Retail Store Stock Inventory Analysis

A Project Report

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Submitted by

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Submitted to the IBM

Professional Readiness Program for Innovation, Employability and Entrepreneurship..

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ABSTRACT

The retail industry is becoming rigorously competitive and narrowly profitable that retailers find themselves in a dilemma of neither excessive in-stock nor depleted out-of- stock is negotiable. This report investigates the answer to the question by providing a comprehensive evaluation of substantial inventory management models which are widely used by retailers throughout the history. Then it commences with the transformation that Big Data Analytics (BDA) made on inventory control. Results from literature review and inventory management practices show that BDA has made a great contribution to demand forecast improvement and inventory diminution. In particular, the application of BDA has significantly enhanced the preciseness in demand forecast and the visibility in inventory tracking, which conjointly support the reduction in inventory level. The report articulates the core problem of inventory management is the trade-off between shortage costs and overage costs. Again, the "performance frontier" graph indicates a pragmatic solution is introducing innovative to shift the efficiency curve. In this context, that innovative is BDA. The report finds the prospects of integrating BDA in the conventional inventory management techniques and promoting the viability and appropriateness of these models in the big-data era. However, the

limitations of BDA underlie data challenges, processing challenges and management challenges. Finally, the connection between BDA and tradition operation concepts is presented with insightful lessons from the personal perspective.

INTRODUCTION

Inventory management is the process of ordering, handling, storing, and using a company's non- capitalized assets - AKA its inventory. For some businesses, this involves raw materials and components, while others may only deal with finished stock items ready for sale.

Inventory control is vitally important to almost every type of business, whether product or service oriented. Inventory control touches almost every facet if operafions. A proper balance must be struck to maintain proper inventory with the minimum financial impact on the customer. Inventory control is the acfivifies that maintain stock keeping items at desired levels. In manufacturing since the focus is on physical product, inventory control focuses on material control.

"Inventory" means physical stock of goods, which is kept in hands for smooth and efficient running of future affairs of an organizafion at the minimum cost of funds blocked in inventories. The fundamental reason for carrying inventory is that it is physically impossible and economically impracfical for each stock item to arrive exactly where it is needed, exactly when it is needed.

Inventory management is the integrated funcfioning of an organizafion dealing with supply of materials and allied acfivifies in order to achieve the maximum co-ordinafion and opfimum expenditure on materials. Inventory control is the most important funcfion of inventory management and it forms the nerve Center in any inventory management organizafion. An Inventory Management System is an essenfial element in an organizafion. It is comprised of a series of processes, which provide an assessment of the organizafion's inventory

Either way, inventory management all comes down to balance - having the **right amount** of stock, in the **right place**, at the **right fime**. And this guide will help you achieve just that. Retail is the general term used to describe businesses that sell physical products to consumers. While not exclusive to retail, inventory management tends

to play more of a role in this industry than any other. We'll therefore be focusing mainly on inventory management from a retail perspecfive within this guide.

Retail can be split into several areas:

Offline. Where a company sells via a brick-and-mortar store or physical locafion

Online. Where a company sells over the internet via an ecommerce website or marketplace.

Mulfichannel. Where a company sells in mulfiple different places, usually a combinafion of online websites and marketplaces.

Omni channel. Where a company provides a unified, integral experience for customers across all the different online and offline channels it sells on.

Businesses may also choose to trade via **wholesale** channels. This involves selling inventory (usually in bulk) directly business-to-business (B2B) or taking part in B2B Commerce.

A company's inventory will therefore need to be managed in accordance with which of these retail models it operates within.

1(A) Project Overview:

- To Know fundamental concepts and can work on IBM Cognos Analytics
- Able to understand the value of Data Analytics
- Gain a broad understanding of plotting different graphs.
- Able to create meaningful dashboards
- It could create the ability to develop a site for a client purpose for managing the store stocks.
- It could create an ability to handle the enormous amount of data in a dashboard.
- In the conclusion of the project we can know the inventory management skills, creating a report and maintaining the data for future use, and also we can have an alternate for all the barriers.

1(B) Purpose:

- To provide operations with an ongoing supply of materials
- To maintain accuracy and current stock position
- Real-time inventory tracking helps you improve inventory management and ensures that you have optimal stock available to fulfil orders
- To create a user friendly and benefit able platform for aclient.
- To avoid the manual inventory management.
- It ensures the level of administration in a better way
- For better Forecasting.
- A good handle on your inventory management can ensure shipping, receiving and fulfilment processes run smoother, reducing errors and customer complaints that would

    inhibit growth.
- All the things in will be displayed as data visualization chart.

2. LITERATURE SURVEY

The survey is a recognized and accepted part of modern society. It is one of the means by which society keeps it informed, a way of bringing under central situations of increasing size and complexity of obtain ng percepfive and standard of com parson. A survey gives an oversight of a field and is thus disfinguishing from a sort of study which consists of a m acroscopic examinafion of a turf; it is a map rather than a detailed plan. The survey must be planned before a start is made The literature survey plays an essenfial role in the research process. It is a source from where research ideas are drawn and developed into concepts and finally theories. It also provides the researcher a bird's eye view about the research done in that area so far.
Depending on what is observed in the literature review, the researcher will understand where his/her research stands. Here in this literature survey, all primary, secondary and terfiary sources of informafion were searched.

The study of literature on Retail Store Stock Inventory Analysis in general and in library and informafion science in parficular revealed several efforts made by the scholars in different disciplines.

The purpose of the literature survey is to collect a lot of number of journal's article about a particular topic like as I have collected --- Five number of articles with abstract. The main aim of this collection is to provide a guideline and brief information for researcher, user a dot her person who want information about this topic.

2(A) Existing problem:

Inconsistent Tracking

Warehouse Efficiency

Inaccurate Data

Changing Demand

Inventory Loss

Manual Documentation

Problem Stock

Supply Chain Complexity

Poor Communication

2(B) References:

Paper: 1). Essentials of Inventory Management
Author: Max Muller

Paper: 2).Inventory Management Explained
Author: David J

Paper:3).Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse
Author: Gwynne Richar

Paper:4).Analysis of Retail Inventory and Financial Performance
Author: Maria Pitari

Paper:5).Improving Sales through Inventory Reduction: A Retail Chain Case Study
Author: M. G. Mattos, J. E. Pécora Jr, T. A. Briso

These are the research paper and articles used for references in this project.

2(C) Problem Statement Definition:

A problem statement is **a concise description of the problem or issues**

a project seeks to address. The problem statement identifies the current

state, the desired future state and any gaps between the two

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	A Local Broker	To supply goods to local area shops	I am unable to safisfy the extensive needs	Due to the sudden change in demands of goods from the customers and insufficient storage capacity	hopeless
PS-2	A beginner trader	Sell/buy stocks on my phone	It leads to losses	Of insufficient knowledge on how stocks move over years based on previous data's	depressed

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PS-1: Here we create a statement of problems that provided by user/clients itself. the problem is demand of goods and insufficient storage capacity, as a data analytics crew we try to resolve the problem in our project

PS-2: In this statement the usere/client don't Know to buy or sell the stocks at right time by the data visualization we used to solve this problem by creation of statistics of previous year stocks.

