ASSIGNMENT 1

Please make a BRD that can be presented to the client along with complete development and resource plan.

BUSINESS REQUIREMENT DOCUMENT:

Project Overview:

Project Name: Inventory and logistic Management software.

Client: ABC LTD.

Prepared by : Vishal Singh

Date: 20/03/2025

Project Background:

The company manufactures Ice Cream and milk products with a manufacturing plant and warehouse all over the country. The primary challenge faced by the company is:

- Inefficient inventory tracking and management
- Delays in product delivery
- High operational costs due to suboptimal logistics planning

To address these issues, the company requires a centralized software system to manage inventory and optimize delivery times.

Project Goals & Objectives

- Manage Inventory Efficiently: Track stock levels, raw materials, and finished goods.
- Optimize Delivery Processes: Ensure the quickest route selection and warehouse allocation.
- Enhance Decision-Making: Provide real-time analytics and reporting for better supply chain control.

2. Business Requirements

Functional Requirements

Inventory Management

- Real-time tracking of raw materials, work-in-progress, and finished goods
- Automated stock level alerts and reordering
- Expiry date tracking and batch management
- Warehouse-to-warehouse stock transfers

Order Managemen*t*

- Automated order processing and fulfillment
- Customer order tracking and notifications
- Invoice generation and integration with accounting software

Logistics & Delivery Optimization

- AI-driven route optimization
- Automated warehouse selection for fastest dispatch
- Real-time GPS tracking of delivery vehicles
- Integration with third-party logistics providers

Reporting & Analytics

- Sales and inventory forecasting
- Stock turnover analysis
- Delivery performance tracking and analytics

Non-Functional Requirements

- Scalability: Support increasing data volume as the company expands.
- Security: Data encryption and role-based access control.
- User-Friendly Interface: Intuitive UI/UX for smooth navigation.
- Cloud-Based Access: Centralized system accessible from multiple locations.

Solution Approach

System Architecture

The system will be designed as a cloud-based web application with a modular architecture consisting of:

1. Frontend: React.js / Angular
2. Backend: Node.js / Python (Django)
3. Database: PostgreSQL / MongoDB
4. Cloud Hosting: AWS / Azure / Google Cloud
5. APIs: RESTful APIs for integration with third-party logistics and accounting tools

Development Roadmap

Phase	Duration	Key Deliverables
Requirement Analysis	2 Weeks	BRD, SRS, Wireframes
UI/UX Design	3 Weeks	Mockups, Prototypes
Backend & Database Development	5 Weeks	API Development, Database Setup
Frontend Development	5 Weeks	User Interface, Integration with Backend
Testing & QA	3 Weeks	Functional & Performance Testing
Deployment & Training	2 Weeks	Live Deployment, Staff Training

