PROJECT REPORT

TEAM ID	PNT2022TMID21428
PROJECT NAME	Inventory Management System for Retailers

TEAM MEMBERS:

1. SOORIYA S (Team Lead) - 917719D096
2. RAM SUNDAR A L   - 917719D071
3. SETHURAMAN S   - 917719D085
4. PRANAV CHAITANYA   - 917719D063

1. INTRODUCTION

1.1 PROJECT OVERVIEW

Inventory Management System is high performance software, which speeds up the business operation of the organization. Every organization, which deals with the raw materials, puts its great effort in the efficient utilization of its raw material according to its need and requirement. The organization must perform number of tasks and operations in order to run its business in manual system. Namely,

- ➢ Estimation of new raw material required
- ➢ Preparation of purchase order
- ➢ Preparation of inward sale invoice

This Software is used for recording the information about the day-to-day transaction of stock of an organization. It stores purchase information of the products with credit/debit information from the supplier. Similarly, it stores sales information with credit/debit about the customer. If a product is purchased, then the related information is stored in stocks, that is, stocks are up to date. Another part is I prepare a sales report after the product is sold. in the sales information, the information about who sold the product is also kept, so there is no problem for misunderstandings in future.

The Inventory Management System is developed and designed for recording and managing the inventory of an organization. It can also be used for different institutions with fewer modifications as per requirement. the system can be easily updated as the other institutional requirements may not be integrated on our project. After the continuous effort, testing and debugging the current system is ready to be implemented in an organization. The System development Project has developed the ability to implement theoretical Knowledge.

Some of the lessons that we had learned from the project are: - Sharpen the knowledge of working cooperating in a working organizational environment and workplace. Know the value of time and disciple. Work in a group and make group decisions. Learnt communication skill, leadership, quality and to make good public relation

1.2 PURPOSE

The aim of this research is to optimize the total cost / total profit of the inventory models for deteriorating and expiry products under the consideration of lead time in different business environments. A lot of research has been done, related to expiry products. But most of the researchers ignored lead time and considered deterioration as a constant. For effective inventory management, consideration to deterioration and lead time is essential. So any study done, ignoring this concept cannot be accurate. Hence, in our study, we tried to develop models with deterioration and lead time, while considering the expiry products.

- To support the armed forces, meet their strategic needs by committed, dedicated and cost-effective development and sustenance of the infrastructure.

- To achieve international levels of quality excellence and time consciousness in a diversified sphere of construction activity in a cost-effective manner.

- Optimize potential and expertise through increased involvement in agency, transnational and national development projects.

- To attain leadership in development, adoption, assimilation, and use of state-of-the-art technology.

- To create the environment for accurate, real time and effective decision making through optimizing use of information technology.

- Through a focus on core competencies, ensure the highest level of skill and proficiency in construction activity.

- To sustain a sense of values in the Organization that will ensure a high level of self-esteem in each individual and immeasurable synergy in the Organization.

- To help enrich the quality of life of the community and ensure all rough growth.

2. LITERATURE SURVEY

Products are considered as the business resources for the organization. This includes managing the product with appropriate ways to review any time as per the requirement. Therefore, it is important to have a computer-based IMS which can generate reports, maintain the balance of the stock, and details about the purchase and sales in the organization. Before developing this application, we came up with 2 Inventory Management Systems existing in the market, which helps to give the knowledge for the development of our project. This application software is only used by the large organization but so we came up with the application which can be used by the small company for the management of their stock in the production houses. After analyzing the other inventory management system, we decided to include some of the common and key features that should be included in every inventory management system. So, we decided to include those things that help the small organization in away or other.

2.1 EXISTING SYSTEM

As we know, the manual processing is quite tedious, time consuming less accurate in comparison to computerized processing Obviously the present system is not exception consultant encountering all the above problems.

- Time Consuming
- It is very tedious
- All information is not placed separately
- Lot of paperwork
- Slow data processing
- Not a frequent user
- It is difficult to find records due to the file management system

Current system is a manual one in which users are maintaining ledgers, books etc. to store the information like supplier details, inwards, deliveries and returns of items in all go downs, customer details as well as employee details. It is very difficult to maintain historical data. Also, regular investments need to purchase stationary every year In the existing system, the inventory

management is handled manually, which is highly tedious. Some of the important business operations are estimating the requirement of new raw material, dealing in the production of Purchase order, purchase invoice, sales invoice and debit note. All these operations are performed by a team of skilled members which are prompt in financial calculations and have a sharp memory. The operations are handled in an effective way, but the process is time taking and subjected to human errors.

2.2 REFERENCES

[1] https://www.camcode.com/asset-tags/what-is-an-inventory-management-system/

[2] Jimmy Wales, online encyclopedia Wikipedia, http://www.wikipedia.org

[3] James Gosling. Java (Programming Language), http://www.java.com

[4] Names Allaire, NetBeans-Fully-featured Java IDE, http://www.netbeans.org

[5] James Gosling, Welcome to java world.com: how-to feature and columns by Java expert; news; Java applets; sample code; tips, http://www.javaworld.com

[6] Pressman, Roger S." Software Engineering a Practitioner' Approach"

