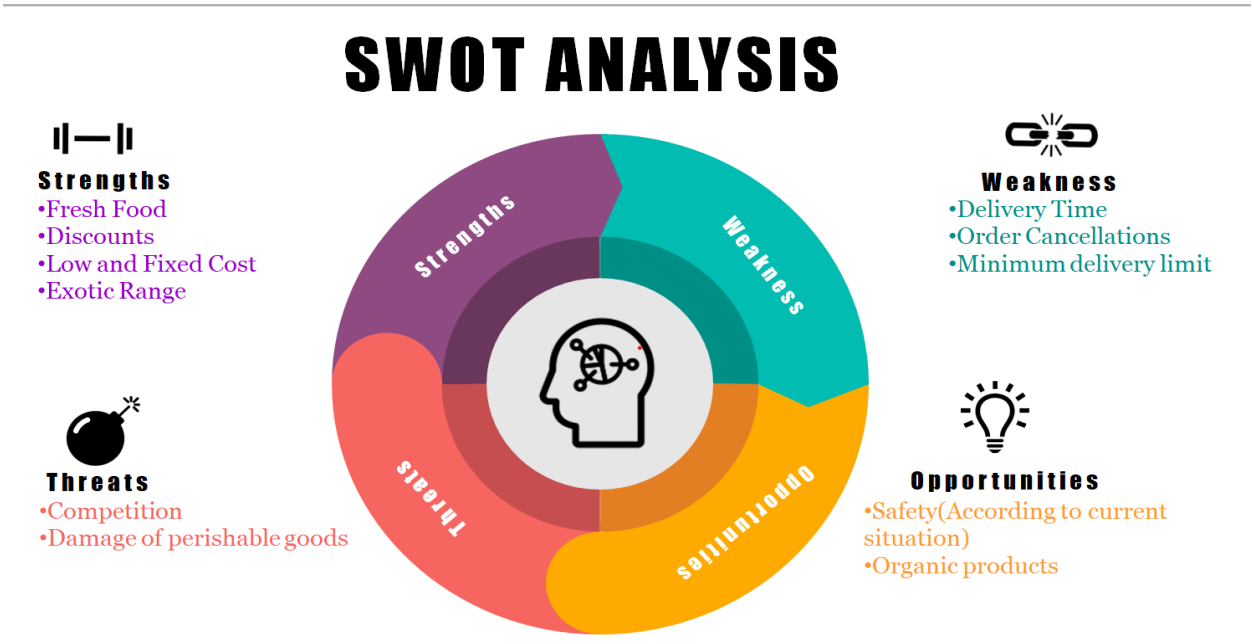
1.1. List (Describe) Register

<Issue can potentially occur in future and list all risks identified >

Risk ID (#)	Risk Description	Impact Description
R01	Server down	If the website goes down for sometime, we will lose customers badly. They may start doubting our site's authentication. Someone's payment may struck in between.
R02	Delivery issues	While delivering the goods to customer, the transportation vehicle may stop in the road, or delivery boy can get sick in middle of delivery. It can cause late delivery and impact the reputation of company
R03	Electricity cut in cold storage	If electricity gets cut of cold storage for more than 6 hours, all the goods will be Start damaging and it will be a huge lose
R04	Wrong delivery	Sometimes because of the huge load of delivery, the details of customer on the packet may get interchanged and different good may be delivered to wrong customer.

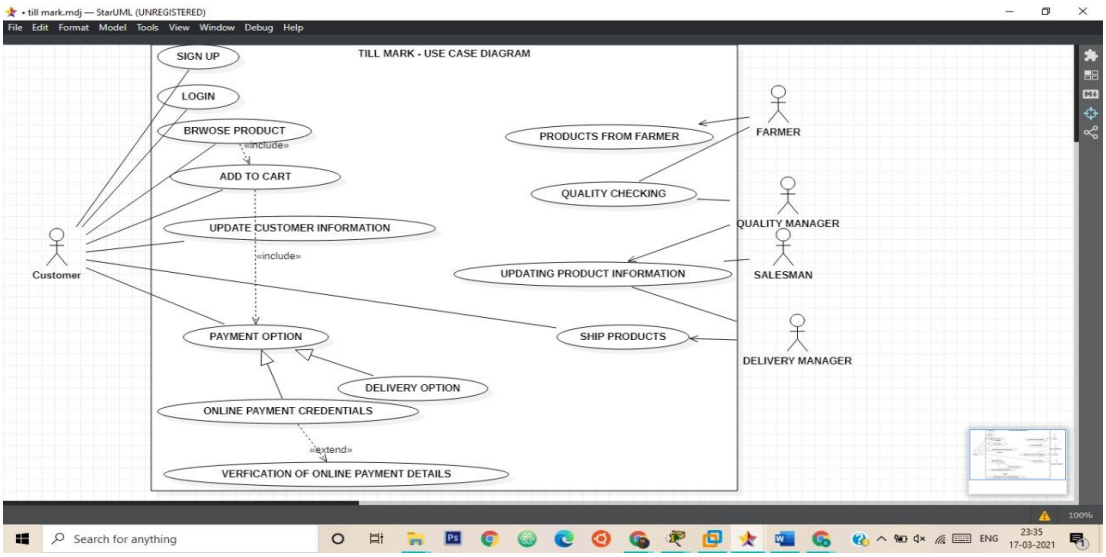
1.2. Managing Risk

Risk ID (#)	Status [Open / Closed]	Risk Appetite [Accept/ Mitigate/ Transfer/Avoid]	Action	Action Owner	Target Date	Remarks
R01	Open	Accept	bug free UI for website	VIBHU	1/5/21	
R02	Open	Mitigate	Sales risks	SAI VINAY	15/6/21	
R03	Open	Avoid	Budget risks	RAJMUN KHAN		



WEEK – 6:

USE CASE DIAGRAM:



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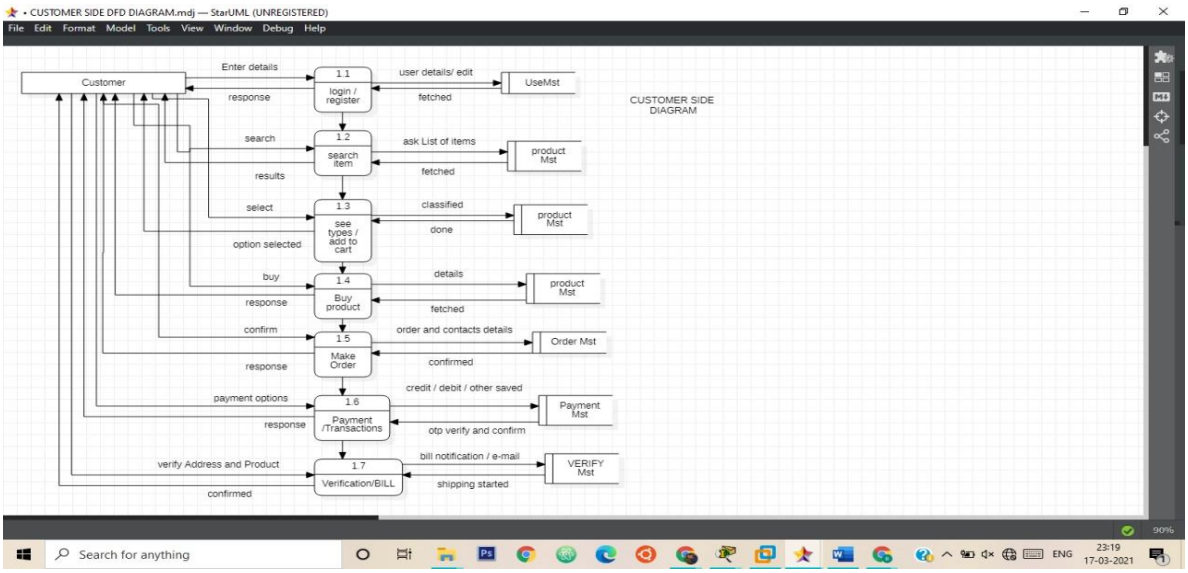
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UseMst
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search item
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fetched
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select
option selected
1.3
see types / add to cart
classified
done
product Mst
buy
response
1.4
Buy product
details
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1.5
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Payment /Transactions
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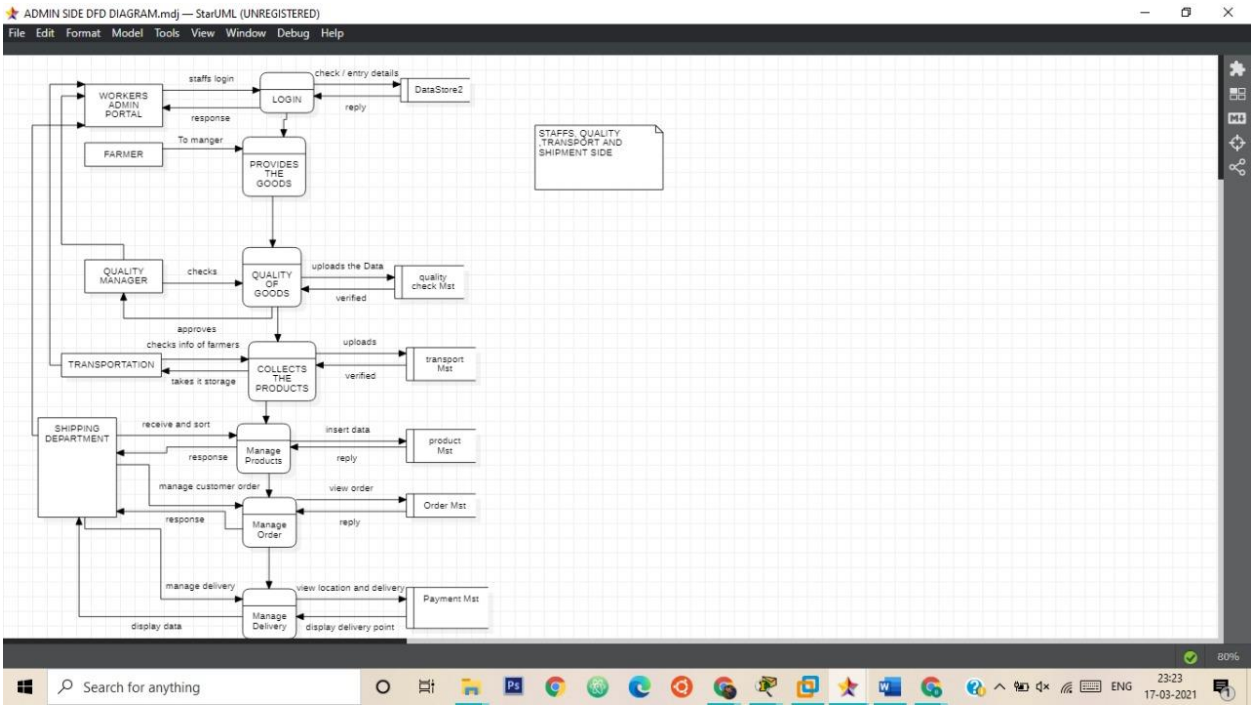
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reply
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FARMER
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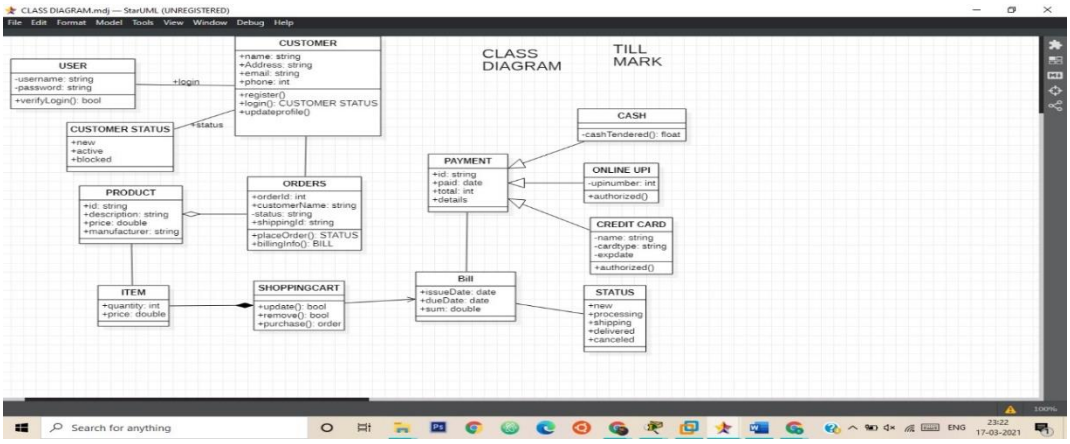
PROVIDES THE GOODS
STAFFS, QUALITY TRANSPORT AND SHIPMENT SIDE
QUALITY MANAGER
checks
QUALITY OF GOODS
uploads the Data
verified
quality check Mst
approves
TRANSPORTATION
checks info of farmers
takes it storage
COLLECTS THE PRODUCTS
uploads
verified
transport Mst
SHIPPING DEPARTMENT
receive and sort
response
Manage Products
insert data
reply
product Mst
manage customer order
response
Manage Order
view order
reply
Order Mst
manage delivery
display data
Manage Delivery
view location and delivery
display delivery point
Payment Mst
Search for anything
ENG
23:23
17-03-2021