IDEATION & PROPOSED

3(A) Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and atitudes.

Through this Empathy map canvas we used to find the things that we don't know while the project when we started, and we finally gets some idea about other clients by thy what say, feel, hear, and their

difficulfies…

3(B) Ideation & Brainstorming:

Brainstorming provides a free and open environment that encourages everyone within a team to parficipate in the creafive thinking process that leads to problem solving. Priorifizing volume over value, out-of-the-box ideas are welcome and built upon, and all parficipants are encouraged to collaborate, helping each other develop a rich amount of creafive solufions

Step-1: Team Gathering, Collaborafion and Select the Problem Statement

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⏱ 5 minutes

PROBLEM

How we might eliminate the issues faced in Stock Inventory Managemnet?

Key rules of brainstorming

To run an smooth and productive session

Stay in topic.

Encourage wild ideas.

Defer judgment.

Listen to others.

Go for volume.

If possible, be visual.

Step-2: Brainstorm, Idea Lisfing and Grouping

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕐 10 minutes

VIKRAMAN

MANAGE MULTI LOCATION WAREHOUSE THROUGH A UNIFIED DATABASE	TO IDENTIFY PROFIT MARGIN BY STYLE, MODEL, PRODUCT ETC	AUTOMATED PROCESS FOR STOCK ALLOCATION

VISHVA JAIGANESH

CREATE A CENTRALIZED RECORD OF ALL PRODUCTS	COMBINE SALES AND INVENTORY DATA	TO MAINTAIN ACCURATE COUNTS
TO BUILD A STOCK RECIEVING PROCESS	TO LOCK THE PRODUCT DATA	

VISHWA

DIFFERENT COLOURS OF THE PRODUCT SHOULD BE MAINTAINED	TO HORD ACCORDING TO THE DEMAND AND SEASON OF THE PRODUCT	TO IDENTIFY THE POPULARITY OF THE PRODUCTS BY LOCATION
TO IDENTIFY POSSIBLE NEW PRODUCTS SIMILAR TO EXISTING ONE'S	TO AVOID OVER BUYING OF PRODUCTS	

SHYAM SUNDAR

TO MAINTAIN LOGS FOR BOTH WHOLESALE SIDE AND RETAILER	TO IDENTIFY AND GROUP SIMILAR PRODUCTS	TO BUY IN BULK TO IN ACCORDING TO THE DISCOUNT RATE
TO INCREASE/DECREASE PRODUCTS TREND CURVE		

3.Group Ideas:

③

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

⏱ 20 minutes

TIME AND LOCATION BASED

TO HOARD ACCORDING TO THE DEMAND AND SEASON OF THE PRODUCT	MANAGE MULTI LOCATION WAREHOUSES THROUGH UNIFIED DATABASE	TO IDENTIFY POPULARITY OF THE PRODUCTS
TO INCREASE-DECREASE PRODUCT BY SEASON	TO AVOID OVER BUYING OF PRODUCTS	

INVENTORY,LOGISTICS

MANAGE MULTI LOCATION WAREHOUSES THROUGH UNIFIED DATABASE	AUTOMATED PROCESS FOR STOCK ALLOCATION	CREATE A CENTRALIZED RECORD OF ALL PRODUCTS
COMBINE SALES AND INVENTORY DATA	TO BUILD A STOCK RECEIVING PROCESS	TO MAINTAIN ACCURATE STOCK COUNTS
TO LOG THE PRODUCT DATA	TO MAINTAIN LOGS FOR BOTH WHOLESALE AND RETAIL	TO BUY IN BULK TO IN ACCORDING TO THE DISCOUNT RATE

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

PRODUCT BASED

TO ANALYZE AND DISCONTINUE THE PRODUCT WHICH HAS LESS PROFIT MARGIN	DIFFERENT COLORS OF THE PRODUCT	TO IDENTIFY POPULARITY OF THE PRODUCT BY LOCATION
TO IDENTIFY POSSIBLE NEW PRODUCTS SIMILAR TO EXISTING POPULAR ONES	TO IDENTIFY AND GROUP SIMILAR PRODUCTS	TO BUY IN BULK ACCORDING TO THE DISCOUNT RATE

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3(C)Proposed Solution:

Proposed Solufion means the technical solufion to be provided by the Implementafion agency in response to the requirements and the objecfives of the Project.

S.No.	Parameter	Descripfion
1.	Problem Statement (Problem to be solved)	The example used here will be a Fruit shop owner who's owning a small shop and a small inventory and the problem faced by him/her is how to manage the inventory of the goods as per the demand and the goodness of the fruit.
2.	Idea / Solufion descripfion	1. As per inventory management sohware we can see which stock is having the most movement and which has the least and restock according to the need 2. if the stock(fruit) is starfing to enter the rofing stage then the vendor can move that stock to another processing industry(juice shop)where there they will process and sell it in another model

| 3. | Novelty / Uniqueness | 1. Let it be restocking of stocks according to the demand we can priorly idenfify what season is coming and what fruit will be mostly demanded for and stock it according to the need. |
| | | 2. The unique idea from this model will be if the fruits start entering into the rofing stage then the sohware will update it and place an alert to move that stock out to another person (juice stall) so that |

| | | the fruit is not wasted completely. |

| 4. | Social Impact / Customer Safisfacfion | 1. By this solufion method the customer will always get a fresh and perfect fit goods according to their need be it fresh fruit or be it a fruit juice. |
| | | 2. A posifive awareness will be spread on not to waste any food items. |

| 5. | Business Model (Revenue Model) | 1. This idea business model will increase the number of sales in accordance to quanfity of stock available because the stocks are only stored in the warehouse depending only upon the demand from the customers.

2. If suppose the the vendor buys the banana(per dozen) for Rs.5/dozen there will be revenue here from two different ways :

    a. Will be by selling the fresh bananas directly to customer at a good amount of margin keep it Rs.14/dozen.

    b. The other will be if the banana starts approaching the rofing stage then the stock can be sold to the juice vendor at a lesser margin keep itRs.7/dozen.

3. This method will result in comparafively no loss from the price of stock bought from the only the profitability will change depending on how much margin it sells of the above two. |

6.	Scalability of the Solufion	The scalability on this model is high as there involves no wastage of food and the inventory space can be managed very efficiently and since the percentage of loss occurring is very less compared to other models and it is very suitable for small fruit shops.

3(D)Problem Solution fit:

Problem-solufion fit is a term used to describe the point validafing that the base problem resulfing in a business idea really exists and the proposed solufion actually solves that problem

Problem-Solution Fit

1. CUSTOMER SEGMENT(S) CS
Who is your customer?
The customer here is a "Fruit Shop Owner"

6. CUSTOMER LIMITATIONS EG. BUDGET, DEVICES CL
What limit your customer to act when problem occurs?
Spending power, No cash in pocket, Risk factor to an extent.

5. AVAILABLE SOLUTIONS PLUSES & MINUSES AS
What solution are available to the customer when he/she is facing the problem? What he/she tried in the past?
- The sudden changes in demand which is directly proportional to the price surge can be identified previously and stocked accordingly.
- He/she tried to predict the surges and drops according to what they only experienced.