[7] John Osborn, JavaBeans: Developing Component Software in Java

[8] Doug Lea Concurrent Programming in Java: Design Principles and Pattern, Addison-Wesley, November,1996
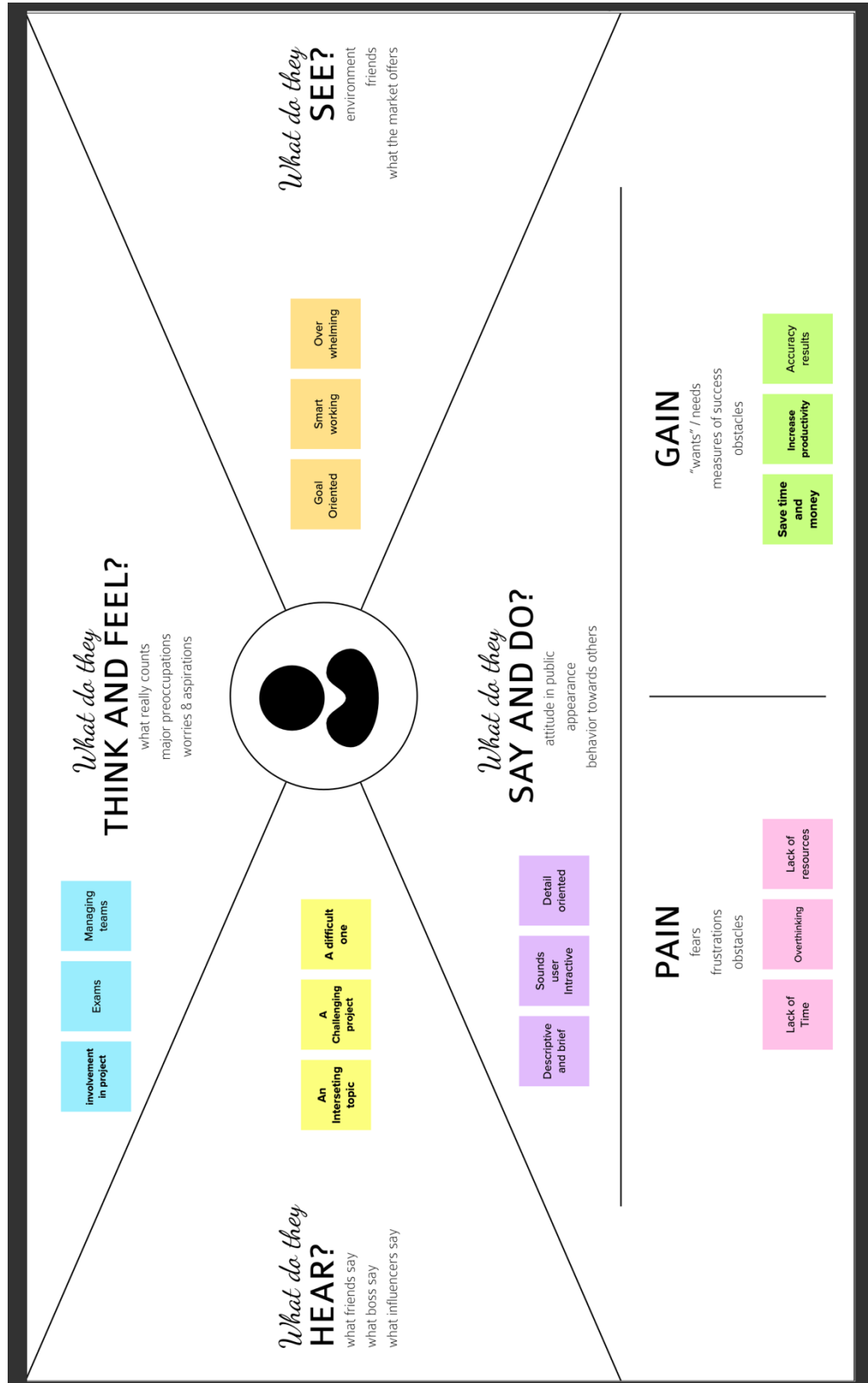
2.3 PROBLEM STATEMENT DEFINITION

Inventory management is a challenging problem in supply chain management. The problem faced by the company is that they do not have any system to keep track of inventory data. It is difficult for the retailer to record the inventory data. Every inventory stock manager's main problem is keeping track of how much stock is purchased and how much stock is spent.

A tool or system to aid the inventory management would be a beneficial tool in this area. Inventory management refers to managing the quantity, quality, location and transportation of various products utilized in manufacturing by various industrial organizations or in sales by various retailers.

Usually, Inventory Management systems are limited and fixed to a selected range of items and cannot be modified and extended based on the customer's needs. The Inventory Management System focuses on making it expandable and usable easily by the end user and with constant customer support to alter the use. Unlike other software that provides similar functionalities, Inventory Management System focuses on making it easier by adding details of various other entities that is a part of organization.

3. IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS

What do they
THINK AND FEEL?
what really counts
major preoccupations
worries & aspirations

What do they
SEE?
environment
friends
what the market offers

What do they
HEAR?
what friends say
what boss say
what influencers say

What do they
SAY AND DO?
attitude in public
appearance
behavior towards others

Involvement in project

Exams

Managing teams

An Intersecting topic

A Challenging project

A difficult one

Goal Oriented

Smart working

Over whelming

Descriptive and brief

Sounds user Intractive

Detail oriented

PAIN
fears
frustrations
obstacles

Lack of Time

Overthinking

Lack of resources

GAIN
"wants" / needs
measures of success
obstacles

Save time and money

Increase productivity

Accuracy results

3.2 IDEATION AND BRAINSTORMING

①

Choose your best "How Might We" Questions

Share the top 5 brainstorm questions that you created and let the group determine where to begin by selecting one question to move forward with based on what seems to be the most promising for idea generation in the areas you are trying to impact.

⏱ 10 minutes

PROBLEM

To develop an inventory management system for retailers both in small and medium scale. This will ultimately ultimately help customers and retailers

②

Brainstorm solo

Have each participant begin in the "solo brainstorm space" by silently brainstorming ideas and placing them into the template. This "silent-storming" avoids group-think and creates an inclusive environment for introverts and extroverts alike. Set a time limit. Encourage people to go for quantity.

⏱ 10 minutes

SOORIYA S

The application must include the present day inventory functions along with quantity for both the customers and the retailer	keep in track of high demand products	prediction of future sales with help of machine learning
Alerting stock inadequacy	User friendly interface	tracking and transportation functionality

PRANAV CHAITANYA

Feedback and rating from the customer	communication via email, information regarding the stocks.	expiry dates and discount for expiring products
plan appropriate strategic business plans and bring the plan noticable among the customers	RFID based product tracking	Tracking, recording, communicating with customers for exclusive offers

RAM SUNDAR A L

Storage of data in Spreadsheets	Indicating position of store in nearby area	Providing discount and keep point cards
Transactions maintained	Vital product stocks maintained uniformly	Linking billing with cloud so as to improve customer experience

SETHURAMAN S

Investment opportunities analysed and executed	Transparent billing system for product promotion	Income Tax filings
Free deliveries to near areas	Product delivery scheduling for smooth transport	Special discount alert

③

Brainstorm as a group

Have everyone move their ideas into the "group sharing space" within the template and have the team silently read through them. As a team, sort and group them by thematic topics or similarities. Discuss and answer any questions that arise. Encourage "Yes, and..." and build on the ideas of other people along the way.