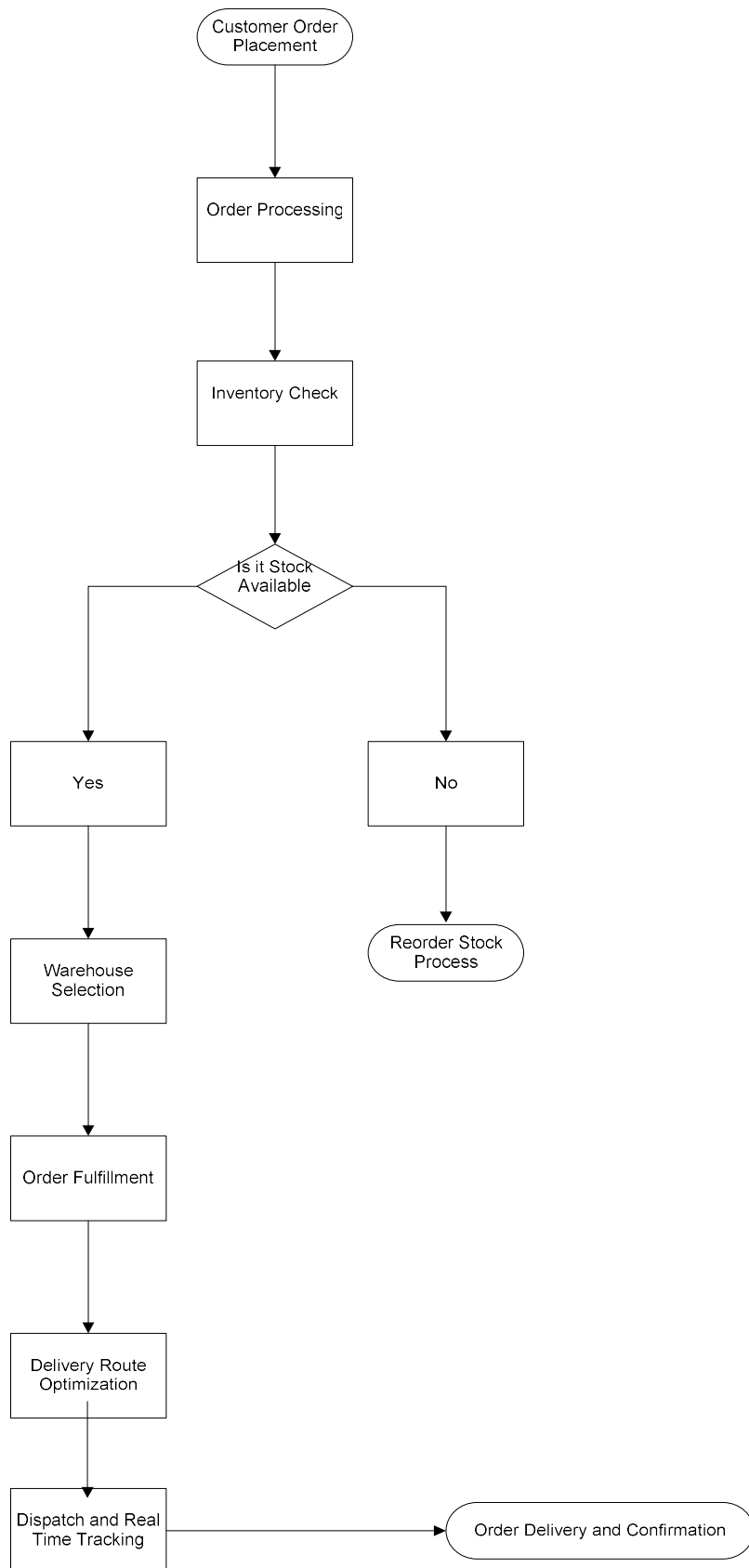Total Project Duration: ~20 Weeks (~5 Months)

Resource Allocation Plan

Team Composition

Role	Number of Resources	Responsibilities
Project Manager	1	Oversee development, ensure timelines
Business Analyst	1	Requirement gathering, documentation
UI/UX Designer	1	Design wireframes and user interface
Frontend Developers	2	Build web-based UI (React.js / Angular)
Backend Developers	2	Develop APIs and database logic
QA Engineers	2	Testing and quality assurance
DevOps Engineer	1	Cloud deployment and infrastructure setup

Budget Estimate

Category	Estimated Cost
Software Development	$50,000
Cloud Hosting & Infrastructure	$10,000
Third-Party API Integration	$5,000
Training & Support	$5,000
Total Estimate	$70,000

2. Prepare process flow diagram using your imagination.

```
                    ( Customer Order )
                    (   Placement    )
                           |
                           v
                   +------------------+
                   | Order Processing |
                   +------------------+
                           |
                           v
                   +------------------+
                   |  Inventory Check |
                   +------------------+
                           |
                           v
                        /      \
                       / Is it  \
                      <  Stock   >
                       \Available/
                        \      /
                     /           \
                    v             v
            +---------+       +---------+
            |   Yes   |       |   No    |
            +---------+       +---------+
                 |                 |
                 v                 v
         +---------------+   ( Reorder Stock )
         |   Warehouse   |   (   Process    )
         |   Selection   |
         +---------------+
                 |
                 v
         +-----------------+
         | Order Fulfillment|
         +-----------------+
                 |
                 v
         +---------------+
         | Delivery Route|
         | Optimization  |
         +---------------+
                 |
                 v
         +------------------+      ( Order Delivery and Confirmation )
         | Dispatch and Real|----->
         | Time Tracking    |
         +------------------+
```

ASSIGNMENT 2.

1.Write an introduction letter to a client introducing yourself as a business analyst who will work with the client and his team to start the business understanding process.