2. PROBLEMS / PAINS + ITS FREQUENCY PR
Which problem do you solve for your customer?
- Periodic changes according to season
- Daily Transportation costs
- Locating the warehouse for restocking
- Short life of the fresh fruits
- Sudden surge in prices based on demands

9. PROBLEM ROOT / CAUSE RC
What is the root of every problem from the list?
- People think that managing a inventory through a digital form will be difficult and the managing the software will cost too much money.
- People have kept a mindset that increase/decrease of demand cannot be predicted before itself.

7. BEHAVIOR + ITS INTENSITY BE
What does your customer do about / around / directly or indirectly relate to the problem?
- They try the interface for overcoming of the problem but then if they find it complicated or not efficient enough, they stop using it.
- Indirectly related will be them attending workshops where an effective inventory management technique will be shared information about.

3. TRIGGERS TO ACT TR
What triggers customer to act?
- Seeing the immense wastage of fruits due to less sales
- Reading about innovative ideas on better management on the internet.

4. EMOTIONS BEFORE / AFTER EM
Which emotions do people feel before after this problem is solved?
- Frustration, helplessness, demotivated
- Satisfaction, Confident, Calm state of mind.

10. YOUR SOLUTION SL
- Analysing the previous year climatic changes will determine the grocery's demand and that will create a good path to invest in right fruits
- Monitoring and predicting the ups and downs in market by previous year statistics will helps us to make a alternative changes in the field.
- Always have a plan b for storing the stocks in warehouse will help us to get avoid in some emergency situation.

8. CHANNELS of BEHAVIOR CH
Online
Advertise with financial influencers to spread awareness and promote it.

Offline
A person who belongs to the work he should have or create some social contacts in his/her surrounding that's will create a certain trust worthy things in his business

4.REQUIREMENT ANALYSIS:

4(A) Functional requirement:

Following are the non-funcfional requirements of the online food delivery system.

Online Food Delivery System

FR No.	Funcfional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Registrafion	Registrafion through app. If customer wants to order the food He/she must be registered, unregistered customer can't for ordering.
FR-2	Login	Login through valid user id. Login through valid password for ordering.
FR-3	Display the Menu	In this system all the items are displayed with Their rates.
FR-4	Modify Menu	System can make changes in menu like adding or removing food items which are not available.
FR-5	Select food item's	Items are selected customer feel free to Order.
FR-6	Changes to order	The customer can make changes in order like He/she can delete or add fooditems in order.
FR-7	Review the orderbefore Submifing	Customer Name, Phone number, Locafion (address), and placed order, then finally order is submited.

FR-8	Payment	For customers there are many types of secure billing will be prepaid as debit or credit card, post paid as aher delivering, check or bank drah.
FR-9	Provide delivery and payment details	Here a bill is generated, order No, and payment is given and confirmafion of delivery is done.
FR-10	Logout	Aher the payment or surf the product the customer will logout.

4(B) Non Functional requirement:

Following are the non-funcfional requirements of the online food delivery system

FR No.	Non-Funcfional Requirement	Descripfion
NFR-1	**Usability**	System should be easily used by the customer.
NFR-2	**Security**	Applicafion should not be most vulnerable to any exploitafion. That is strict authenficafion mechanisms to be applied to the system.
NFR-3	**Reliability**	The ability of the system to behave consistently in a user acceptable manner when operating within the Environment for which the system was intended
NFR-4	**Performance**	Online food delivery application to order food that provides instant delivery for food. The app should be able to handle the load of many users at peak hours where maximum orders placed should be a particular minute. Performance should be fast.

Without funcfional requirements the system will not work. Without at least some non- funcfional requirements being met to a certain level. They ensure the reliability, availability, performance, and scalability of the sohware system. They help in construcfing the security policy of the sohware system. They ensure good user experience, ease of operafing the sohware, and minimize the cost factor and so on.

5.PROJECT DESIGN:

5(A) Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.
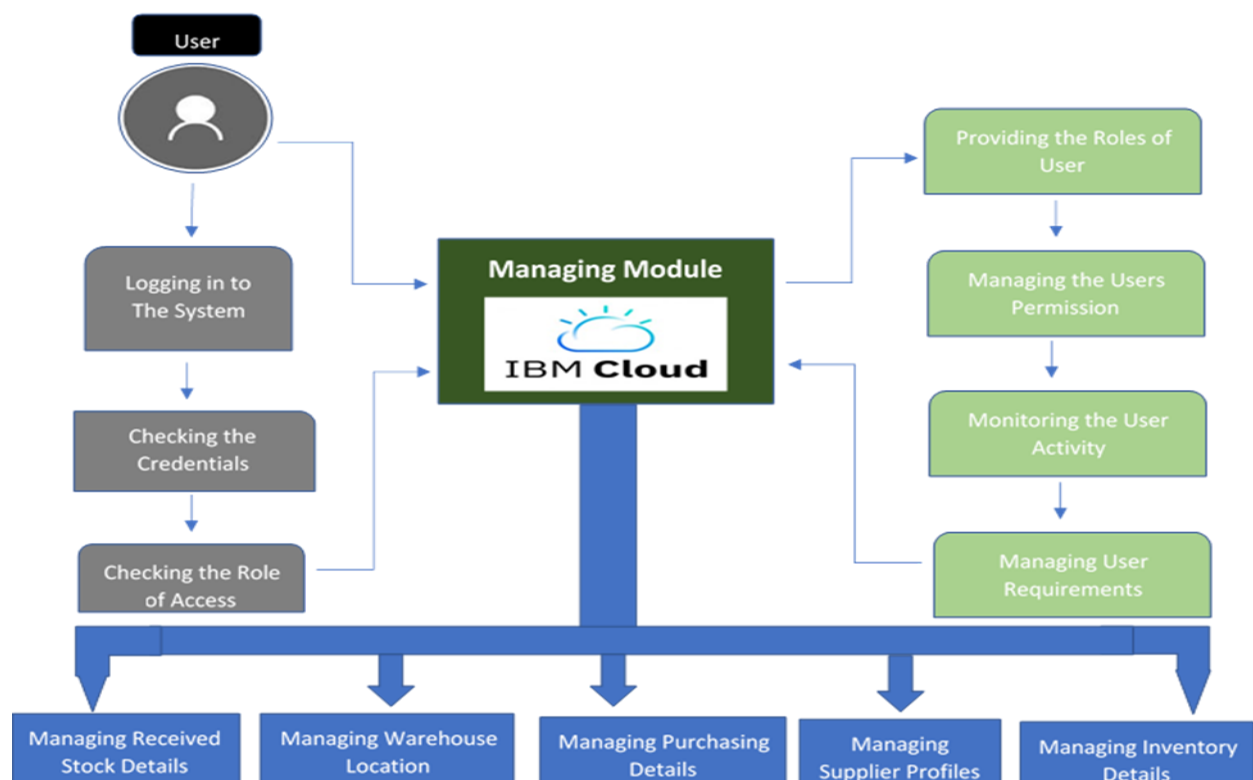
5(B)Solution & Technical Architecture:

A solutions architect creates the overall technical vision for a specific solution to a business problem. A solutions architect creates the overall technical vision for a specific solution to a business problem. They design, describe, and manage the solution.