⏱ 15 minutes

TIP
You can use the **Voting** session tool above to focus on the changed ideas.

Prediction of sales	success ratio of new arrivals	providing best products	Online purchases discount on delivery	Discount alerts and offers	customer service center

Prediction and analysis

Services

Features

SMS and E-mail alerts regarding the discount	Easy billing system using accounting softare	customer feedback transperancy
Ensure product availability	All time access of store and products	

Management

Managing the expiry nearing products	Feedback management system	Store management in retail form
Delivery management	Website and biling	Strategic planning

3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	• The customers are not satisfied with the retailers store since it doesn't have enough supplements and the deliveries were not made on time. • The retailers generally facing issues in recording the stocks and its threshold limit available.
2.	Idea / Solution description	• This proposed system will have a daily update system whenever a product is sold, or it is renewed more. • The product availability is tracked daily and an alert system in again kept on indicating those products which falls below the threshold limit. • All the customers can register their accounts after which they will be given a login credentials which they can use whenever they feel like buying the stocks. • The application allows the customers to know all the present time available stocks and also when the new stock will be available on the store for them to buy.
3.	Novelty / Uniqueness	• Certain machine learning algorithms are used to predict the seasonal high selling products which can be made available during that time. • Prediction of the best-selling brand of all certain products based on their popularity, price and customer trust and satisfaction will be implemented. • Notifications will be sent to the retailers if any product that the customers have been looking for is not available so that the product can be stocked up soon.

4.	Social Impact / Customer Satisfaction	• The customers will be highly satisfied since the wasting of time while searching for an unavailable product is reduced. • The workload of the retailers will be minimized if the system is automated every day and during every purchase. • The customer satisfaction will be improved for getting appropriate response from the retailers and that too immediately.

5.	Business Model (Revenue Model)	• Hereby we can provide a robust and most reliable inventory management system by using:
		   o ML algorithms for all the prediction purposes using all the past dataset since datasets are undoubtedly available in huge amounts.
		   o Can deploy the most appropriate business advertising models.
		   o To establish a loss preventing strategy.
		   o And to ensure any time, any place availability of products system.

6.	Scalability of the Solution	• Implementation of anyone and anywhere using system can be helpful for even a commoner to buy the products. • Daily and Each time purchase updation of the stock for preventing inventory shrinkage.

3.4 PROBLEM SOLUTION FIT

1. CUSTOMER SEGMENT(S) `CS`

1.Retailers

2.Wholesalers

3.Business men

6. CUSTOMER CONSTRAINTS `CC`

- Low Budget
- Simple and Understandable
- User friendly

5. AVAILABLE SOLUTIONS `AS`

- Customer feedback
- Counting Products in Stock
- High Demand Product Information.

2. PROBLEMS / PAINS `J&P`

1.Maintaining the ledgers

2.Trust issues

3.Mismatching data

9. PROBLEM ROOT CAUSE `RC`

There is a huge products details in the stock so the maintaining stock ledger is difficult.

7. BEHAVIOUR `BE`

Feel work and stress-free to manage the hard stock pieces of information.

3. TRIGGERS `TR`

Hearing about the web application through social media, neighborhood retailers, and friends.

4. EMOTIONS: BEFORE / AFTER

BEFORE: Difficult to maintain, Trust issues

AFTER: More Profit, Best Analysis

10. YOUR SOLUTION `SL`

- Benefiting the retailers by scanning the product barcode and generating the invoice.
- By Collecting regular Orders and customer details the high-demand products will be identified.

8. CHANNELS of BEHAVIOR `CH`

8.1 ONLINE
Check the Stock information whenever needed.

8.2 OFFLINE
Add a new variety of product details to the stock.

1. CUSTOMER SEGMENT:

Our Proposed Model targets retailers, wholesalers and businessmen to have a track on their stock availability.

2. JOBS-TO-BE-DONE / PROBLEMS:

The problem faced by the retailers is that they must maintain large record of their sales i.e., Ledgers, also the entire process works upon the trust that the owner has on the retailers. Another issue is that, the data processed and stored in the ledger won't match sometimes.

3. TRIGGERS:

Hearing about the web application through social media, neighborhood retailers as well as friends.

4. EMOTIONS: BEFORE / AFTER:

- Before: Difficult to maintain, Trust issues
- After: Increased Profit, Best Analysis

5. AVAILABLE SOLUTIONS:

- Customer Feedback
- Continuous counting of products in Stock
- High demand product Information storage

6. CUSTOMER:

They need a low budget as well as easily understandable even for laymen and a system that is purely safe and more importantly user-friendly in nature.

7. BEHAVIOUR:

Customers should feel stress-free to organize and manage all the hard stock pieces of information.

8. CHANNELS OF BEHAVIOUR:

8.1. ONLINE: Check the stock information whenever necessary.

8.2. OFFLINE: Add a new variety of product details to the stock.

9. PROBLEM ROOT CAUSE:

Since the availability of large quantity stocks, maintaining the ledger becomes difficult.

10. OUR SOLUTION:

- Benefitting the retailers by scanning the QR Code and generating the invoice.
- By collecting regular order and customer details on high-demand products.

4.REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS:

FR. No.	Functional Requirement (Epic)	Sub Requirement (Story/Sub-Task)
FR-1	User Registration	Registration through registration form. Registration through One-Tap Google Sign-in.
FR-2	User Authentication and Confirmation	Authentication via Google Authentication. Confirmation via Email. Confirmation via OTP.
FR-3	Product management	Quickly produce reports for single or multiple products. Track information of dead and fast-moving products. Track information of suppliers and manufacturers of the product.
FR-4	Audit Monitoring	The technique of tracking crucial data is known as audit tracking. Monitor the financial expenses carried out throughout the whole time (from receiving order of the product to delivery of the product).
FR-5	Historical Data	Data of everything should be stored for analytics and forecasting.
FR – 6	CRM (Customer Relationship Management)	Track the customer experience via ratings given by them. Get customer reviews regularly or atleast at the time of product delivery to work on customer satisfaction. User-friendly GUI to increase the customerbase from only techies to normal people.