Vishal Singh
Business Analyst
A to Z Financial Services
vscvishal1299@gmail.com
22/03/2025

Ajay Kumar
ABC PVT. LTD.
Pune

Subject: Introduction as Your Business Analyst for Project Initiation

Dear Ajay

I hope this email finds you well. My name is Vishal Singh, and I am a Business Analyst at A to Z Financial Services. I am excited to introduce myself as your primary point of contact to understand and define your business needs for the upcoming PENNANT project.

My role is to work closely with you and your team to ensure that we gain a comprehensive understanding of your business requirements, challenges, and objectives. This will help us design a solution that aligns with your company's vision and maximizes operational efficiency.

To begin this process, I would like to schedule an initial discovery meeting where we can discuss:

- Your business goals and expectations for the project.
- Key challenges you are facing.
- The current workflows and processes.
- Any specific requirements or concerns you have.

Please let me know a convenient time for us to connect. I am looking forward to collaborating with you and ensuring the success of this project.

Feel free to reach out to me anytime at vscvishal1299@gmail.comm or 6387860598 if you have any questions.

Looking forward to working with you.

Best Regards,
Vishal Singh
Business Analyst
A to Z Financial Services

2. Prepare a brief BRD and SRS for a project- Horoscope or Ticketing system or online store.

TICKETING SYSTEM

1. Business Requirement Document (BRD)

Project Overview

Project Name: Ticketing System
Client: IRCTC
Prepared By: Vishal Singh
Date: 23/03/2025

Business Objectives

The objective of this project is to develop a ticketing system that enables efficient tracking, management, and resolution of customer requests and support issues.

Key Features

- Ticket Creation & Tracking: Users can create tickets for support requests and track their progress.
- Automated Ticket Assignment: Assign tickets based on priority and workload.
- Status Updates & Notifications: Real-time updates on ticket progress via email/SMS.
- Dashboard & Reporting: Analytics for tracking performance and issue resolution.
- Multi-Channel Support: Integrate with email, chat, and phone systems.

Stakeholders

- End Users: Customers submitting tickets.
- Support Agents: Handling and resolving tickets.
- Administrators: Managing system configurations and reporting.

Success Criteria

- Reduced ticket resolution time.
- Improved customer satisfaction.
- Efficient workload management.

2. Software Requirement Specification (SRS)

Introduction

This document outlines the functional and non-functional requirements for the Ticketing System.

Functional Requirements

User Management:

- User registration/login (Customers, Support Agents, Admins).
- Role-based access control.

Ticket Management:

- Create, update, and close tickets.
- Assign priority levels (Low, Medium, High, Critical).
- Attach files/screenshots to tickets.

Automated Workflow:

- Assign tickets to agents based on expertise and availability.
- SLA (Service Level Agreement) tracking for timely resolution.

Communication & Notifications:

- Email and SMS alerts for ticket updates.
- Live chat for real-time support.

Reports & Analytics:

- Generate reports on response time, resolution time, and customer satisfaction.
- Dashboard with key performance metrics.