DFD Diagram (Process) With Description:

DESCRIPTION:

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. Data flowcharts can range from simple, even hand-drawn process overviews, to in-depth, multi-level DFDs that dig progressively deeper into how the data is handled. They can be used to analyze an existing system or model a new one. Like all the best diagrams and charts, a DFD can often visually "say" things that would be hard to explain in words, and they work for both technical and nontechnical audiences, from developer to CEO. That's why DFDs remain so popular after all these years. While they work well for data flow software and systems, they are less applicable nowadays to visualizing interactive, real-time or database-oriented software or systems.

CLASS DIAGRAM:



Class Diagram (Applied For OOPS based Project):

DESCRIPTION:

The main purpose of the class diagram is to build a static view of an application. It is widely used for construction and can be mapped with object-oriented languages. Here in the class, there are three sections that give the information name of the class, attributes, and operations that can perform. These class diagrams are connected with their relationship. And in the class diagram middle section also describe the visibility factors.

Collaboration Diagram (Applied For OOPS based Project) :

DESCRIPTION:

Collaboration diagram is mainly based on the how objects are interacting with the messages. in sequence diagram we see in their timing matters a lot but here in the collaboration or communication diagram message matters a lot. the rectangle boxes as you see in the photo or diagram are the objects and they are written as the colon and then the object name.
after writing the objects we need to connect them with the line which shows the messages forwarding or reversing back.

the message is denoted by an arrow, then above that arrow, an integer 'colon' then the name of the method. like in the starting as we can see login messages getting interacted between the user that is customer and the server with 1:login() method.

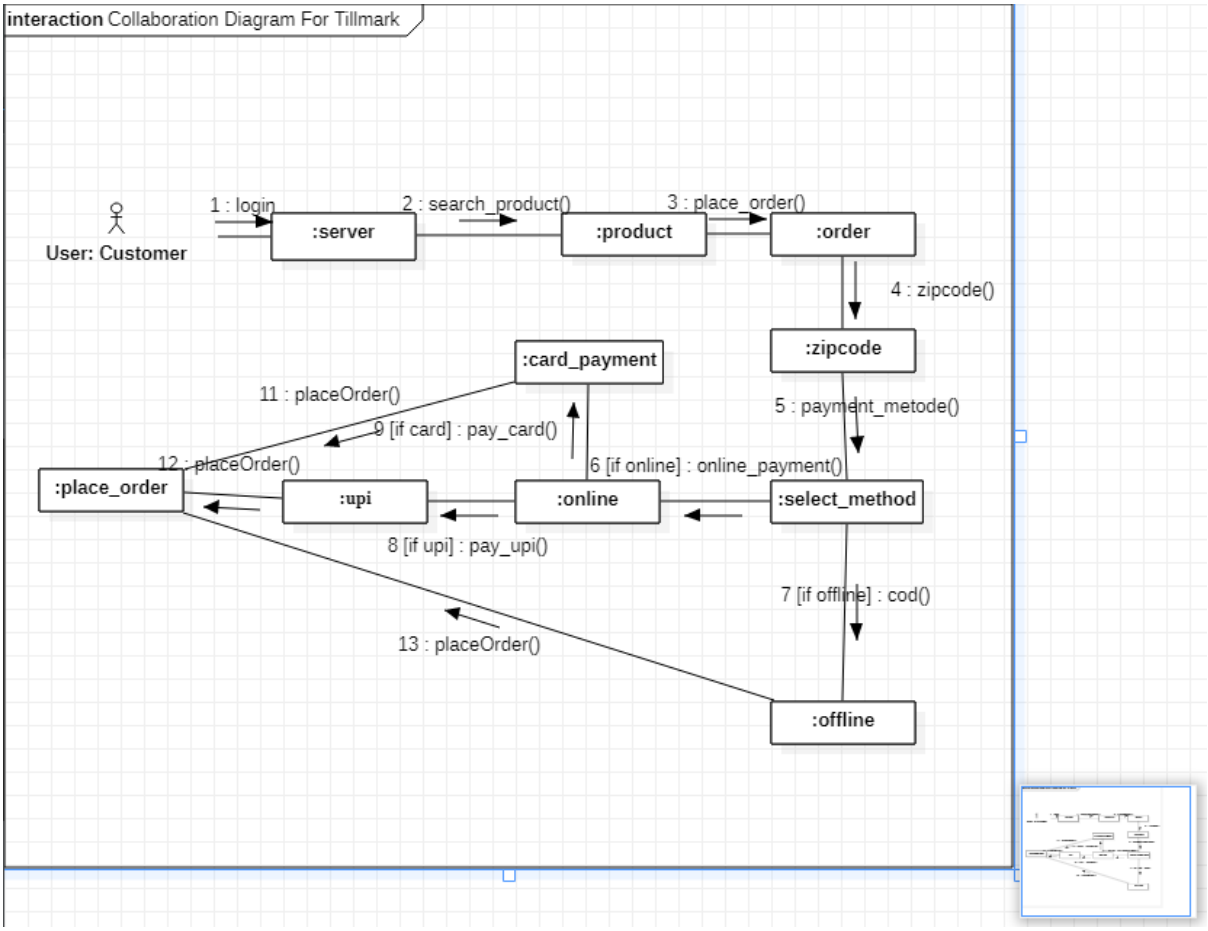
then server will check the details from the product object through the search_product() method.

in this way it will check if the order is placed in the right zip code if the code is not correct it won't go further and if zip code is correct then it will proceed to payment method and it will ask to select a payment method there.

Then there the user can select two method either online or offline if online then online_payment() method will execute if offline then cod() method will execute

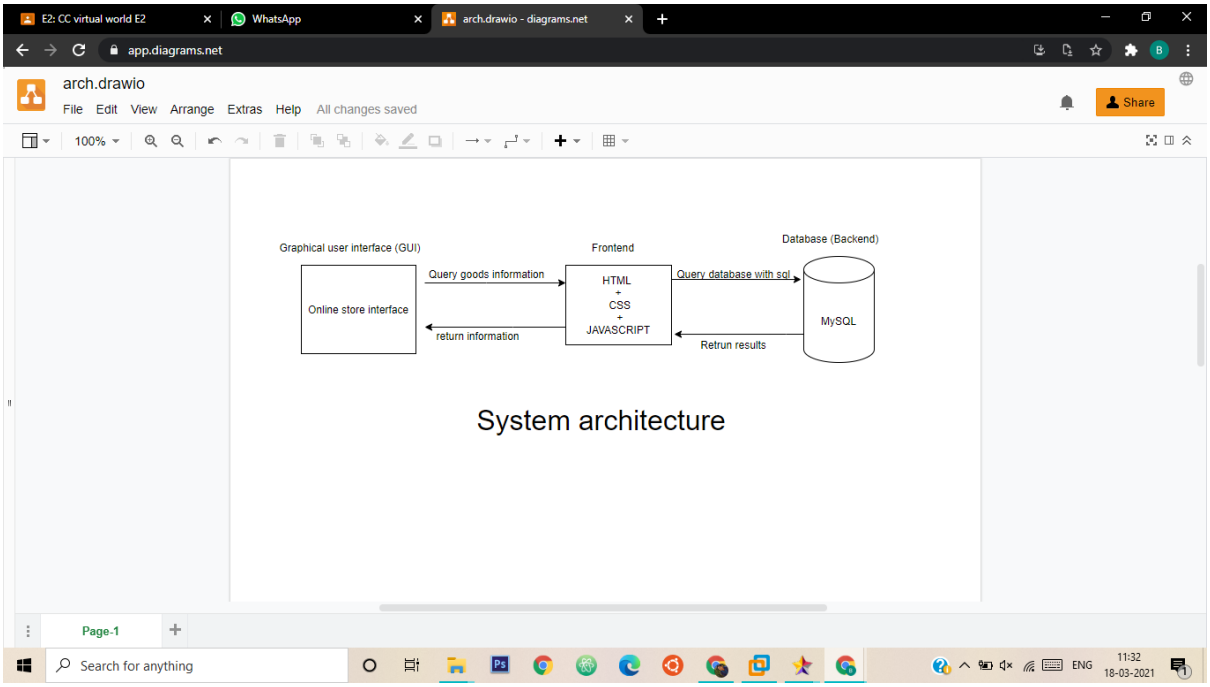
If user selects online method then it will ask if he/she wants to use UPI or card payment if user selects UPI it will execute pay_upi() method or it will execute pay_card() method. After selecting the payment method all will go to the place_order object through the placeOrder() method.