FR - 7	Security Policy	User data collected must be as secure as possible. User data must not be misused. They can only be used for user preferred advertising purposes.

4.2 NON-FUNCTIONAL REQUIREMENTS:

The non-functional requirements of the proposed solution are as follows,

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The UI should be accessible to everybody despite of there diversity in languages. People with some impairments should also be able to use the application with ease. (Example, integrate google assistant so that blind people can use it). .
NFR-2	Security	The security requirements deal with the primary security. Only authorized users can access the system with their credentials. Administrator or the concerned security team should be alerted on any unauthorized access or data breaches so as to rectify it immediately.
NFR-3	Reliability	The software should be able to connect to the database in the event of the server being down due to a hardware or software failure. The users must me intimated by the periodic maintenance break of the server so that they will be aware of it.
NFR-4	Performance	Performance of the app should be reliable with high-end servers on which the software is running.
NFR-5	Availability	The software should be available to the users 24/7 with all functionalities working. New module deployment should not impact the availability of existing modules and their functionalities.
NFR-6	Scalability	The whole software deployed must be easily scalable as the customer base increases.

5.PROJECT DESIGN

5.1 DATA FLOW DIAGRAM:

Data Flow Diagram
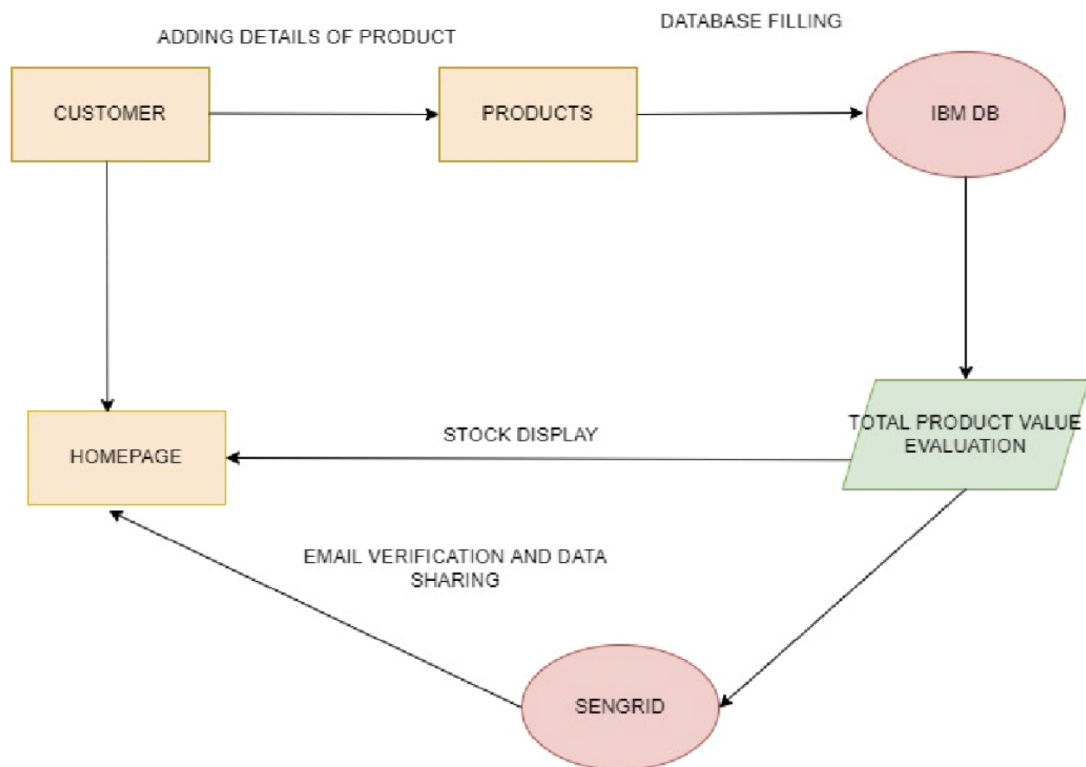
5.2 SOLUTION & TECHNICAL ARCHITECTURE:

5.2.1. Solution Architecture
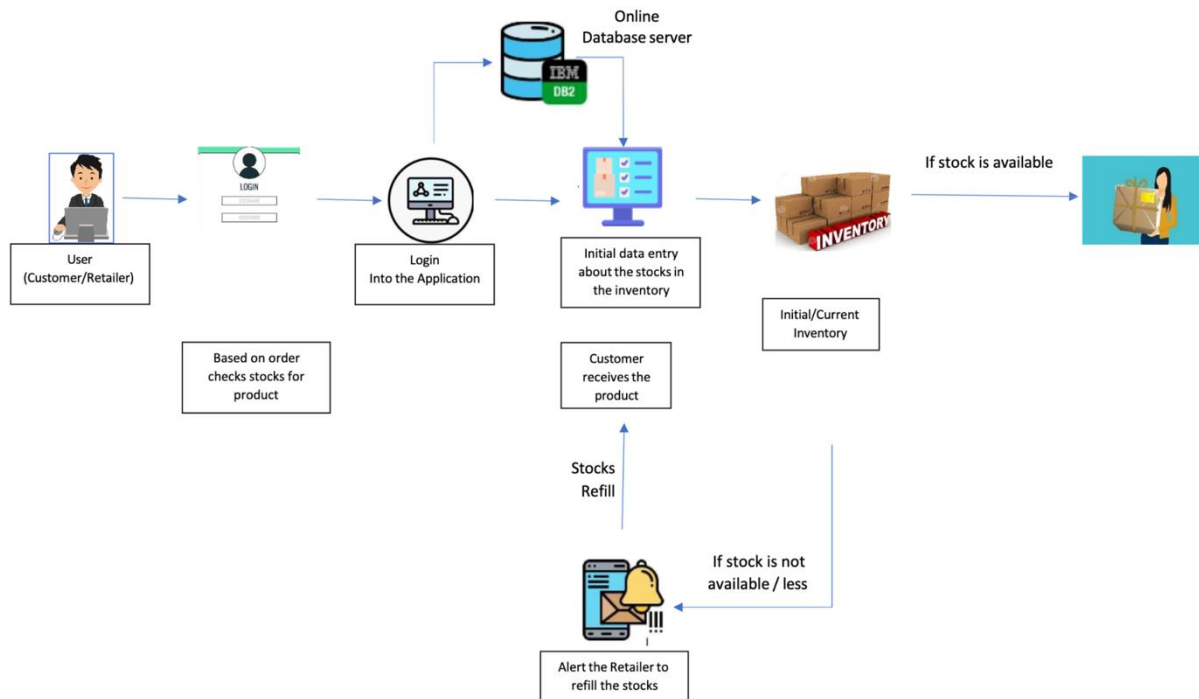
5.2.2. Technology Architecture
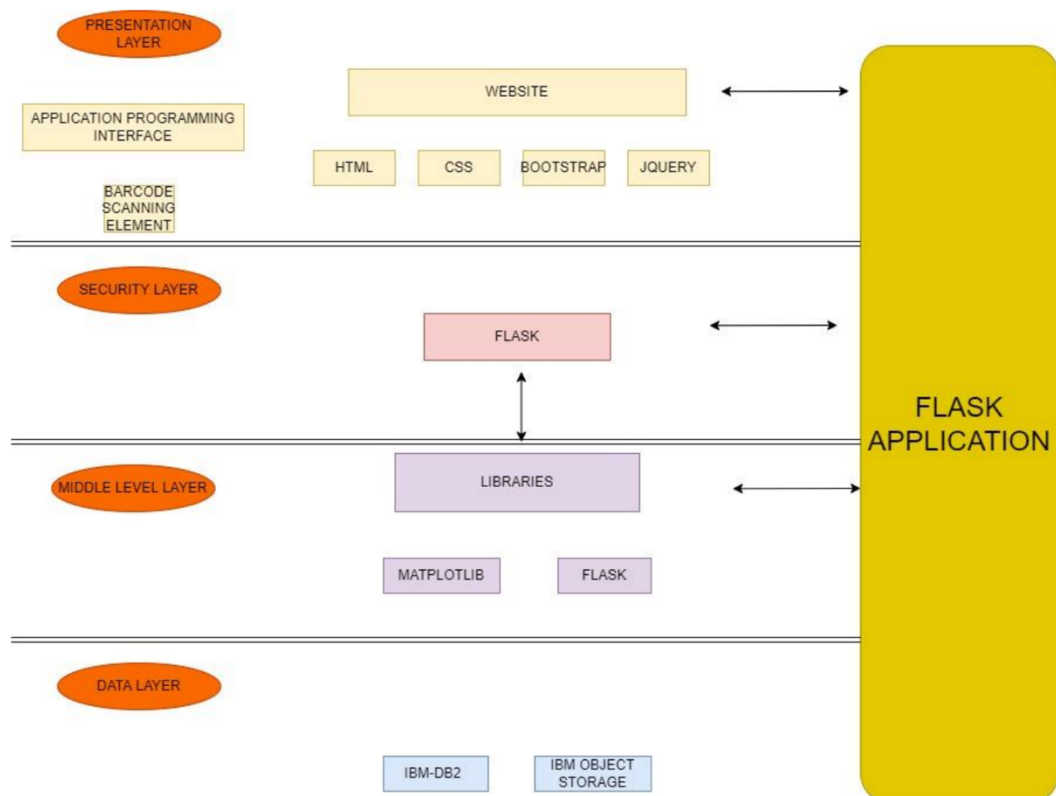
5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Retailer	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirmingmy password.	I will be redirected to loginpage	High	Sprint-1
		USN-2	As a user, I will receive confirmation emailonce I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can verify the OTP number	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access my account / dashboard	High	Sprint-1
	Dashboard	USN-6	As a user, I can update stock in & out count details	Updating can be made through barcode scanning	High	Sprint -2
	Dashboard	USN-7	As a user, I can check the low stock detailsthrough alert message	Alert message can be received by registered mail	High	Sprint -1
		USN-8	As a user, I can check the total product details	I can view the value of total products in the stock	Medium	Sprint -2
		USN-9	As a user, I can check the high demand product details	I can update sales detailsof the products	High	Sprint -2
		USN-10	As a user, I can generate the invoice details	I can add incoming stockdetails	High	Sprint -1

6.PROJECT PLANNING AND SCHEDULING

6.1 SPRINT PLANNING AND ESTIMATION:

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	User can register for the application by entering my email, password, and confirmingmy password, with maximum security.	5	High	Pranav Sooriya
Sprint-1		USN-2	User can register for the application through Gmail	5	High	Ram
Sprint-1	Confirmation	USN-3	User will receive confirmation emailoncethat they have registered for the application	5	Medium	Sethu
Sprint-1	Login	USN-4	User can log into the application byentering email & password	5	High	Sooriya
Sprint-1	Admin Panel	USN-5	The database availability and the services to be provided are checked			Ram
Sprint-2	Dashboard	USN-6	view the products which are available in theinventory	10	High	Pranav Sooriya
Sprint-2	Stocks update	USN-7	Add the products which are not available inthe inventory and then restock the productsto make them available	10	Medium	Sethu Ram

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Sales prediction	USN-8	be able to get access to sales report to predict the which product runs out of stocksfast. So it helps me to predict there stock of product.	20	High	Pranav Sooriya
Sprint-4	Customer interface	USN-9	to get in touch with customer care to enquire the doubts and problems we have faced.	10	Medium	Ram Sooriya Sethu Pranav
Sprint-4	Feedback	USN-10	to send feedback forms to resolve issues and improve the system.	10	Medium	Pranav

6.2 SPRINT DELIVERY SCHEDULE:

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	27 Oct 2022	30 Oct 2022	20	30 Oct 2022
Sprint-2	20	6 Days	12 Nov 2022	13 Nov 2022	20	13 Nov 2022
Sprint-3	20	6 Days	15 Nov 2022	17 Nov 2022	20	17 Nov 2022
Sprint-4	20	6 Days	19 Nov 2022	19 Nov 2022	20	19 Nov 2022

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) periteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Sprint 1: 3.33; Sprint 2: 3.33; Sprint 3: 3.33; Sprint 4: 3.33

6.3 REPORTS FROM JIRA:

1. User can register for the application through Gmail.
2. User can register for the application by entering my email, password, and confirming my password, with maximum security.
3. User will receive confirmation email once, that they have registered for the application.
4. The database availability and the services to be provided are checked.
5. Add the products which are not available inthe inventory and then restock the products to make them available.