Non-Functional Requirements

Scalability: Should support growing user base.
Security: Role-based access, data encryption.
Availability: 99.9% uptime with cloud hosting.
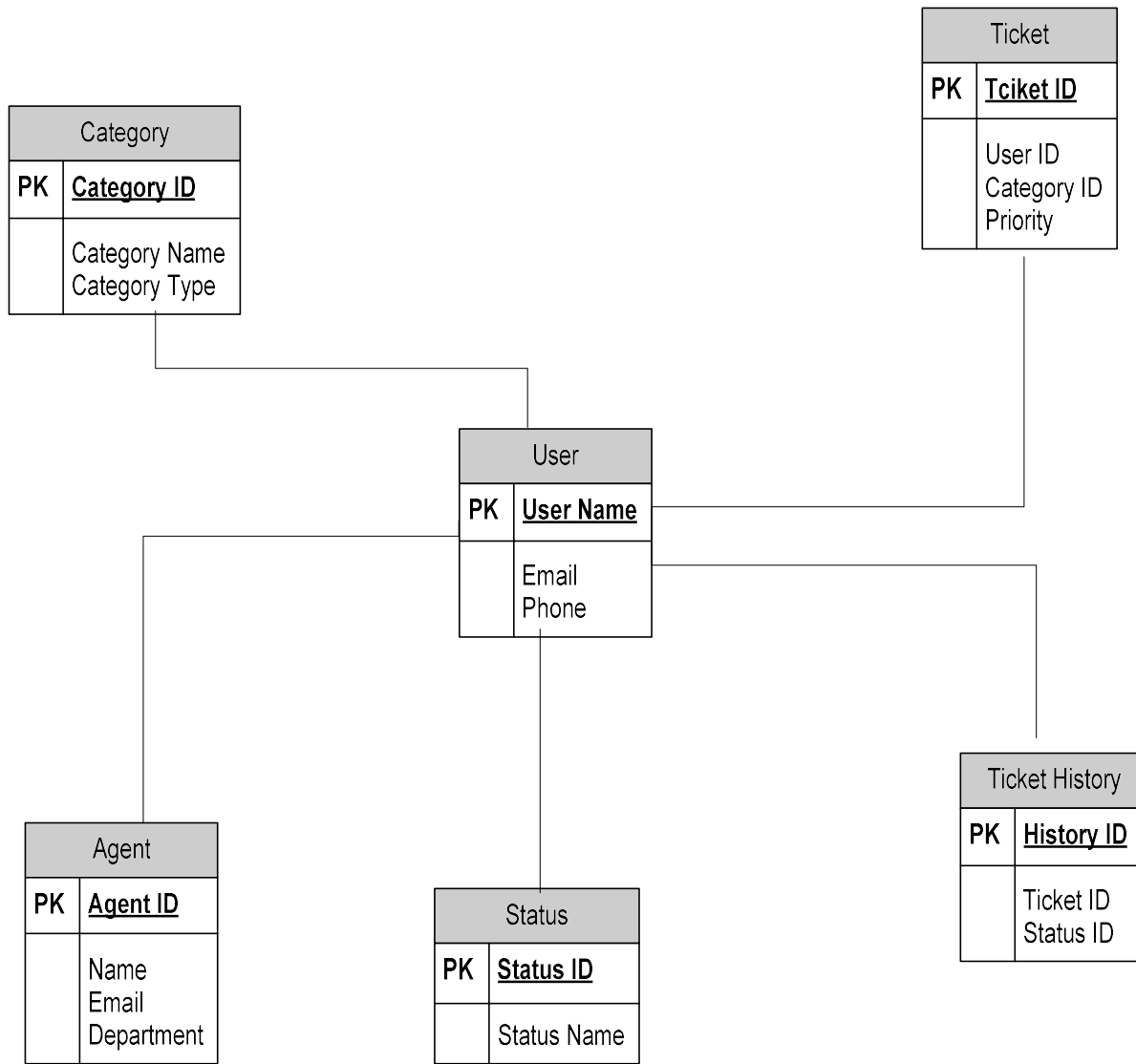
Technology Stack

- Frontend: React.js / Angular
- Backend: Node.js / Django / .NET
- Database: PostgreSQL / MongoDB
- Hosting: AWS / Azure

Constraints

Must support multiple devices (desktop, mobile, tablet).
Should comply with data privacy laws (GDPR, CCPA).

3.Make an ERD of creating a support ticket/Ticketing life cycle.

Ticket

PK	Tciket ID
	User ID Category ID Priority

Category

PK	Category ID
	Category Name Category Type

User

PK	User Name
	Email Phone

Ticket History

PK	History ID
	Ticket ID Status ID

Agent

PK	Agent ID
	Name Email Department

Status

PK	Status ID
	Status Name

4. User story of shopping from ecommerce

USER STORY NO. 1	TASK : CREATE CUSTOMER REGISTRATION PORTAL	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT : TO REGISTER IN EWAY		
SO THAT : I CAN DO SHOPPING		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
Registration Screen		
Text Boxes for User Name, Password, Nation ID, Mobile No		
Phone Number		
Click on Register Button		
Send Notification To User		

USER STORY NO. 2	TASK : CREATE LOGIN PAGE FOR REGISTER USER	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO LOGIN IN EWAY APP		
SO THAT I CAN LOGIN ON THE APP		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
Registration Screen		
Text Boxes for User Name, Password, Nation ID, Mobile No		
Phone Number		
Click on Register Button		

USER STORY NO. 3	TASK : CREATE A LIST OF BRANDS AND ADD IN SEARCH BAR	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO SEARCH AND VIEW BRANDS		
SO THAT: I CAN CHOOSE PRODUCTS AND ADD TO CART		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
Should get the list of all the category wise product		