Collaboration Diagram :



WEEK – 7:

Architecture Diagram with description

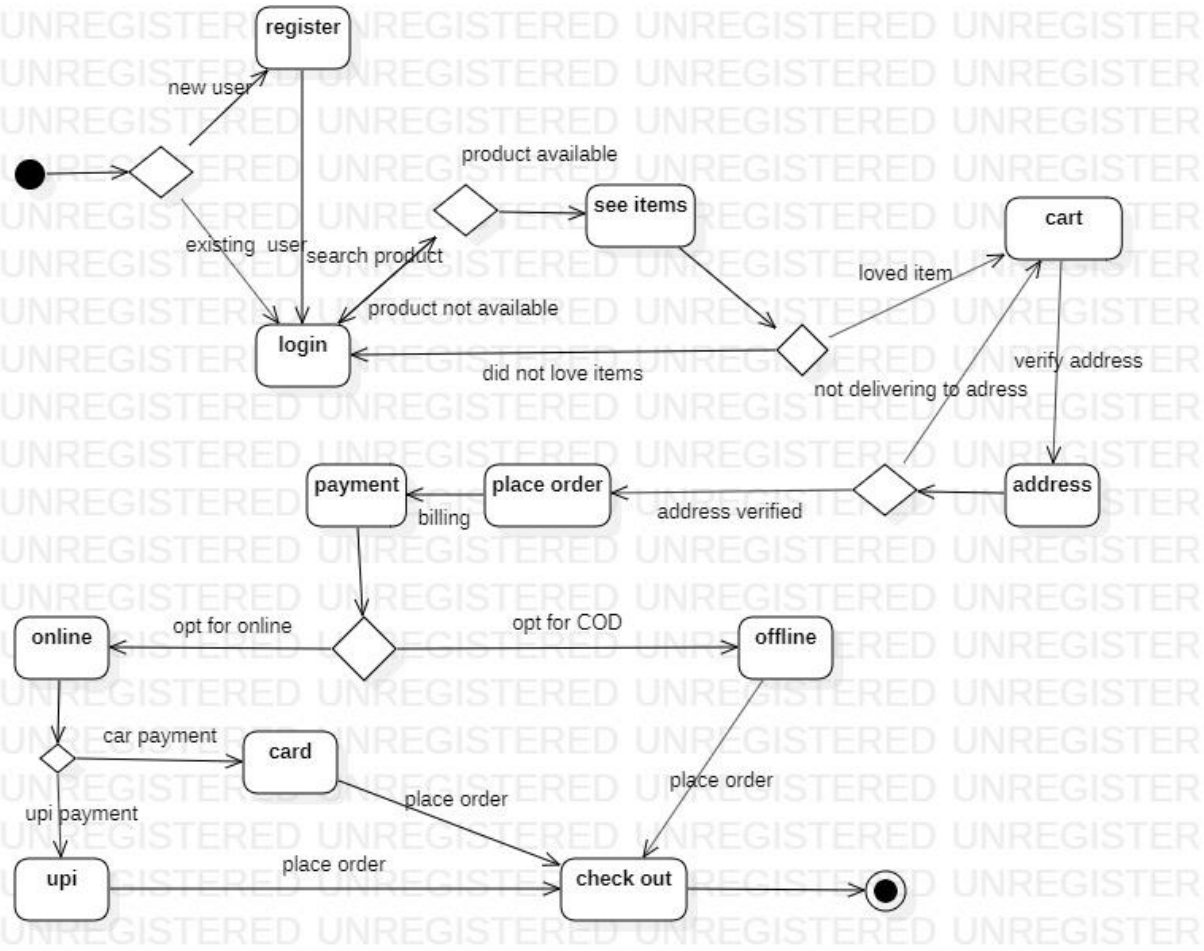


The system architecture consists of three major parts namely Graphical User Interface (GUI),front end and back end. The architecture displays the basic process flow.

GUI is the interface visible to the user/customer. A GUI allows the use of icons or other visual indicators to interact with electronic devices; rather than using only text via the command line. It will display the different categories of grocery items, sign in, register etc.

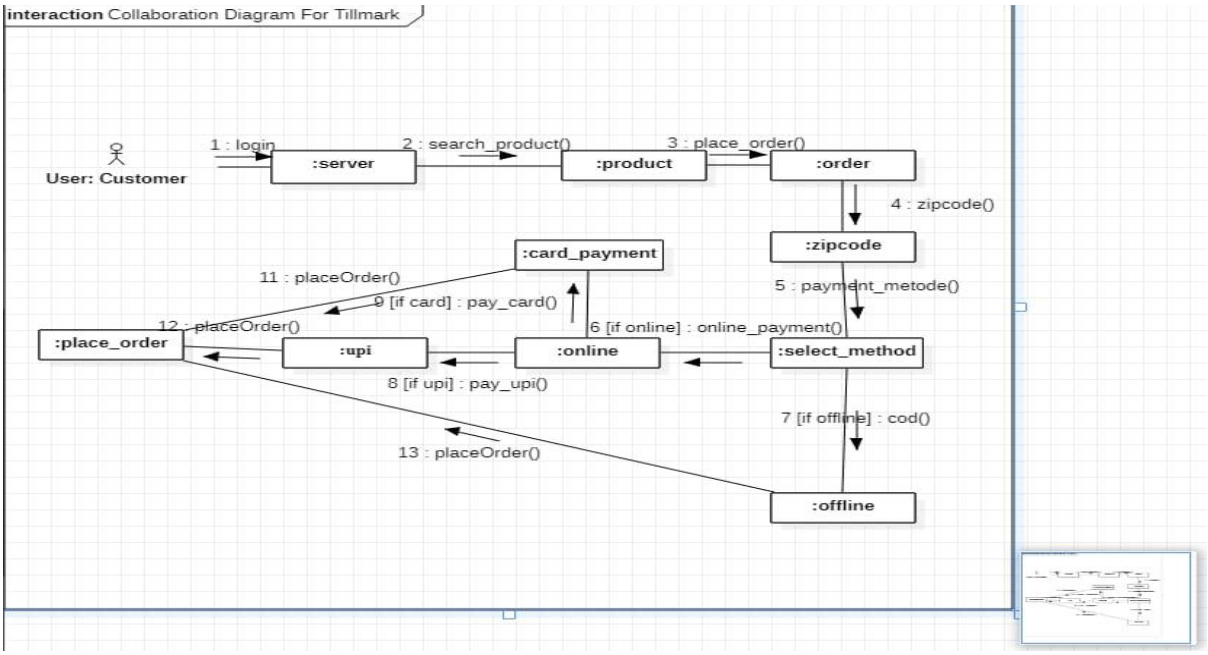
HTML , CSS , JAVASCRIPT are used as front-end technologies. When user clicks on the particular product, the query goes to the front end part. After that front end fetches the required data from the database i.e. Back end. There is a database in the back end. It contains all the information regarding customers, products and vendors.

State Diagram with Description



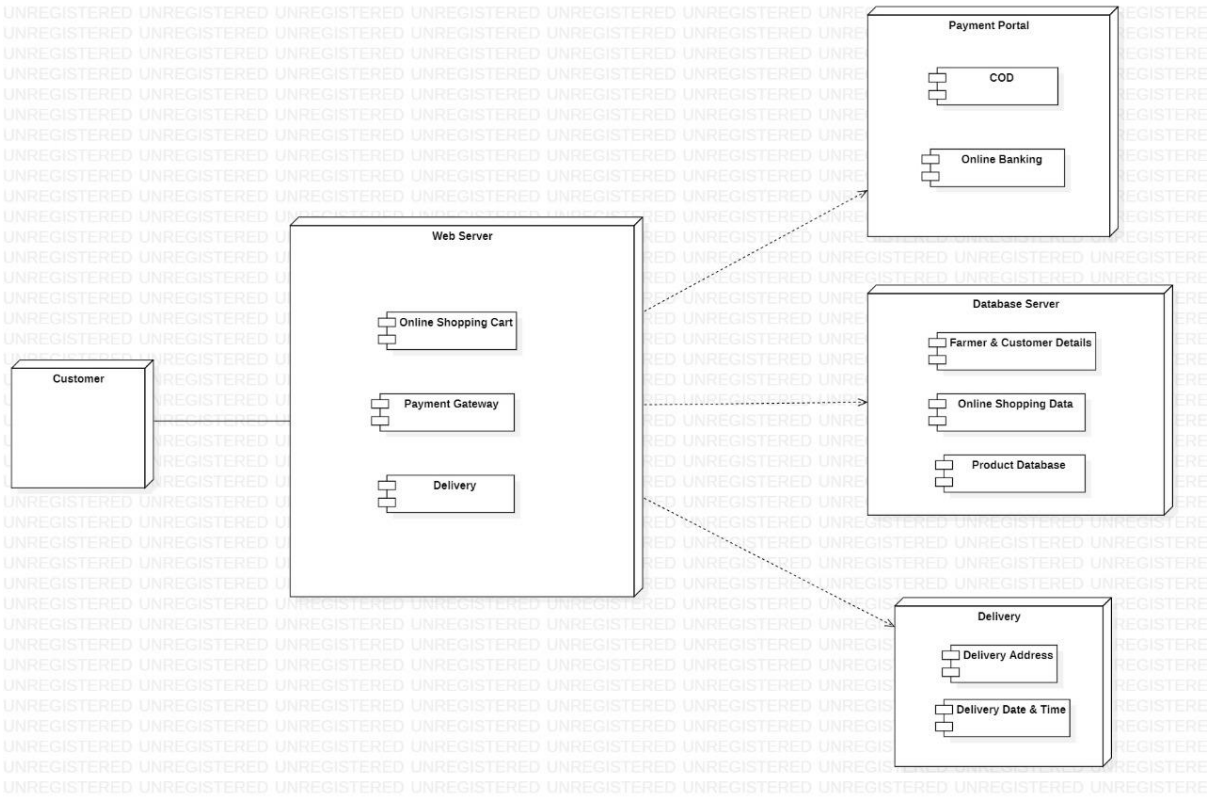
A state diagram shows the behavior of classes in response to external stimuli. Specifically a state diagram describes the behavior of a single object in response to a series of events in a system. Sometimes it's also known as a Harel state chart or a state machine diagram. This UML diagram models the dynamic flow of control from state to state of a particular object within a system