Solution Architecture:
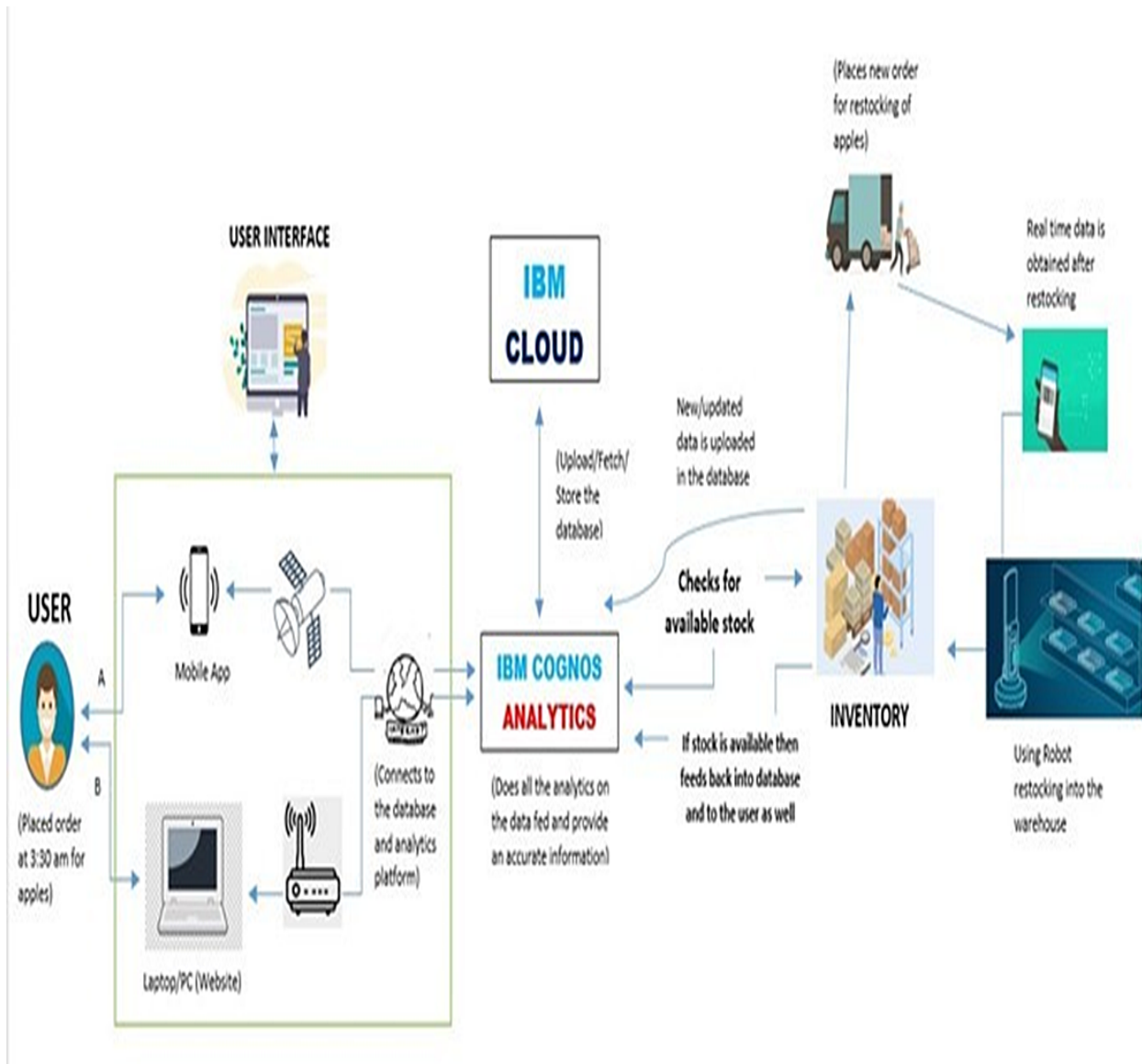
Technical Architecture

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Creating an E commerce website for ordering, delivering and knowing the products regions with its locations
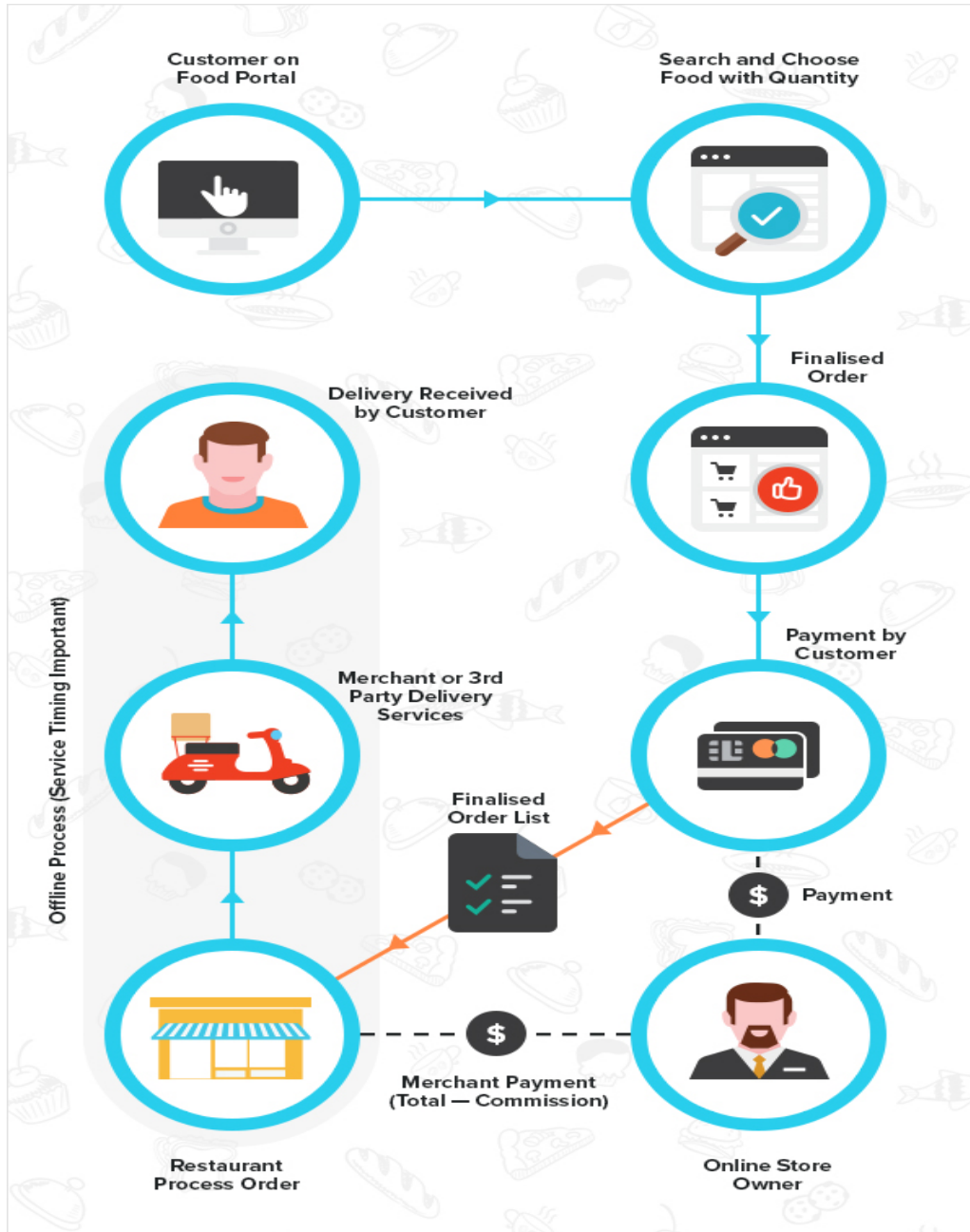
5(C)User Stories:

we use the below format to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Fruit Vendor)	Registration	USN-1	As a Fruit Vendor, I can know the previous year statistics about the fruits	I can access my account dashboard	High	Sprint-1
	Data Modules	USN-2	As a Fruit Vendor, I can receive confirmation message once the Stocks were restored	I can receive confirmation message & click confirm	High	Sprint-1

	Dashboard	USN-3	As a Fruit Vendor, I want to know my warehouse locations instantly	I can access the dashboard with my individual Login id/ password	Low	Sprint-2
	Login	USN-4	As a Fruit Vendor, I can identify the sudden ups and downs in the market.	I can know the market statement by the analytics	Medium	Sprint-1
	Dashboard	USN-5	As a Fruit Vendor, I can log in to my stock activities	I can know my day- today activities by mean of having acceptance to view the data	High	Sprint-1

Customer (Stock broker)	Login	USN-1	As a stock broker, I can know my shares in the market by the analytics	I can know the value of stock in current trend by my analytics itself	High	Sprint-1
	Report	USN-2	As a Stock Broker, I can find the valuable stock at the period .	I can know my all-market details and reports by own data analytic crew.	Medium	Sprint-2
	Data Exploration	USN-3	As a Stock Broker, I can predict the hike of the product	I can easily go through the movement of stocks in previous years drops and downs	High	Sprint-2
Customer (restaurant)	Data module	USN1	As a Restaurant owner, I can easily able know to my traditional customers	I can easily segregate the daily customer list through the analytics	Medium	Sprint-3

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
	Report	USN2	As a Restaurant owner ,I can create my unique menu for my customer	I can easily find the taste of an customer by their orders and by my sales	Medium	Sprint-1
	Story	USN3	As a restaurant owner I can able see a visual representation of my way of journey	I can easily identify my mistake and turnover of my organization	Low	sprint-1

6.PROJECT PLANNING & SCHEDULING

6(A)Sprint Planning & Estimation:

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

We use the below format to create product backlog and sprint schedule

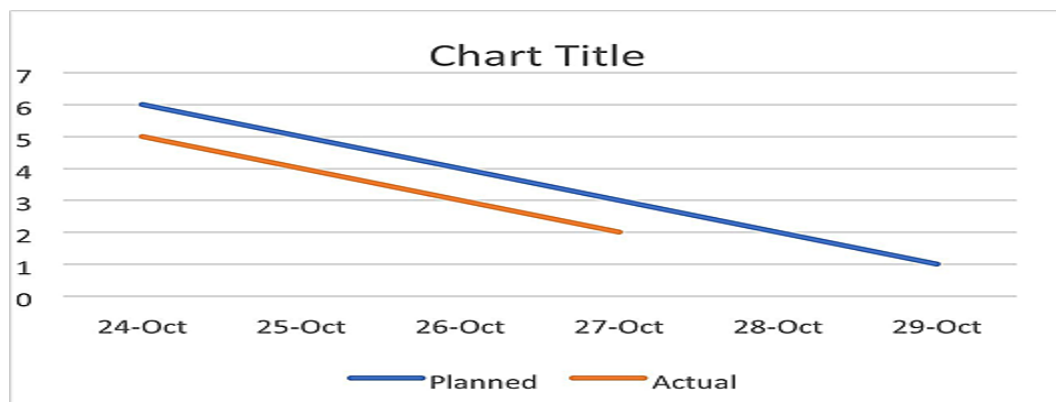| Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High
Sprint-1	Registration	USN-2	As a user, I will receive a confirmation email once I have registered for the application	1	High
Sprint-2	Registration	USN-3	As a user, I can register for the application through google account or the one provided by the service provider.	2	Low
Sprint-1	Registration	USN-4	As a user, I can register using the collaborated Gmail ID as well.	2	Medium
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High
Sprint-2	Login	USN-6	As a user, for more secure protection 2 step authentication will be used.	1	High
Sprint-2	Login	USN-7	As a user, it will be redirected to the dashboard interface.	2	Medium
Sprint-3	Dashboard	USN-8	As a user, The dashboard will provide suitable information for us the user to decide on the next move for the retail inventory.	2	High

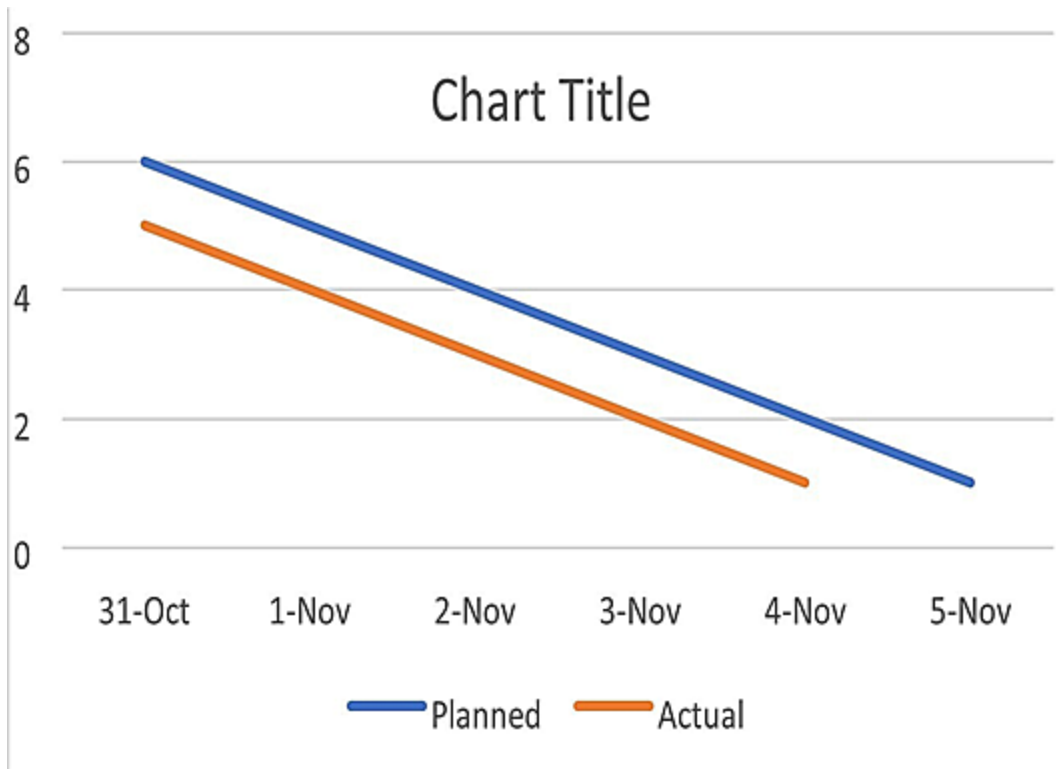| Sprint-3	Dashboard	USN-9	As a user, The dashboard will recommend orders to be placed for the right season.	2	High
Sprint-4	Server & Data Analysis	USN-10	As a user, The data will be entered using a Barcode scanner or through analysis the items will be then processed and analysis will be done with the given data and a suitable output will be given.	2	High
Sprint-4	Server & Data Analysis	USN-11	As a user, The server will itself place the most suitable order and analyse if the stock will sale as soon as possible.	2	High