USER STORY NO. 4	TASK : CREATE A LIST OF PRODUCTS	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO SEE BRAND WISE PRODUCT		
SO THAT: I CAN CHOOSE PRODUCT AND ADD TO CART		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
Should get the list of all the Brands and product		

USER STORY NO. 5	TASK : CREATE A LIST OF BRANDS	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO SEE DIFFERENT BRANDS		
SO THAT: I CAN CHOOSE PRODUCTS		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
Should get the list of all the brands and products		

USER STORY NO. 6	TASK : USER WISE CREATE THE TAB TO ADD ADDRESS	PRIORITY: HIGHEST
AS AN ONLINE USER		
I WANT: TO ADD THE ADDRESS		
SO THAT: I CAN GET THE PRODUCT ON MY ADDRESS		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
Once the user want to order the Product it should be order to the given address.		

USER STORY NO. 7	TASK : CREATE ADD TO CART TAB	PRIORITY: HIGHEST
AS AN ONLINE USER		
I WANT: TO ADD THE SELECTED ITEM IN CART		
SO THAT: I CAN GET THE SELECTED ITEM		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
All the selected item should display in the cart.		

USER STORY NO. 9	TASK : TRACKING TAB SHOULD DISPLAY WITH THE MAP	PRIORITY: HIGHEST
AS AN ONLINE USER		
I WANT: TO TRACK MY GIVEN ORDER		
SO THAT: I CAN ABLE TO VIEW THE CURRENT STATE ON THE MAP		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		

- App should display the map and the current movement of the order
- Display delivery boy mobile number
- Display delivery boy name in tracking field
- Display delivery boy picture

USER STORY NO. 10	TASK : CANCEL ORDER TAB SHOULD DISPLAY	PRIORITY: HIGHEST
AS AN ONLINE USER		
I WANT: TO CANCEL MY ORDER		
SO THAT: IF NOT REQUIRED I CAN ABLE TO CANCEL MY ALL ORDER		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
App should able to cancel the order within a minute of the given order.		

USER STORY NO. 11	TASK : FEEDBACK AND RATING	PRIORITY: HIGHEST
AS AN ONLINE USER		
I WANT: TO SHARE MY FEEDBACK FOR PRODUCT AND APP		
SO THAT: I CAN ABLE TO SHARE MY OPINION AND FEEDBACK ON THE SERVICES		
BV: 100		CP:04
ACCEPTANCE CRITERIA:		
App should able to show he rating and feedback option so that user can add review.		

USER STORY NO. 12	TASK : LOGOUT TAB SHOULD BE DISPLAYED	PRIORITY: HIGHEST
AS AN ONLINE USER		
I WANT: LOGOUT TAB		
SO THAT: I CAN LOGOUT FROM THE APP		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
Logout button should be displayed (before logout app should confirm for logout)		

USER STORY NO. 13	TASK : DELIVERY FOR USER CREATION TABLE SHOULD DISPLAY	PRIORITY: HIGHEST
AS A DELIVERY BOY		
I WANT: REGISTER IN THE EWAY APP		
SO THAT: I CAN DELIVER THE PRODUCCT		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
Registration Screen		
Text Boxes for User Name, Password, Nation ID, Mobile No		
Phone Number		
Click on Register Button		
Send Notification To User		

USER STORY NO. 14	TASK : LIST OF ORDER IN SPECIFIC PERIOD	PRIORITY: HIGHEST
AS A RESTAURANT OWNER		
I WANT: TO SEE ALL MY ORDER IN A DAY, WEEK, MONTH, YEAR.		
SO THAT: I CAN VIEW LIST OF ORDER		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		
View order (display order list in a day, week, month, year		

USER STORY NO. 15	TASK : REGISTER ALL MANUFACTURER	PRIORITY: HIGHEST
AS AN ADMIN		
I WANT: TO SEE THE LIST OF ALL MANUFACTURER		
SO THAT: I CAN APPROVE THE REGISTRATION.		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		

- List of restaurants
- select Restaurants
- verify restaurant details
- approve button
- reject button
- notification to the restaurant

USER STORY NO. 16	TASK : GENERATE RREVENUE REPORT	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: VIEW THE REVENUE REPORT		
SO THAT: I CAN VIEW THE PRODUCT REVENUE		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		