Collaboration Diagram with Description



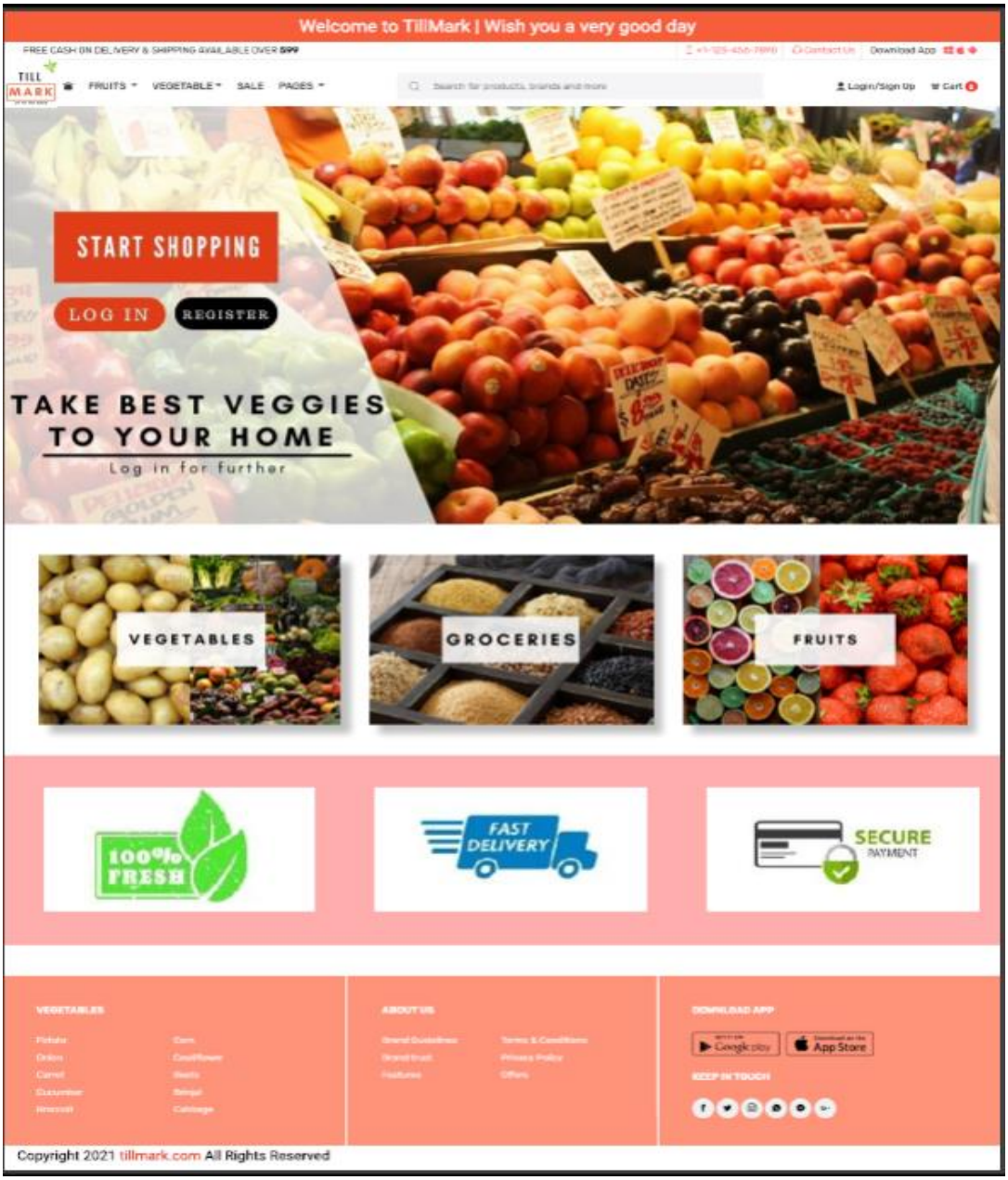
Collaboration diagram is mainly based on the how objects are interacting with the messages. In sequence diagram we see in their timing matters a lot but here in the collaboration or communication diagram message matters a lot. The rectangle boxes as you see in the photo or diagram are the objects and they are written as the colon and then the object name after writing the objects we need to connect them with the line which shows the messages forwarding or reversing back. The message is denoted by an arrow, then above that arrow, an integer 'colon' then the name of the method. like in the starting as we can see login messages getting interacted between the user that is customer and the server with 1:login() method. Then server will check the details from the product object through the search_product() method. In this way it will check if the order is placed in the right zip code if the code is not correct it won't go further and if zip code is correct then it will proceed to payment method and it will ask to select a payment method there.Then there the user can select two method either online or offline if online then online_payment() method will execute if offline then cod() method will execute. If user selects online method then it will ask if he/she wants to use UPI or card payment if user selects UPI it will execute pay_upi() method or it will execute pay_card() method. After selecting the payment method all will go to the place_order object through the placeOrder() method

Deployment Diagram with Description



A deployment diagram is a UML diagram type that shows the execution architecture of a system, including nodes such as hardware or software execution environments, and the middleware connecting them.
Deployment diagrams are typically used to visualize the physical hardware and software of a system. Using it you can understand how the system will be physically deployed on the hardware.
Deployment diagrams help model the hardware topology of a system compared to other UML diagram types which mostly outline the logical components of a system

Sample Frontend design



WEEK – 9:

Code of Module 1

FRONTEND CODING:

HTML:

```
<?php
session_start();
?>

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Tillmark Project</title>

    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Roboto&display=swap" rel
="stylesheet">
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/font-
awesome/4.7.0/css/font-awesome.min.css"
        integrity="sha384-
wvfXpqpZZVQGK6TAh5PVlGOfQNHSoD2xbE+QkPxCAFlNEevoEH3Sl0sibVcOQVnN" crossorigin="an
onymous">
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Open+Sans+Condensed:wght
@300&display=swap" rel="stylesheet">
    <link rel="stylesheet" href="tillmarkk.css">

</head>

<body>
    <?php include 'navigation.php';?>


    <section class="header-area">
```

```
        <?php
        if(!isset($_SESSION['loggedin']) || $_SESSION['loggedin']!=true){
                        echo '<p class="header-
para"><strong>START SHOPPING</strong></p>

                        <div class="button-area">
                            <a href="login.php" class="login-button">LOG IN</a>
                            <a href="signup.php" class="register-
button">REGISTER</a>

                        </div>';
                    }
        else {
            echo '<p class="header-para"><strong>START SHOPPING</strong></p>';

            echo '<div class="greet ">
                <p>WELCOME</p>
                <strong>'.$_SESSION['username'].'</strong>
            </div>';
        }
        ?>

    </section>

    <section class="categories">

        <div id="vegetables" class="sub-
categories"><img src="pics/vegetable.jpg" alt=""></div>
        <div id="groceries" class="sub-
categories"><img src="pics/grocery.jpg" alt=""></div>
        <div id="fruits" class="sub-
categories"><img src="pics/fruit.jpg" alt=""></div>

    </section>
    <section class="trust-div">
        <!-- <div class="our-surety">
        <h1 >Our Surety!</h1>
        </div> -->
        <div class="trust-strip">
            <div class="trusts"><img src="pics/fresh.jpg" alt=""></div>
            <div class="trusts"><img src="pics/fast.jpg" alt=""></div>
            <div class="trusts"><img src="pics/payment.jpg" alt=""></div>
        </div>
    </section>
```

```
    <?php include 'footer.php';?>



</body>

</html>
```

CSS:

```
*{
        margin: 0px;
    }
    a{
        text-decoration: none;
        font-family: 'Roboto', sans-serif;
    }
    nav a.active{
        border-bottom: 2px solid #F85E3A;
    }



    #first_strip{
        background-color: #F85E3A;

        color: white;
        display: flex;
        justify-content: center;

    }
    .first_strip{
        padding-top: 10px;
        padding-bottom: 10px;
```

```
    font-family: 'Roboto', sans-serif;

}
.second_strip{
    padding-left: 22px;
    padding-right: 22px;
.third-strip img{
    width: 65px;
    font-size: 25px;
    padding: 5px 5px;
}
.form{
    display: flex;
    margin: 20px 50px 25px 100px;
    border-radius: 8px;
    background-color: rgb(240, 240, 240);
}
.form a{
    padding: 8px;
}
.form i{
    font-size: 15px;
}

input{
    width: 450px;
    height: 20px;
    border: none;
    margin: 8px 8px;
    background-color: transparent;
    outline: none;
```

```
    font-size: 15px;

}
.search{

    width: 610.234px;
    height: 72px;
}
.first-ul li{
    padding-left: 10px;
    padding-right: 10px;
    /* text-decoration: none; */
    display: inline-block;
    border-left: 1px solid black;



}
.icofont-iphone:before {
content: "\ea3b";
}
::before{
    box-sizing: border-box;
}

/* .header-area::before */
    /* content: "";
    background: url('tillmark\ header\ image\ html.jpg')no-repeat center center/cover;
    top: 0px;

    position: absolute;
    width: 100%;
```

```
    height: 100%;
    z-index: -1;
    opacity: 0.5;

} */
.header-area::before{
    content: "";
    background: url('pics/front-header.jpg')no-repeat center center/cover;
    height: 100%;
    width: 100%;
    position: absolute;
    z-index: -1;

}

.header-para{
    background-color: #ec5431;
    display: inline-block;
    color:white;
    margin-top: 150px;
    margin-left: 100px;
```