6(B)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	24 Oct 2022	29 Oct 2022	10	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	10	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	10	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022		19 Nov 2022

SPRINT-1

SPRINT-2

Chart Title

Planned — Actual

SPRINT-3

Chart Title

Planned — Actual

SPRINT-4

Chart Title

| | 14-Nov | 15-Nov | 16-Nov | 17-Nov | 18-Nov | 19-Nov |

Planned   Actual
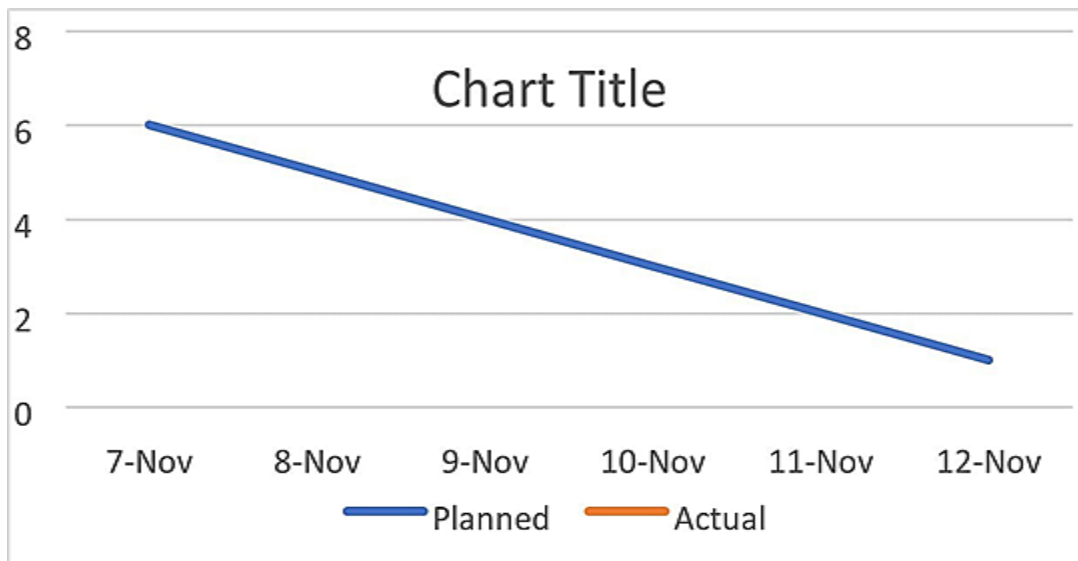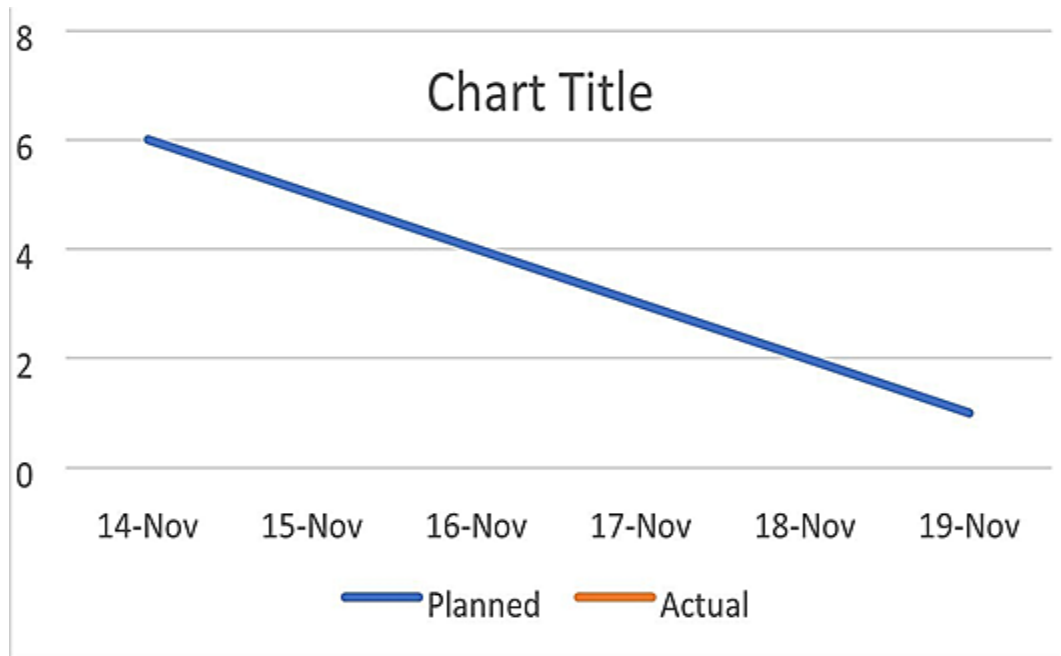
6(C)Reports From Jira:

Project DevelopmentPhase:

PROJECT PLANNING PHASE:

7. CODING & SOLUTIONING

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

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>IBM PROJECT</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
```

```html
<!-- Template Main CSS File -->
<link href="assets/css/style.css" rel="stylesheet">
</head>

<body>

  <!-- ======= Header ======= -->
  <header id="header" class="fixed-top header-transparent">
    <div class="container d-flex align-items-center justify-content-between">

      <div class="logo">
        <h1 class="text-light"><a href="index.html"><span>TEAM ID
PNT2022TMID15458</span></a></h1>
      </div>

      <nav id="navbar" class="navbar">
        <ul>
          <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
          <li><a class="nav-link scrollto" href="#about">About Us</a></li>
          <li><a class="nav-link scrollto" href="#services">Services</a></li>
          <li><a class="nav-link scrollto" href="#team">Team</a></li>
          </li>
          <li><a class="nav-link scrollto" href="#contact">Contact</a></li>
        </ul>
        <i class="bi bi-list mobile-nav-toggle"></i>
      </nav><!-- .navbar -->