These are some of the User task that the customers/users are free to do under the system. Also, all the User side, retailer side process and several other processes have been updated in the JIRA software and it gave us the percentage of completion on the planned day.

In the milestones, we implemented the roadmap section and planned the dates of completion of our project accordingly. After the completion of each task, the bar shows the start date as well as the end date for the task. Hence, we were also able to keep track of the work done by each of us and the overall completion of our team.

The software was on the whole an effective one which also motivated us to do the work within the given time frame. Reports given by it were the building blocks of the successful completion of our entire **Inventory Management System** project.

7. CODING AND SOLUTIONING

7.1 FEATURE 1:

CENTRALISED INVENTORY MANAGEMENT:

The software must enable you to manage your business inventory in a centralized manner. Good inventory management software is not about a bunch of single modules operating separately. It is about ensuring that all modules are interconnected so that information is available in one centralized place.

REPORTING OF BUSINESS ACTIVITIES:

One of the major functions of inventory management software is its ability to generate meaningful reports that give you a clear picture of inventory. Reports play a key role in decision making which can help cut costs, increase productivity, and improve profits. Inventory management reports allow you to improve overall efficiency of inventory management.

AUTOMATION:

An inventory management software must have the automation feature whereby you can delegate tasks to the system. Even if you believe that you can handle inventory tasks manually in the beginning, it will not take long before your inventory becomes complex, and you need torely on a software solution to manage it all.

7.2 FEATURE 2:

FLEXIBLE:

When talking about inventory, it is vital that one of the functions of inventory management software is to be flexible to suit your business requirements. No two business functions are alike and similarly, the inventory management system must enable you to customize and define parameters as per your needs.

\\

OPTIMUM INVENTORY LEVELS:

A must-have feature of inventory management software is the ability to always manage the right level of inventories. For example, you need to know when the stock levels are low and when they need replenishment. The right inventory management system will have features in place whereby you can get to know when the stock falls below a certain level. This allows you to place orders on the raw materials or other components as and when required.

CONTROL OVER USER ACCESS AND PERFORMANCE:

The inventory management system must have the feature to control whereby you can set access permissions to your employees. Not every employee needs access to every part of the inventory. While some may need access to just the stock levels, others may require it to the costs, and so on.

7.3 DATABASE SCHEMA:

DBMS Architecture
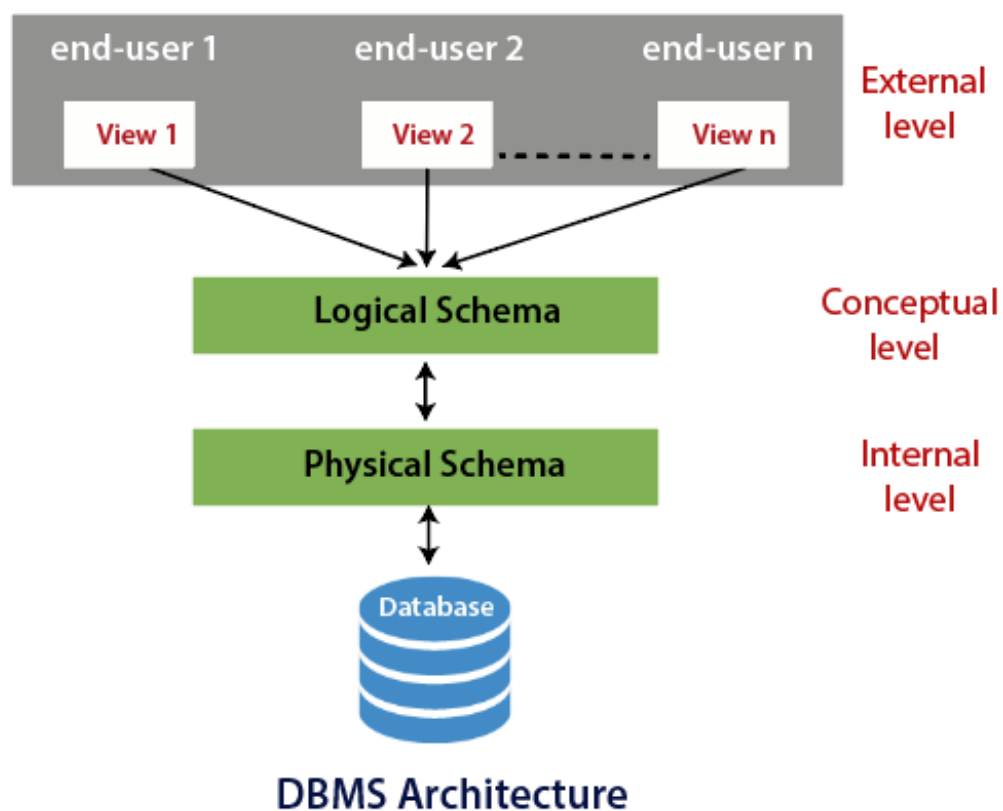
USER APPLICATION:

In the Users application, you create and manage user records. User records contain usernames, passwords, and security profiles that determine the applications, options, and data to which a user can access. A user record can be associated with only one person record.