_dbconnect.php(backend):

```
<?php
$server = "localhost";
$username = "root";
$password = "";
$database = "tillmark";

$conn = mysqli_connect($server, $username, $password, $database);
```

```
if (!$conn){
//     echo "success";
// }
// else{
    die("Error". mysqli_connect_error());
}

?>
```

BACKEND CODING:

NAVIGATION:

```
<body>
    <div id="first_strip">
        <p class="first_strip">Welcome to TillMark | Wish you a very good day</p>
    </div>
    <div class="second_strip">
        <ul class="first-ul">
            <li><a>
                    <i class="fa fa-mobile"></i>
                    </i>+1-123-456-7890</a></li>
            <li><a>
                    <i class="fa fa-envelope"></i>

                    </i>Contact Us</a></li>
            <li><a>

                    Download App<i class="fa fa-android"></i><i class="fa fa-windows"></i><i
                        class="fa fa-apple"></i></a></li>
        </ul>
```

```
    <p>FREE CASH ON DELIVERY & SHIPPING AVAILABLE OVER <span class="text-
danger"><strong>599</strong></span></p>
  </div>
  <div class="third-strip">
```

FOOTER:

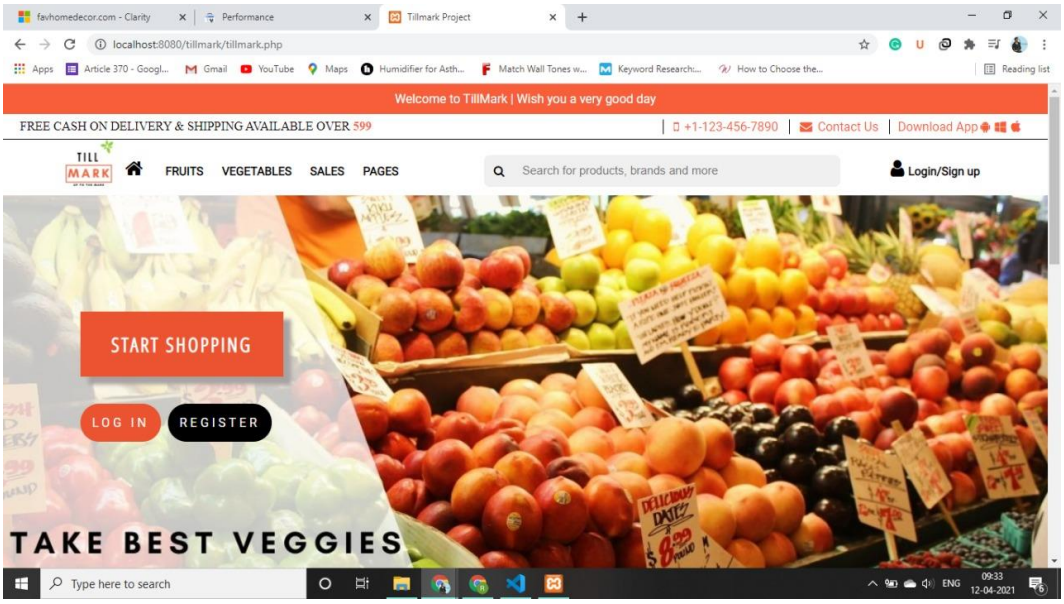
```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Tillmark Project</title>
  <link rel="preconnect" href="https://fonts.gstatic.com">
  <link href="https://fonts.googleapis.com/css2?family=Roboto&display=swap"
rel="stylesheet">
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/font-awesome/4.7.0/css/font-
awesome.min.css"
    integrity="sha384-
wvfXpqpZZVQGK6TAh5PVlGOfQNHSoD2xbE+QkPxCAFlNEevoEH3Sl0sibVcOQVnN"
crossorigin="anonymous">
  <link rel="preconnect" href="https://fonts.gstatic.com">
  <link
href="https://fonts.googleapis.com/css2?family=Open+Sans+Condensed:wght@300&display=s
wap" rel="stylesheet">
  <link rel="stylesheet" href="tillmarkk.css">
</head>
<body>
<section class="footer">
    <div class="box" id="box1">
```

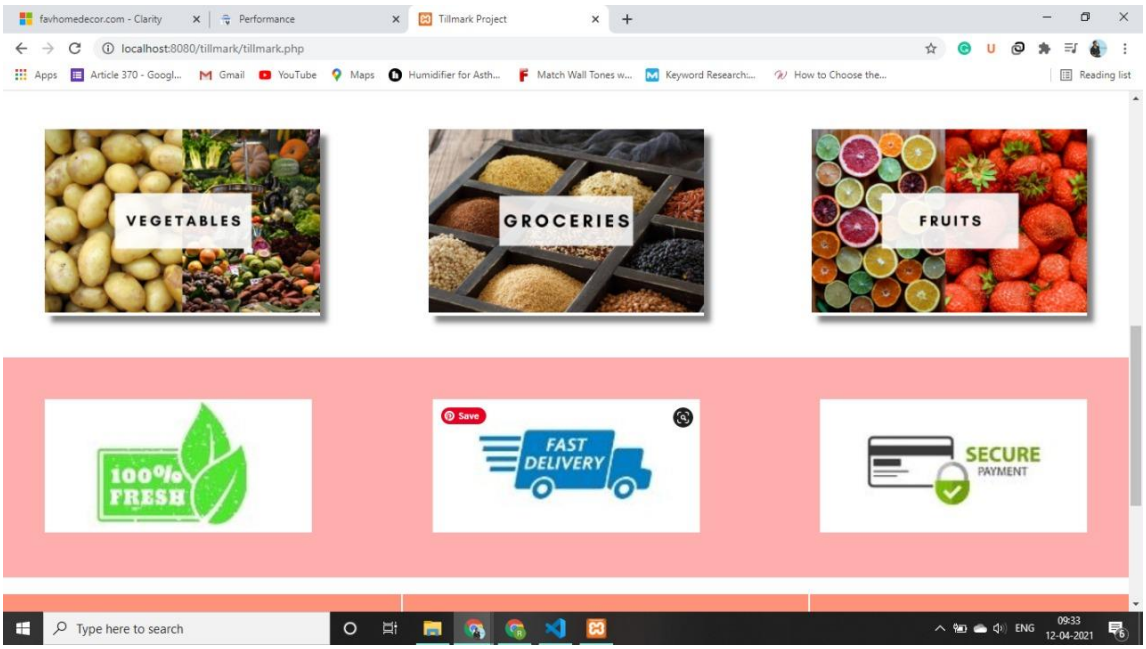
```
<h3>VEGETABLES</h3>
<div class="row">
    <div id="first-column" class="column">
```

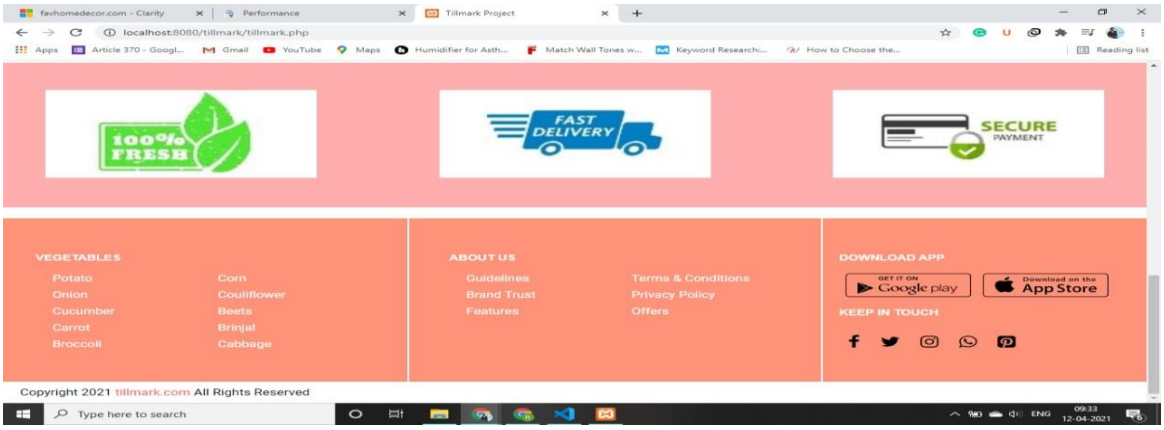
Result of Module 1

SCREENSHOT

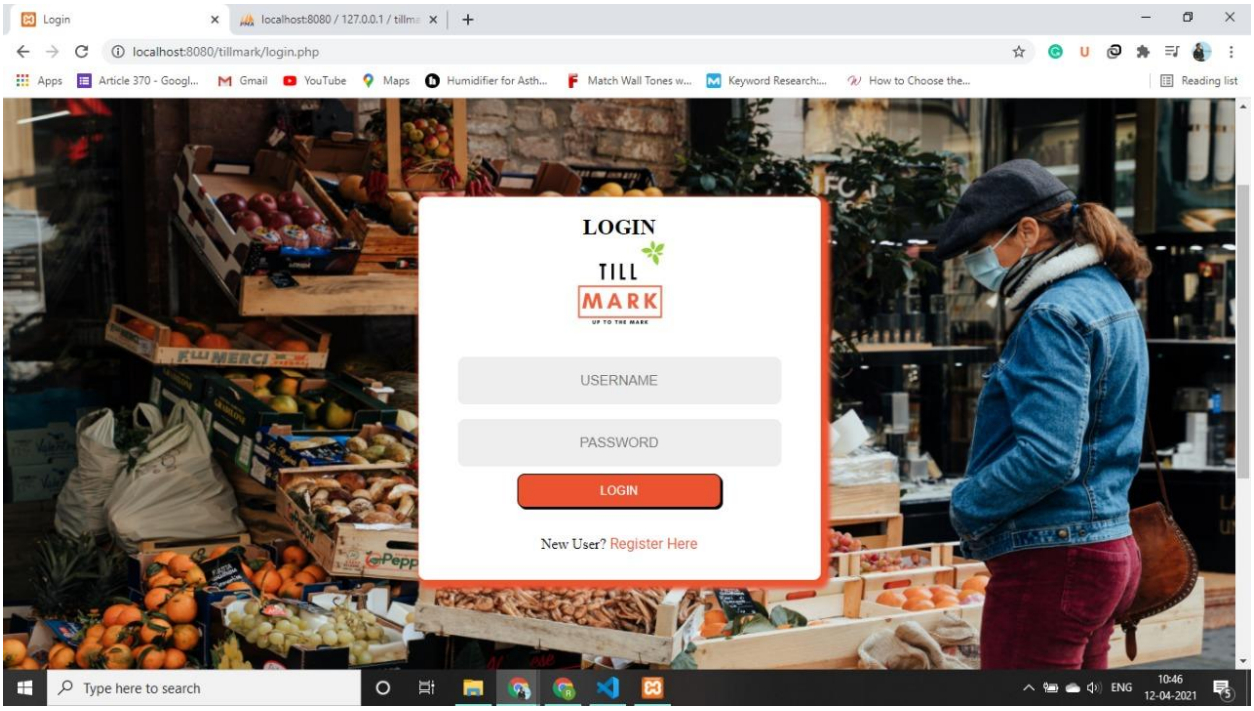
FRONT HOME PAGE:

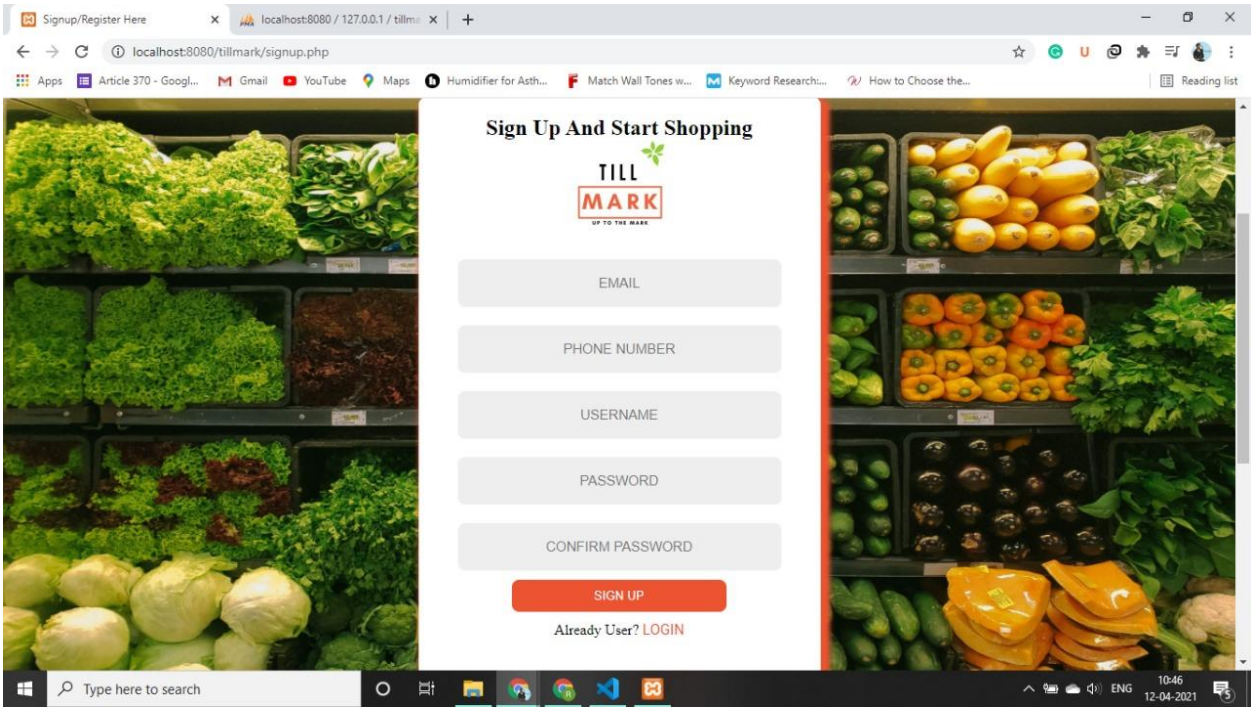






SIGN AND LOGIN PAGE:


Login
localhost:8080 / 127.0.0.1 / tillm
localhost:8080/tillmark/login.php
Apps
Article 370 - Googl...
Gmail
YouTube
Maps
Humidifier for Asth...
Match Wall Tones w...
Keyword Research:...
How to Choose the...
Reading list
LOGIN
TILL
MARK
UP TO THE MARK
USERNAME
PASSWORD
LOGIN
New User? Register Here
Type here to search
ENG
10:46
12-04-2021


Signup/Register Here
localhost:8080 / 127.0.0.1 / tillm
localhost:8080/tillmark/signup.php
Apps
Article 370 - Googl...
Gmail
YouTube
Maps
Humidifier for Asth...
Match Wall Tones w...
Keyword Research:...
How to Choose the...
Reading list
Sign Up And Start Shopping
TILL
MARK
UP TO THE MARK
EMAIL
PHONE NUMBER
USERNAME
PASSWORD
CONFIRM PASSWORD
SIGN UP
Already User? LOGIN
Type here to search
ENG
10:46
12-04-2021

WEEK – 10:

SELECTION OF VEGETABLES AND ADDRESS VERIFICATION

Code of Module 3

```
<?php include 'partials/_dbconnect.php';
session_start();
$found=FALSE;
$name=$_GET['name'];
if(isset ($_SESSION['loggedin']) && ($_SESSION['username'] == $name)){
   $api="rzp_test_m1tugGZiNMyylw";
   $sql="SELECT * FROM `orders` WHERE orderby='$name'";
   $result=mysqli_query($conn, $sql);
   $num=mysqli_num_rows($result);
   if($num>0){
   $row=mysqli_fetch_assoc($result);
      if($row){
         $callback="success.php";
         $found=TRUE;
         $address=$row['address'];
         $phone=$row['Phone'];
         $productname=$row['product_name'];
         $quantity=$row['quantity'];
         $rname=$row['rname'];
         $price_sql="SELECT * FROM `fruits` WHERE match (proname)
against('$productname')
         UNION
         SELECT * FROM `vegetables` WHERE match (proname)
against('$productname');";
         $price_result=mysqli_query($conn,$price_sql);
```

```
            $num=mysqli_num_rows($price_result);
            if($num>0){
                $row=mysqli_fetch_assoc($price_result);
                    $price=$row['price'];
                    $total=$quantity*$price;
                    $payprice=$total*100;
                }

        }
    }



}
else{
    header("location:tillmark.php");
}
?>
<?php
    if(isset($_POST['pay_id'])){
        $id=$_POST['pay_id'];
        $update="UPDATE `orders` SET `pay_status`='done', `payment`='$id' WHERE
`orderby` = '$name'";
        $result2=mysqli_query($conn,$update);
    }

    ?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
```

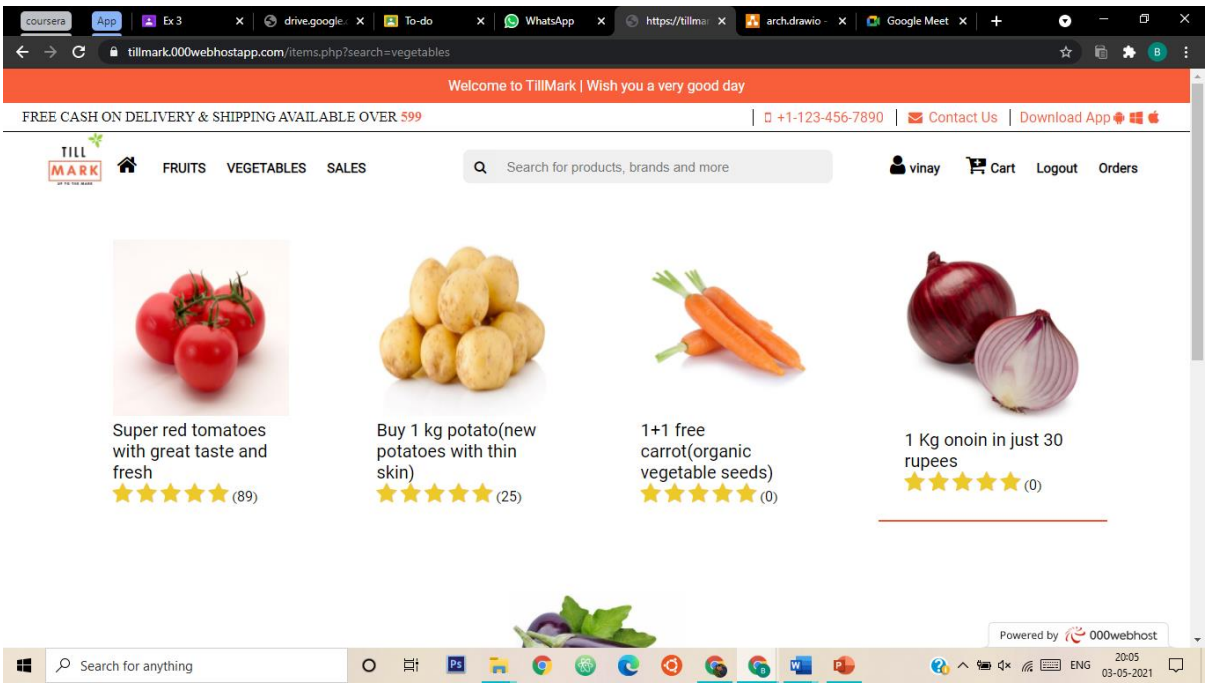
```
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>cart</title>
    <link rel="stylesheet" href="cart.css">
    <script src="https://code.jquery.com/jquery-3.6.0.min.js" integrity="sha256-
/xUj+3OJU5yExlq6GSYGSHk7tPXikynS7ogEvDej/m4="
crossorigin="anonymous"></script>
</head>
<body>
<?php include 'navigation.php'; ?>
    <?php
    if($found){
        echo'<div class="productList">
        <div class="propic">
            <img src="pics/'.$productname.'.jpg" alt="" width="200px" height="200px">
    </div>
        <div class="address">
            <h2>Deliver To</h2>
            <p>Name: '.$rname.'</p>
            <p>Phone: '.$phone.'</p>
            <p>'.$address.'</p>
            <hr>
            <h2>Quantity</h2>
            <p>'.$quantity.'</p>

        </div>
        <div class="pay">
            <p>Total Rs.'.$total.'</p>

            <button id="rzp-button1">Pay</button>
            <script src="https://checkout.razorpay.com/v1/checkout.js"></script>
```