- Select Reports
- Select Revenue Reports
- Select to and from date
- Select Region (can select all)
- Generate Report
- Download Report in EXCEL
- Share

USER STORY NO. 17	TASK : MANAGE LOCAL MANUFACTURER	PRIORITY: HIGHEST
AS AN ADMIN		
I WANT: TO MANAGE REGIONAL MANUFACTURER		
SO THAT: I CAN TRACK THE PERFORMACE OF REGIONAL MANUFACTURER		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		

- Click on performance of products
- select date wise report
- click on generate report which includes manufacturer ID - name and revenue
- click on download and share button in excel

USER STORY NO. 18	TASK : GENERATE REGIONAL REVENUE REPORT	PRIORITY: HIGHEST
AS AN ADMIN		
I WANT: TO SEE THE REGIONAL REPORT		
SO THAT: I CAN VIEW THE REGIONAL REPORT		
BV: 200		CP:03
ACCEPTANCE CRITERIA:		

- View performance of each rest of that region in tabular form which includes restaurant name, revenue, generated .
- Download in excel or PDF

USER STORY NO. 19	TASK : CREATE THE REFUND OPTION TO THE USER	PRIORITY: HIGHEST
AS A REGIONAL ADMIN		
I WANT: TO SEE THE REFUND OPTION		
SO THAT: I CAN ABLE TRACK THE REFUND GIVEN TO USER		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		

- All should be able to show - all mandatory
- text box field; display order ID
- text box for description
- submit
- generate issue id
- share refund and display successful

USER STORY NO. 20	TASK : CHECK REVENUE REPORT	PRIORITY: HIGHEST
AS A RESTAURANT OWNER		
I WANT: TO CHECK REVENUE DAY WISE		
SO THAT: VIEW REVENUE GENERATED THROUGH SCRUM FOOD APP		
BV: 100		CP:04
ACCEPTANCE CRITERIA:		

- Mention the list of order generated in a day
- billing done
- revenue generated
- payment received
- fetch in excel

USER STORY NO. 21	TASK : CREATE ADMIN REGISTRATION PORTAL	PRIORITY: HIGHEST
AS AN ADMIN		
I WANT: DO THE REGISTRATION ON THE SCRUM FOOD APP		
SO THAT: I CAN HAVE AN ADMIN REGHT ON THE APP		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
- Should have valid email - Send successful notification to the admin		

USER STORY NO. 22	TASK : CREATE MANUFACTURER PORTAL	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: DO THE REGISTRATION ON THE EWAY APP		
SO THAT: I CAN PLACE THE PRODUCT ON THE APP		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
- Should have valid email - Send successful notification to the manufacturer.		

USER STORY NO. 23	TASK : CREATE LOGIN PAGE FOR MANUFACTURER	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO LOGIN IN EWAY APP		
SO THAT: I CAN LOGIN ON THE APP		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
- Text Boxes for User Name, Password, - Submit button		

USER STORY NO. 24	TASK : CREATE PRODUCT LIST	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO CREATE THE LIST OF PRODUCT		
SO THAT: I CAN ABLE TO CREATE THE LIST OF PRODUCT IN APP		
BV: 200		CP:04
ACCEPTANCE CRITERIA:		
Should have product list		

USER STORY NO. 25	TASK : SEARCH FOR PRODUCT	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: ABLE TO SEARCH FOR THE PRODUCT AVAILABLE ONLINE		
SO THAT: I CAN PICK MY CHOICE OF PRODUCT		
BV: 100		CP:05
ACCEPTANCE CRITERIA:		
• Should be able to view all proucts.		

USER STORY NO. 26	TASK : ADD QUANTITY OPTION	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO PROVIDE THE QUANTITY OPTION ON THE APP		
SO THAT: I CAN MODIFY THE NUMBER OF SPECIFIC ITEMS		
BV: 100		CP:05
ACCEPTANCE CRITERIA:		
• Should be able to view all proucts.		