RDBMS (RELATIONAL DATABASE MANAGEMENT SYSTEM):

All modern database management systems like SQL, MS SQL Server, IBM DB2, ORACLE, My-SQL, and Microsoft Access are based on RDBMS. It is called Relational Database Management System (RDBMS) because it is based on the relational model introduced by E.F. Codd.

DB FILES:

A file with dB extension is a generic database file to store data. There are no official specifications to be followed for such a database file. Data is organized in a structured format inside the file in the form tables, fields, data types, and field values.

User Data will be connected to RDBMS via network, The data that are stored in RDBMS arerelated to each file formats after the data are related to each other they will saved in DATABASE FILES

8. TESTING

8.1 TEST CASES:
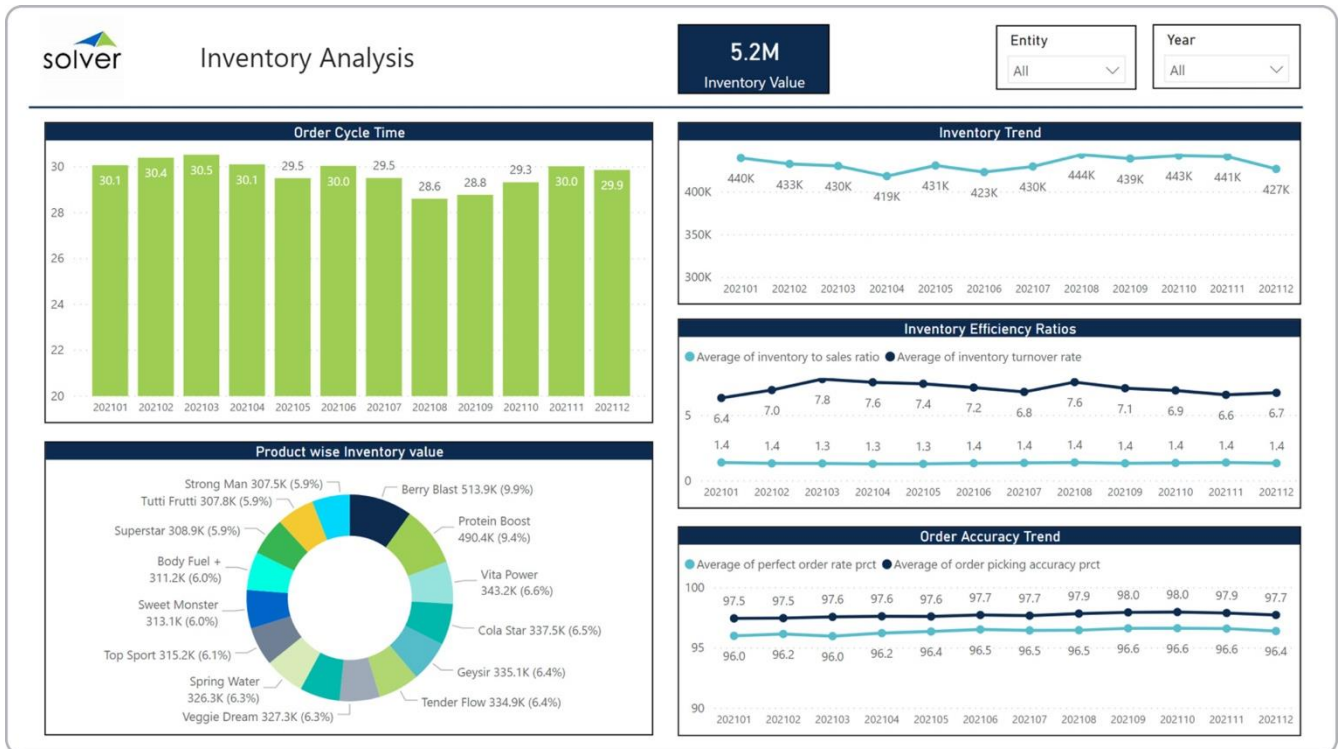
8.2 USER ACCEPTANCE TESTING

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the INVENTORY MANAGEMENT SYSTEM project at the time of the release to User Acceptance Testing (UAT)

2.Defect Analysis

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	1	4	2	3	2
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	5	2	4	15	12
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	1	0	1	0
Totals	9	10	11	21	27

3. Test Case Analysis

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	25	0	0	25
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	4	0	0	4
Final Report Output	11	0	0	11
Version Control	2	0	0	2

9. RESULTS

PERFORMANCE METRICS

				Date	03-Nov-22					
				Team ID	PNT2022TMID21428					
				Project Name	INVENTORY MANAGEMENT SYSTEM					
				Maximum Marks	4 marks					
Test case ID	**Feature Type**	**Component**	**Test Scenario**	**Pre-Requisite**	**Steps To Execute**	**Test Data**	**Expected Result**	**Actual Result**	**Status**	**Commnets**
LoginPage_TC_OO1	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on url.	None	1.Enter URL and click go 2.Verify login/Register popup displayed or not	the home page of the webpage	Login/Signup popup should display	Working as expected	Pass	
LoginPage_TC_OO2	UI	Home Page	Verify the UI elements in Login/Signup popup	Home	1.Enter URL and click go 2.Verify login/Singup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link	the login and registration	Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.New customer? Create account link e.Last password? Recovery password link	Working as expected	Pass	Steps are clear to follow
LoginPage_TC_OO3	Functional	Home page	Verify user is able to log into application with Valid credentials	Username and password	1.Enter URL and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username:ramsundar@student.tc e.edu	User should navigate to user account homepage	Working as expected	Pass	
LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with InValid credentials	Username an password	1.Enter URL and click go 2..Enter InValid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	password: Testing@123	Application should show 'Incorrect email or password ' validation message.	Working as expected	Pass	
LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with InValid credentials	Login first	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter Invalid password in password text box 5.Click on login button	Username:ramsundar@student.tc e.edu password: Testing@123	Application should show 'Incorrect email or password ' validation message.	Working as expected	Pass	
LoginPage_TC_OO5	Functional	Login page	Verify user is able to log into application with InValid credentials	Login first	1.Enter URL and click go 2.Click on My Account dropdown button 3.Enter InValid username/email in Email text box 4.Enter Invalid password in password text box 5.Click on login button	Username:ramsundar@student.tc e.edu password: Testing@123	Application should show 'Incorrect email or password ' validation message.	Working as expected	Pass	