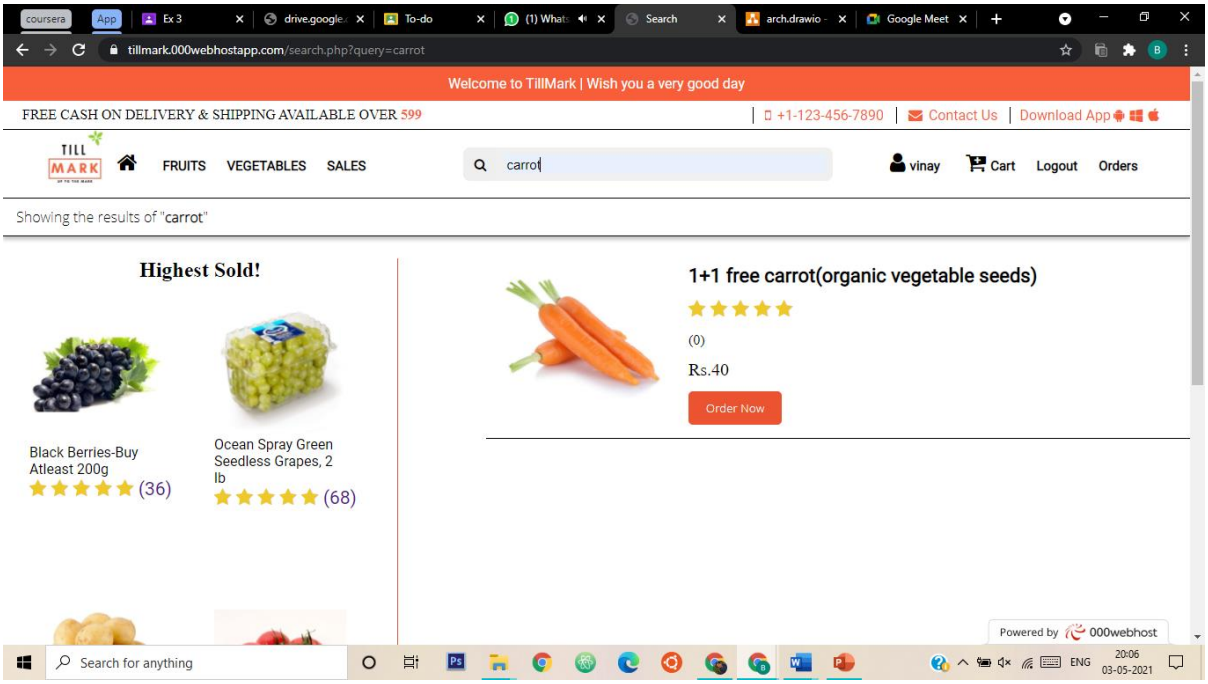
```
    </div>
    </div>';
    }

    else{
        echo'<div class="failed"><h2>No product is there in the cart '.$name.'</h2></div>';
    }
    ?>

    <script>
            var options = {

                "key": "rzp_test_m1tugGZiNMyylw",
                "amount": "<?php echo $payprice; ?>",
                "currency": "INR",
                "name": "Tillmark",
                "description": "Test Transaction",
                "image": "pics/logo.jpg",



                "handler": function (response){
                    jQuery.ajax({
                        url: '',
                        cache: false,
                        type: "POST",
                        data:{
                                pay_id: response.razorpay_payment_id,
                        },
                        success: function (response) {
                            window.location.assign("order.php?name=<?php echo $name; ?>")
```

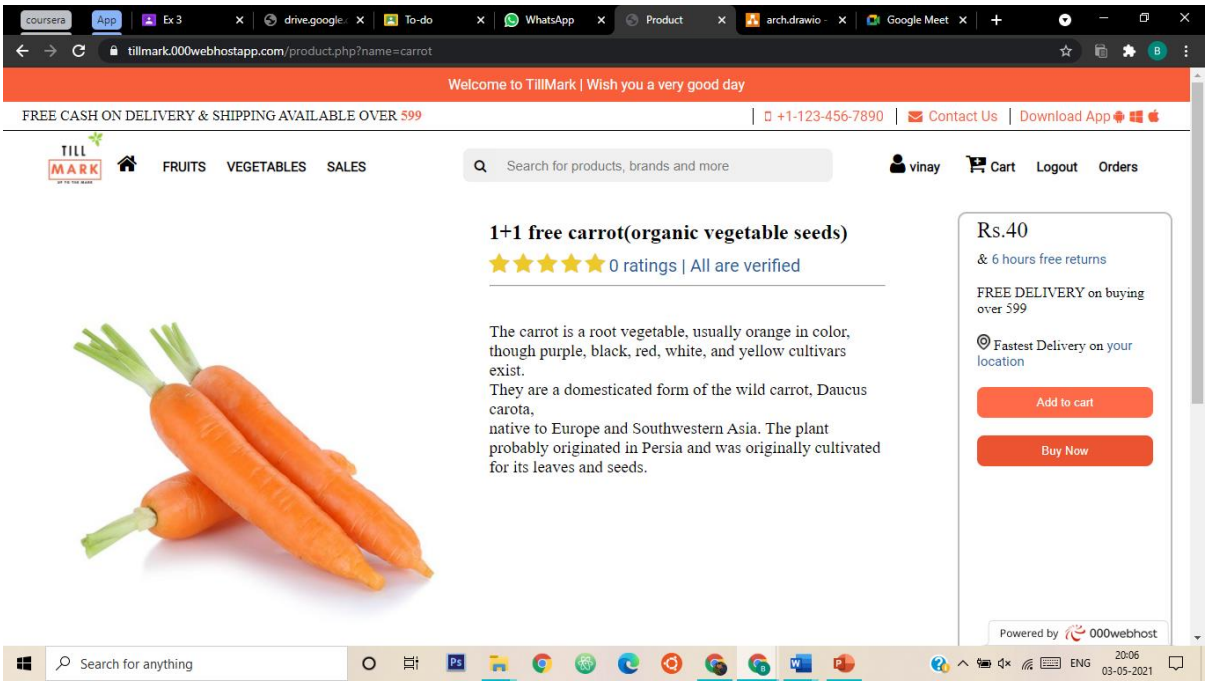
```
                    }
                });
            },



            "prefill": {
                "name": "<?php echo $name; ?>",
                "email": "",
                "contact": "<?php echo '+91'.$phone.''; ?>"
            },
            "notes": {
                "address": "Razorpay Corporate Office"
            },
            "theme": {
                "color": "#3399cc"
            }
        };



        var rzp1 = new Razorpay(options);
        document.getElementById("rzp-button1").onclick = function (e) {
            rzp1.open();
            e.preventDefault();
        }
    </script>
```

```
    <?php include 'footer.php'; ?>
</body>
</html>
```

SCREENSHOT OF MODULE 3:






tillmark.000webhostapp.com/product.php?name=carrot
Welcome to TillMark | Wish you a very good day
FREE CASH ON DELIVERY & SHIPPING AVAILABLE OVER 599
+1-123-456-7890
Contact Us
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FRUITS
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Search for products, brands and more
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1+1 free carrot(organic vegetable seeds)
0 ratings | All are verified
The carrot is a root vegetable, usually orange in color, though purple, black, red, white, and yellow cultivars exist.
They are a domesticated form of the wild carrot, Daucus carota,
native to Europe and Southwestern Asia. The plant probably originated in Persia and was originally cultivated for its leaves and seeds.
Rs.40
& 6 hours free returns
FREE DELIVERY on buying over 599
Fastest Delivery on your location
Add to cart
Buy Now
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Search for anything
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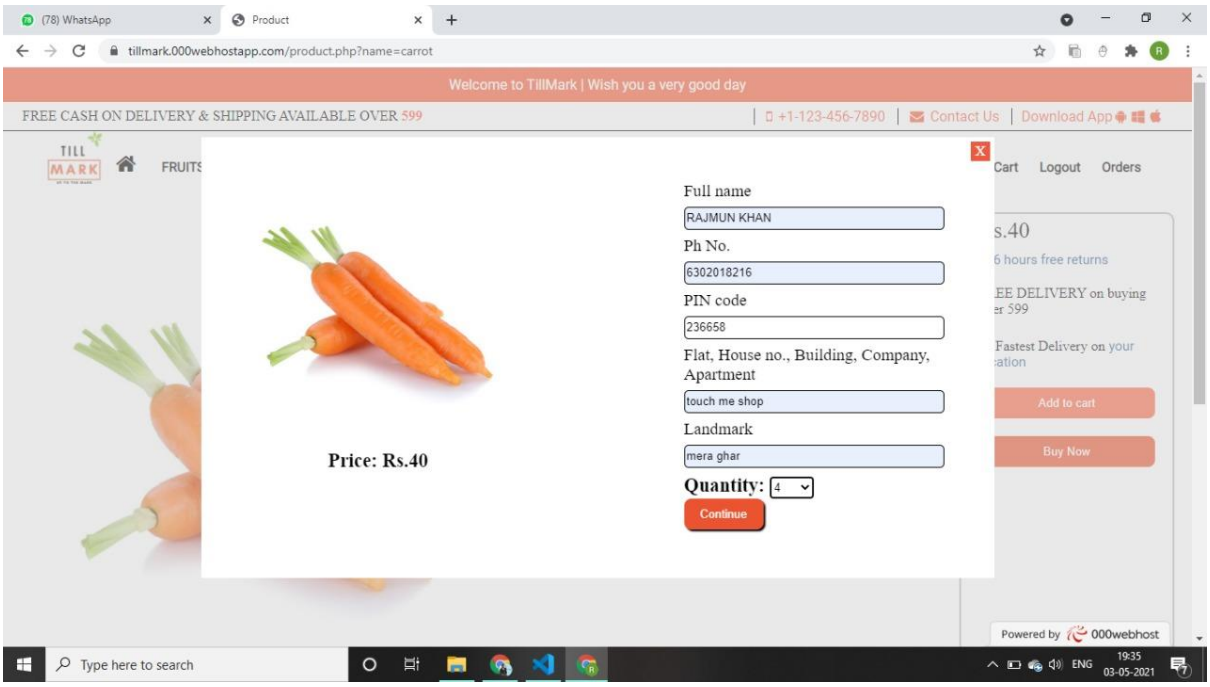
(78) WhatsApp
Product
tillmark.000webhostapp.com/product.php?name=carrot
Welcome to TillMark | Wish you a very good day
FREE CASH ON DELIVERY & SHIPPING AVAILABLE OVER 599
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Contact Us
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Cart
Logout
Orders
Price: Rs.40
Full name
RAJMUN KHAN
Ph No.
6302018216
PIN code
236658
Flat, House no., Building, Company, Apartment
touch me shop
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Quantity: 4
Continue
Add to cart
Buy Now
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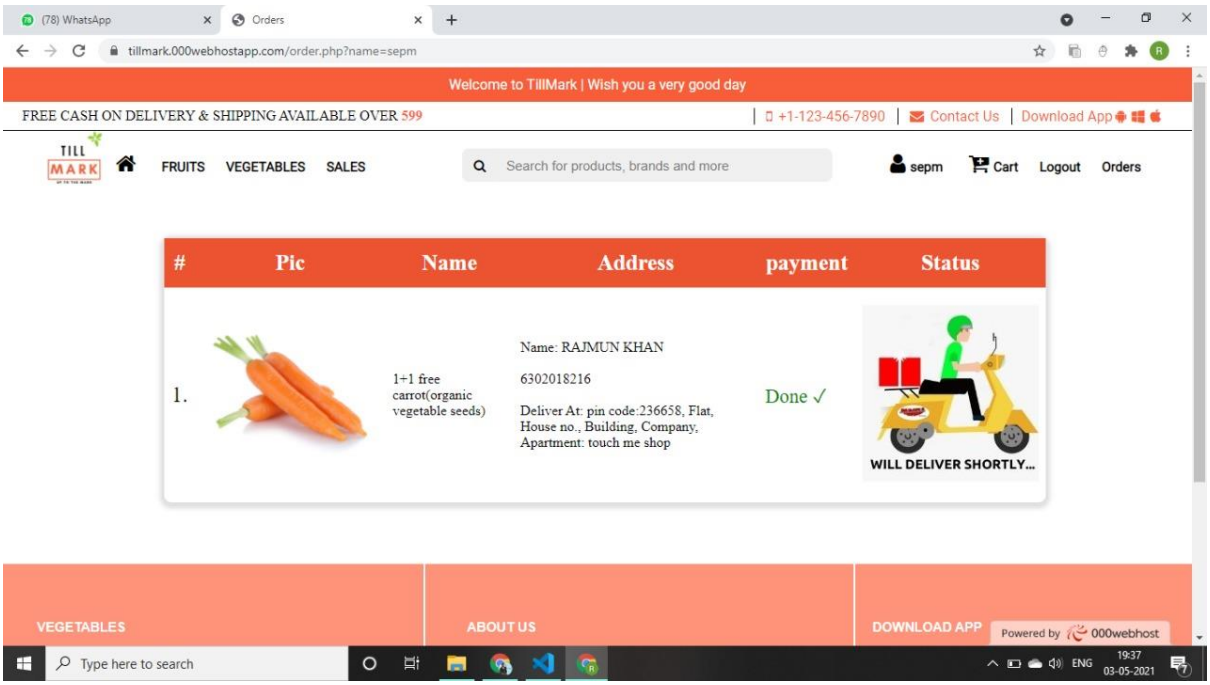
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Orders
tillmark.000webhostapp.com/order.php?name=sepm
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Orders
Pic Name Address payment Status
1.
1+1 free carrot(organic vegetable seeds)
Name: RAJMUN KHAN
6302018216
Deliver At: pin code:236658, Flat, House no., Building, Company, Apartment: touch me shop
Done ✓
WILL DELIVER SHORTLY...
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WEEK 11:-
Test Plan, Test Case