USER STORY NO. 27	TASK : ADD QUANTITY BY USER	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO QUANTITY FOR ITEMS		
SO THAT: I CAN ADD COUNT FOR SPECIFIC ITEMS		
BV: 500		CP:02
ACCEPTANCE CRITERIA:		
• Should be able to add quantity		

USER STORY NO. 28	TASK : UPDATE QUANTITY BY USER	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO UPDATE THE QUANTITY FOR ALREADY CHOSSEN ITEM		
SO THAT: I CAN MODIFY THE ALREADY COUNT OF ITEM		
BV: 200		CP:04
ACCEPTANCE CRITERIA:		
• Should be able to update quantity		

USER STORY NO. 29	TASK : DELETE QUANTITY BY USER	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: DELETE THE QUANTITY FOR ALREADY CHOSEN ITEM		
SO THAT: I CAN DELETE THE COUNT OF ITEM		
BV:100		CP:05
ACCEPTANCE CRITERIA:		
• Should be able to delete quantity		

USER STORY NO. 30	TASK : REMOVE THE ITEM FROM CART	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: REMOVE THE PARTICULAR ITEM FROM CART		
SO THAT: I CAN DELETE THE PRODUCT		
BV:100		CP:05
ACCEPTANCE CRITERIA:		
• Should be able to delete quantity		

USER STORY NO. 31	TASK : CANCEL THE ORDER	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO CANCEL THE ORDER		
SO THAT: I CAN CANCEL THE ORDER AND PLACE THE ORDER WHENEVER NEEDED		
BV:200		CP:04
ACCEPTANCE CRITERIA:		
• Should be able to cancel the order		

USER STORY NO. 32	TASK : CREATE PAYMENT OPTION	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO CREATE VARIOUS PAYMENT OPTION		
SO THAT: USER CAN SELECT ANY OPTION BASED ON THEIR CHOICE		
BV:500		CP:02
ACCEPTANCE CRITERIA:		
• Should be created different payment option		

USER STORY NO. 33	TASK : VIEW PAYMENT OPTION	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO VIEW VARIOUS PAYMENT OPTION		
SO THAT: USER CAN VIEW THE PAYMENT OPTIONS		
BV:200		CP:04
ACCEPTANCE CRITERIA:		
• Should be view different payment option		

USER STORY NO. 34	TASK : CREATE COD OPTION	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO CREATE COD OPTION		
SO THAT: APP SHOULD CONTAIN COD OPTIONS		
BV:200		CP:04
ACCEPTANCE CRITERIA:		
• Should be able to see COD option		

USER STORY NO. 35	TASK : VIEW COD OPTION	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: USER CAN VIEW COD OPTION		
SO THAT: USER CAN VIEW THE COD OPTIONS		
BV:200		CP:04
ACCEPTANCE CRITERIA:		
• Should be able to view COD option		

USER STORY NO. 36	TASK : PROCEED TO CHECK OUT	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO CREATE PROCEED TO CHECKOUT OPTION		
SO THAT: PROCEED TO CREATE CHECKOUT OPTION ON APP		
BV:200		CP:04
ACCEPTANCE CRITERIA:		
• Should be able to see proceed to checkout option.		

USER STORY NO. 37	TASK : VIEW CHECK OUT	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO VIEW PROCEED TO CHECKOUT OPTION		
SO THAT: I WANT TO SEE PROCEED TO CHECKOUT OPTION ON APP		
BV:400		CP:02
ACCEPTANCE CRITERIA:		
• Should be able to see proceed to checkout option.		

USER STORY NO. 38	TASK : TRACK THE ORDER	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO TRACK THE ORDER		
SO THAT: I WANT TO SEE WHERE MY ORDER IS		
BV:400		CP:02
ACCEPTANCE CRITERIA:		
• Should be able to track the order.		

USER STORY NO. 39	TASK : ORDER NOTIFICATION	PRIORITY: HIGHEST
AS A MANUFACTURER		
I WANT: TO SEND THE NOTIFICATION TO CUSTOMER ON ORDER DETAIL		
SO THAT: I CAN SEND THE NOTIFICATION TO CUSTOMER ON ORDER DETAIL		
BV:500		CP:02
ACCEPTANCE CRITERIA:		
• Should be able to send notification to user through any device		

USER STORY NO. 40	TASK : RECEIVE ORDER NOTIFICATION	PRIORITY: HIGHEST
AS A CUSTOMER		
I WANT: TO RECEIVE THE NOTIFICATION ON ORDER DETAIL		
SO THAT: I CAN RECEIVE THE NOTIFICATION ON ORDER DETAIL		
BV:500		CP:02
ACCEPTANCE CRITERIA:		
• Should be able to receive notification through any device		