ID	PNT2022TMID21428								
					NFT - Risk Assessment				
S.No	**Project Name**	**Scope/feature**	**Changes**	**Hardware Changes**	**Software Changes**	**Impact of Downtime**	**Load/Volume Changes**	**Risk Score**	**Justification**
1	authentication	New	Moderate		Moderate		>30 to 50 %	ORANGE	Required feature
2	Management	New	High		Moderate		>30 to 50 %	RED	Indispensable feature
3	Containerization	New	Low		Moderate		>5 to 10%	ORANGE	Feature to make it deployable
					NFT - Detailed Test Plan				
			S.No	**Project Overview**	**NFT Test approach**	**cies/Risks**	**Approvals/SignOff**		
			1	FOR RETAILERS	Stress Test	User Credentials	Approved		

10.ADVANTAGES & DISADVANTAGES

ADVANTAGES:

1. It helps to maintain the right amount of stocks

2. It leads to a more organized warehouse
3. It saves time and money
4. Improves efficiency and productivity

5. A well-structured inventory management system leads to improved customer retention

6. Schedule maintenance

7. Reduction in holding costs

DISADVANTAGES:

1. Bureaucracy

2. Impersonal touch

3. Production problem

4. Increased space is needed to hold the inventory

5. Complexity

6. High implementation costs

7. Even with an efficient inventory management method, you can control but not eliminate business risk.

8. The control of inventory is complex because of the many functions it performs. It should thus be viewed as a shared responsibility.

11.CONCLUSION

The Inventory Management System is developed and designed for recording and managing the inventory of an organization. It can also be used for different institutions with fewer modifications as per requirement. the system can be easily updated as the other institutional requirements may not be integrated on our project.

After the continuous effort, testing and debugging the current system is ready to be implemented in an organization.

The System development Project has developed the ability on us to implement the theoretical Knowledge we have gained during BIM study in the real-life scenario. Some of the lesson that we had learned from the project are: -

- Learned communication skill, leadership, quality and to make good public relations.
- Know the value of time and disciple.
- Sharpen the knowledge of working cooperating in a working organizational environment and workplace.
- Work in a group and make group decisions.

12. FUTURE SCOPE
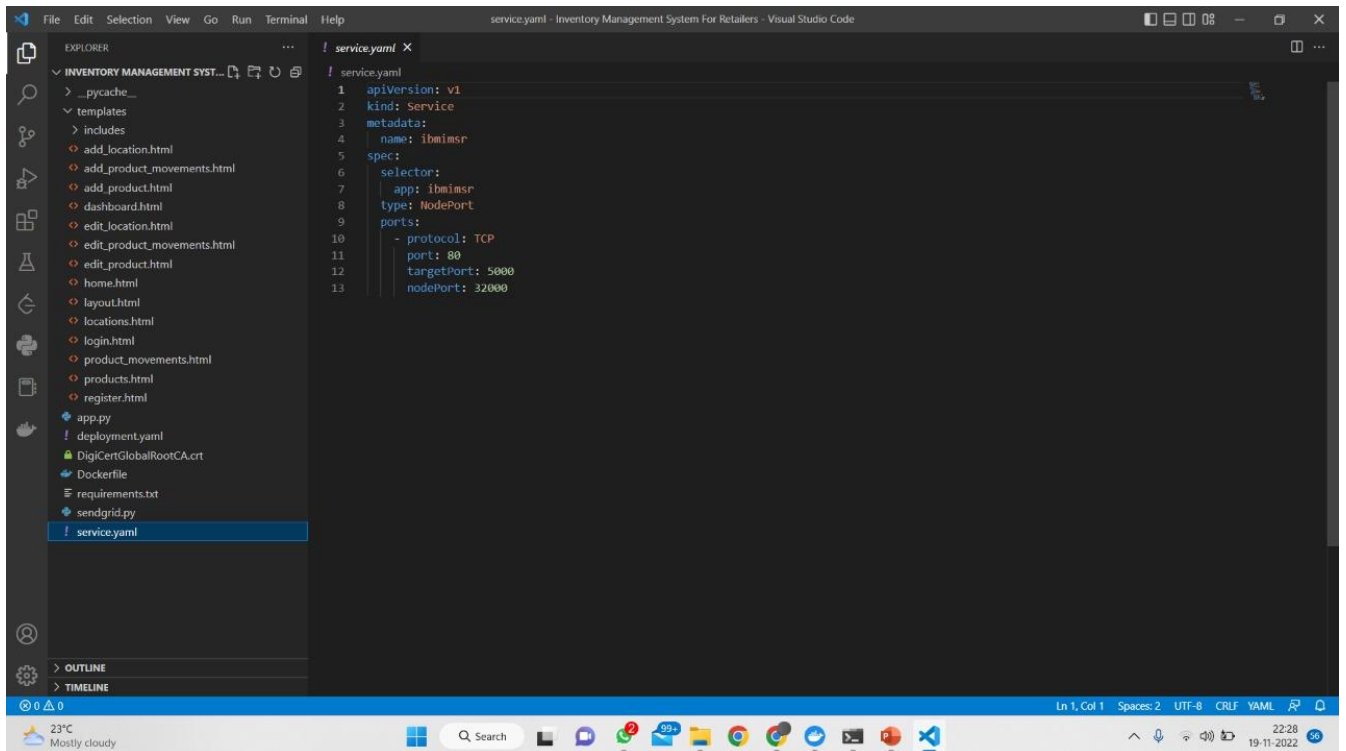
1. Collaboration with supply chain partners, coupled with a holistic approach to supply chain management, will be key to effective inventory management.

2. The Fourth Industrial Revolution will continue to drive technological change that will impact the way that we manage inventories.

3. Successful companies will view inventory as a strategic asset, rather than an aggravating expense or an evil to be tolerated.

13. APPENDIX

Source code

GitHub & Project Demo Link

https://github.com/IBM-EPBL/IBM-Project-10337-1659169644