1. Executive Summary

A Test Plan is a detailed document that describes the test strategy, objectives, schedule, estimation, deliverables, and resources required to perform testing for a software product. Test Plan helps us determine the effort needed to validate the quality of the application under test.

Test Plan is A document describing the scope, approach, resources, and schedule of intended test activities

The **scope** of a **test** defines what areas of a customer's product are supposed to get tested, what functionalities to focus on, what bug types the customer is interested in, and what areas or features should not be tested by any means.

Objective of testing: To evaluate the work products such as requirements, design, user stories, and code, To verify the fulfilment of all specified requirements, To validate if the test object is complete and works as per the expectation of the users and the stakeholders.

The testing methodology aligns with iterative Development Methodology in which requirements develop gradually from developers and testing teams. The team tests continuously because it is the only way to ensure continuous progress of the product. The test design and test execution phase will go hand in hand.

2. Test Plan

2.1. Scope of Testing

In our project TILLMARK, the following things are to be tested:

1.) The login page credentials.
2.) The search engine correctly identifies the products searched.
3.) The MANAGER LOGIN for uploading information.
4.) Payment side whether it is done in proper manner.
5.) Add to cart is enabled and to verify it.
6.) The data collected from the admin is stored in the database properly.

2.2. Types of Testing, Methodology, Tools

Category	Methodology	Tools Required
Functional Testing • Unit testing • Integration testing • System testing • Acceptance testing	Manual	Excel Sheet Fully functioning website to test
Non-Functional Testing • Performance testing • Security testing • Usability testing • Compatibility testing • Supportability	Manual	Excel Sheet Fully functioning website to test

2.3 Test Deliverables

Test Deliverables are the artifacts which mean “things” that are produced by people involved in the process and are given to the stakeholders. Some deliverables are provided before testing phase, Some during the testing phase and rest after the testing cycle. The below are the list of test deliverables.

- Test Specifications document
- Test Plan document
- Test Strategy
- Test Scenarios document

What is Functional Testing?

Functional testing is a type of testing which verifies that each function of the software application operates in conformance with the requirement specification. This testing mainly involves black box testing, and it is not concerned about the source code of the application.

Every functionality of the system is tested by providing appropriate input, verifying the output and comparing the actual results with the expected results. This testing involves checking of User Interface, APIs, Database, security, client/ server applications and functionality of the Application under Test. The testing can be done either manually or using automation.

What is Non-Functional Testing?

Non-functional testing is a type of testing to check non-functional aspects (performance, usability, reliability, etc.) of a software application. It is explicitly designed to test the readiness of a system as per non-functional parameters which are never addressed by functional testing.

A good example of non-functional test would be to check how many people can simultaneously login into software.

Non-functional testing is equally important as functional testing and affects client satisfaction.

3. Test Case

3.1. Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status
1	Check the register functionality	Check whether the required information is provided.	Customer fills out the registration part and clicks on register button.	User should be registered successfully if he enters all the details required.	Works perfectly. All test cases are tried and verified. Fully functional.	SUCCESS
2	Login functionality/ SIGN UP	Check whether the Customer had entered his valid email id, password, and username. And too check whether invalid credentials are given.	Customer enters the username, email id, and password. Clicks the login button.	User should be logged in successfully if he enters valid credentials. Otherwise be in the login page.	Works perfectly. All test cases are tried and verified. Fully functional.	SUCCESS
3	Check the logout functionality	Check the system behavior when the user wants to logout	Clicks on the logout button	logout successfully	Logged out successfully	Pass
4	Check the SEARCH ENGINE functionality	Check whether the entered products is available and to be displayed.	Customer enters the product's name and clicks the search button.	Product with price tag, types and name should be displayed.	Product with all the requirement is displayed	SUCCESS
5	MANAGER LOGIN	Check the system that the INFORMATION is correctly stored the data in the database	When user clicks on upload button, the data will be	All the data from the manager or profile should be	The data is checked and verified from the database.	SUCCESS

		When the manager clicks the upload button then the data collected in the data base Database verification is to store the data store properly	collected in the database	collected and stored in the database properly		
6	Payment and DELIVERY ADDRESS Verification.	Check the UPI / Credit or Debit card number, OTP, Delivery ADDRESS is entered properly and verified once. And Cash on delivery option is also enabled.	Customer enters the all the credit, debit, and UPI and delivery address and clicks confirm to place the order.	The order should be confirmed and verified.	The order is placed and delivery will be done.	SUCCES AND DELIVERED

3.2 Non-Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status
1	Performance	CHECK THE SPEED IF THE PAGE AND WHO IT WORKS ACCORDINGLY TO THE CUSTOMERS WISH AND PERFORMS WITHOUT ANY LAG	Click on search button , pay button, upload button, etc.	The required or the requested thing from the customer is to be displayed without lag.	Displayed and checked multiple times.	SUCCESS
2	Reliability	Check if all the information provided on the website is true and reliable.	Go through the website checking the information	All information is true and reliable	All information is true and reliable	SUCCESS
3	Usability	Check if the website is user friendly and all important links	Go through the website for checking	The website is user friendly and very easily	The website is user friendly and very easily	SUCCESS

		are highlighted for easy access to the user	user friendliness	usable by any user	usable by any user	
4	Security	All the data should be secured and be encrypted and safely place in the database.	All the details uploaded either by manager or the customer should be safe and not leaked out.	The details remains safe.	The details are safe and secure.	SUCCESS
5	Supportability	WEBISTE is user friendly and all other issues are resolved and reported to the admin.	The customer should not feel any discomfort and easily buy their requirement without any problems and easily.	THE CUSTOMER SHOULD BE COMFORT	THE CUSTOMER IS COMFORT	SUCCESS
6	Maintainability	Issues regarding the website is resolved through regular updates and bugs are fixed	The website should be maintained properly and updates should be done regularly	The website should be Free of bugs and other issues faced by customers.	The website is well-maintained	SUCCESS

WEEK – 12:

4. Test Report

A test report is an organized summary of testing objectives, activities, and results. It is created and used to help stakeholders (product manager, analysts, testing team, and developers) understand product quality and decide whether a product, feature, or a defect resolution is on track for release.

Beyond product quality, a test report also provides insight into the quality of your testing and test automation activities. Organizations typically have four high-level questions about their test automation.

- What's wrong with my automation scripts?
- What's wrong with my backend?
- What's wrong with my lab?
- What's wrong with my executions?

Finally, test reporting should help you understand the achieved value of testing. For example, are you testing anything unnecessarily? Are your tests stable? Were you able to uncover issues early in the process?

A good test reporting process gives insight and answers to all these important questions. You can not only improve quality of an app, but you can accelerate your releases.

Category	**Progress Against Plan**	**Status**
Functional Testing	Green	Completed
Non-Functional Testing	Green	Completed

Functional	Test Case Coverage (%)	Status
Module 1	100%	Completed
Module 2	100%	Completed
Module 3	100%	Completed

Result:

Thus, the software test conducted and documented the report successfully