    </div>
  </header><!-- End Header -->

  <!-- ======= Hero Section ======= -->
  <section id="hero">
```

```html
    <div class="hero-container" data-aos="fade-up">
      <h1>Welcome</h1>
      <h2>We are team of students making data analytics a user friendly
process</h2>
      <a href="#about" class="btn-get-started scrollto"><i class="bx bx-
chevrons-down"></i></a>
    </div>
  </section><!-- End Hero -->

  <main id="main">

    <!-- ======= About Section ======= -->
    <section id="about" class="about">
      <div class="container">

        <div class="row no-gutters">
          <div class="content col-xl-5 d-flex align-items-stretch" data-aos="fade-
up">
            <div class="content">
              <h3>TEAM ID </h3>
              <p>
                PNT2022TMID15458
              </p>
              <a href="#" class="about-btn">About us <i class="bx bx-chevron-
right"></i></a>
            </div>
          </div>
          <div class="col-xl-7 d-flex align-items-stretch">
            <div class="icon-boxes d-flex flex-column justify-content-center">
              <div class="row">
                <div class="col-md-6 icon-box" data-aos="fade-up" data-aos-
delay="100">
```

```html
            <i class="bx bx-receipt"></i>
            <h4>TEAM LEAD</h4>
            <p>VIKRAMAN</p>
          </div>
          <div class="col-md-6 icon-box" data-aos="fade-up" data-aos-
delay="200">
            <i class="bx bi-journal-richtext"></i>
            <h4>TEAM MEMBER 1</h4>
            <p>VISHVA JAIGANESH</p>
          </div>
          <div class="col-md-6 icon-box" data-aos="fade-up" data-aos-
delay="300">
            <i class="bx bx-images"></i>
            <h4>TEAM MEMBER 2</h4>
            <p>VISHWA</p>
          </div>
          <div class="col-md-6 icon-box" data-aos="fade-up" data-aos-
delay="400">
            <i class="bx bx-shield"></i>
            <h4>TEAM MEMBER 3</h4>
            <p>SHYAM SUNDAR</p>
          </div>
        </div>
      </div><!-- End .content-->
    </div>
   </div>

  </div>
 </section><!-- End About Section -->

 <!-- ======= Services Section ======= -->
 <section id="services" class="services">
```

```html
<div class="container">

  <div class="section-title" data-aos="fade-in" data-aos-delay="100">
    <h2>Services</h2>
    <p>A USER FRIENDLY INTERFACE TO DO THE DATA
ANALYTICS IN A VERY EFFICIENT AND TIME EFFICIENT
MANNER.</p>
  </div>

  <div class="row">
    <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0">
      <div class="icon-box" data-aos="fade-up">
        <div class="icon"><i class="bx bx-link"></i></div>
        <h4 class="title"><a href="">DEMO LINK</a></h4>
        <p class="description">A Demo link of the project's working</p>
      </div>
    </div>

    <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0">
      <div class="icon-box" data-aos="fade-up" data-aos-delay="100">
        <div class="icon"><i class="bx bx-file"></i></div>
        <h4 class="title"><a href="">PROJECT DOCUMENT</a></h4>
        <p class="description">A detailed information about all the project
documents and codes</p>
      </div>
    </div>

    <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0">
      <div class="icon-box" data-aos="fade-up" data-aos-delay="200">
        <div class="icon"><i class="bx bx-tachometer"></i></div>
        <h4 class="title"><a href=""></a>A TOUR THROUGH OUR
PAGE</h4>
```

```html
        <p class="description">A Guided video on all the available features
on our page</p>
      </div>
    </div>


    <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0">
     <div class="icon-box" data-aos="fade-up" data-aos-delay="100">
      <div class="icon"><i class="bx bx-shield"></i></div>
      <h4 class="title"><a href="">DATASET</a></h4>
      <p class="description">The Dataset used for Playstore Analytics</p>
     </div>
    </div>
   </div>


  </div>
 </section><!-- End Services Section -->




 <!-- ======= Cta Section ======= -->
 <section id="cta" class="cta">
  <div class="container" data-aos="zoom-in">

   <div class="text-center">
    <h3>CUSTOMER CARE</h3>
    <p> Our 24/7 Customer Care will guide you through your queries</p>
    <a class="cta-btn" href="#">Call To Action</a>
   </div>

  </div>
 </section><!-- End Cta Section -->
```

```html
<!-- ======= Portfolio Section ======= -->
<section id="portfolio" class="portfolio">
  <div class="container">

    <div class="section-title" data-aos="fade-in" data-aos-delay="100">
      <h2>DASHBOARD</h2>
      <p>A Reactive Dashboard to go through all the needed analysis</p>
    </div>

    <div class="row" data-aos="fade-in">
      <div class="col-lg-12 d-flex justify-content-center">
        <ul id="portfolio-flters">
          <li data-filter="*" class="filter-active">Overview</li>
          <li data-filter=".filter-app">Installs</li>
          <li data-filter=".filter-card">Ratings</li>
          <li data-filter=".filter-web">Categories</li>
        </ul>
      </div>
    </div>

    <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&amp;path
Ref=.my_folders%2Fplaystore%2Bdashboard&amp;closeWindowOnLastVie
w=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=emb
edded&amp;action=view&amp;mode=dashboard&amp;subView=model0000
01847fef5aae_00000001" width="1150" height="750" frameborder="0"
gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>
</section>

  <section id="portfolio" class="portfolio">
    <div class="container">
```

```html
<div class="section-title" data-aos="fade-in" data-aos-delay="100">
  <h2>REPORT</h2>
  <p>A Reactive Report</p>
</div>

<div class="row" data-aos="fade-in">
  <div class="col-lg-12 d-flex justify-content-center">
    <!-- <ul id="portfolio-flters">
      <li data-filter="*" class="filter-active">Overview</li>
      <li data-filter=".filter-app">Installs</li>
      <li data-filter=".filter-card">Ratings</li>
      <li data-filter=".filter-web">Categories</li>
    </ul> -->
  </div>
</div>

<iframe
src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FPlayStore
%2BReport&amp;closeWindowOnLastView=true&amp;ui_appbar=false&a
mp;ui_navbar=false&amp;shareMode=embedded&amp;action=run&amp;fo
rmat=HTML&amp;prompt=false" width="1150" height="1000"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe></section>
  <section id="portfolio" class="portfolio">
    <div class="container">

      <div class="section-title" data-aos="fade-in" data-aos-delay="100">
        <h2>STORY</h2>
        <p>A Cinematic Story on the Dataset</p>
      </div>

      <div class="row" data-aos="fade-in">
```

```html
<div class="col-lg-12 d-flex justify-content-center">
  <!-- <ul id="portfolio-flters">
    <li data-filter="*" class="filter-active">Overview</li>
    <li data-filter=".filter-app">Installs</li>
    <li data-filter=".filter-card">Ratings</li>
    <li data-filter=".filter-web">Categories</li>
  </ul> -->
  </div>
</div>

<iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&amp;pathRef=.
my_folders%2FPlaystore%2BStory&amp;closeWindowOnLastView=true&a
mp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&a
mp;action=view&amp;sceneId=model000001848123455e_00000002&amp;sce
neTime=33850" width="1150" height="750" frameborder="0"
gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe></section>
  <!-- End Portfolio Section -->
  <!-- ======= Team Section ======= -->
  <section id="team" class="team">
    <div class="container">

      <div class="section-title" data-aos="fade-in" data-aos-delay="100">
        <h2>Data Analytics Team</h2>
      </div>

      <div class="row">

        <div class="col-lg-4 col-md-6">
          <div class="member" data-aos="fade-up">
            <div class="pic"><img src="assets/img/team/pics5.jpeg" class="img-
```

```html
fluid" alt=""></div>
          <div class="member-info">
           <h4>VIKRAMAN</h4>
           <span>Team Leader</span>
           <div class="social">
            <a href=""><i class="bi bi-twitter"></i></a>
            <a href=""><i class="bi bi-facebook"></i></a>
            <a href=""><i class="bi bi-instagram"></i></a>
            <a href=""><i class="bi bi-linkedin"></i></a>
           </div>
          </div>
         </div>
        </div>

        <div class="col-lg-4 col-md-6">
         <div class="member" data-aos="fade-up" data-aos-delay="150">
          <div class="pic"><img src="assets/img/team/pics2.jpeg" class="img-
fluid" alt=""></div>
          <div class="member-info">
           <h4>VISHVA JAIGANESH</h4>
           <span>Team Member 1</span>
           <div class="social">
            <a href=""><i class="bi bi-twitter"></i></a>
            <a href=""><i class="bi bi-facebook"></i></a>
            <a href=""><i class="bi bi-instagram"></i></a>
            <a href=""><i class="bi bi-linkedin"></i></a>
           </div>
          </div>
         </div>
        </div>

        <div class="col-lg-4 col-md-6">
```

```html
<div class="member" data-aos="fade-up" data-aos-delay="300">
  <div class="pic"><img src="assets/img/team/pics3.jpeg" class="img-fluid" alt=""></div>
  <div class="member-info">
    <h4>VISHWA</h4>
    <span>Team Member 2</span>
    <div class="social">
      <a href=""><i class="bi bi-twitter"></i></a>
      <a href=""><i class="bi bi-facebook"></i></a>
      <a href=""><i class="bi bi-instagram"></i></a>
      <a href=""><i class="bi bi-linkedin"></i></a>
    </div>
  </div>
</div>
</div>
<div class="col-lg-4 col-md-6">
  <div class="member" data-aos="fade-up" data-aos-delay="300">
    <div class="pic"><img src="assets/img/team/pics4.jpg" class="img-fluid" alt=""></div>
    <div class="member-info">
      <h4>SHYAM SUNDAR</h4>
      <span>Team Member 3</span>
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
  </div>
</div>
```

```html
      </div>

   </div>
  </section><!-- End Team Section -->

  <!-- ======= Contact Section ======= -->
  <section id="contact" class="contact section-bg">
   <div class="container" data-aos="fade-up">

     <div class="section-title">
      <h2>Contact</h2>
     </div>

     <div class="row">
      <div class="col-lg-6">
       <div class="info-box mb-4">
        <i class="bx bx-map"></i>
        <h3>Our Address</h3>
        <p>RMD Engineering College, Kavaraipettai-Thiruvallur District
601206</p>
       </div>
      </div>

      <div class="col-lg-3 col-md-6">
       <div class="info-box  mb-4">
        <i class="bx bx-envelope"></i>
        <h3>Email Us</h3>
        <p>111519104170@smartinternz.com</p>
       </div>
      </div>

      <div class="col-lg-3 col-md-6">
```

```html
      <div class="info-box  mb-4">
        <i class="bx bx-phone-call"></i>
        <h3>Call Us</h3>
        <p>+91 93XXXXXXX</p>
      </div>
    </div>

    </div>

    <div class="row">

      <div class="col-lg-6">
        <form action="forms/contact.php" method="post" role="form"
class="php-email-form">
          <div class="row">
            <div class="col-md-6 form-group">
              <input type="text" name="name" class="form-control"
id="name" placeholder="Your Name" required>
            </div>
            <div class="col-md-6 form-group mt-3 mt-md-0">
              <input type="email" class="form-control" name="email"
id="email" placeholder="Your Email" required>
            </div>
          </div>
          <div class="form-group mt-3">
            <input type="text" class="form-control" name="subject"
id="subject" placeholder="Subject" required>
          </div>
          <div class="form-group mt-3">
            <textarea class="form-control" name="message" rows="5"
placeholder="Message" required></textarea>
```

```html
        </div>
        <div class="my-3">
          <div class="loading">Loading</div>
          <div class="error-message"></div>
          <div class="sent-message">Your message has been sent. Thank
you!</div>
        </div>
        <div class="text-center"><button type="submit">Send
Message</button></div>
      </form>
    </div>


    </div>


  </div>
  </section><!-- End Contact Section -->


</main><!-- End #main -->


<!-- ======= Footer ======= -->
<footer id="footer">
  <div class="footer-top">
    <div class="container">
      <div class="row">


        <div class="col-lg-4 col-md-6">
          <div class="footer-info">
            <h3>IBM PROJECT</h3>
            <p class="pb-3"><em>Retail Store Stock Inventory
Analytics</em></p>
            <p>
```

```html
        Chennai, Tamil Nadu 614403<br><br>
        <strong>Phone:</strong> +91 936XXXXXXX<br>
        <strong>Email:</strong> info@smartinternz.com<br>
      </p>
      <div class="social-links mt-3">
        <a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
        <a href="#" class="facebook"><i class="bx bxl-facebook"></i></a>
        <a href="#" class="instagram"><i class="bx bxl-instagram"></i></a>
        <a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>
        <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
      </div>
    </div>
  </div>

  <div class="col-lg-2 col-md-6 footer-links">
    <h4>Useful Links</h4>
    <ul>
      <li><i class="bx bx-chevron-right"></i> <a href="#">Home</a></li>
      <li><i class="bx bx-chevron-right"></i> <a href="#">About us</a></li>
      <li><i class="bx bx-chevron-right"></i> <a href="#">Services</a></li>
      <li><i class="bx bx-chevron-right"></i> <a href="#">Terms of service</a></li>
      <li><i class="bx bx-chevron-right"></i> <a href="#">Privacy policy</a></li>
    </ul>
  </div>
  <div class="col-lg-4 col-md-6 footer-newsletter">
    <h4>Our Newsletter</h4>
    <p>Subscribe to avail our latest news and services via a email</p>
```

```html
        <form action="" method="post">
          <input type="email" name="email"><input type="submit"
value="Subscribe">
        </form>

      </div>

    </div>
   </div>
  </div>


  <div class="container">
    <div class="copyright">
      &copy; Copyright <strong><span>Team ID
PNT2022TMID15458</span></strong>. All Rights Reserved
    </div>
    <div class="credits">
    </div>
   </div>
  </footer><!-- End Footer -->

  <a href="#" class="back-to-top d-flex align-items-center justify-content-
center"><i class="bi bi-arrow-up-short"></i></a>

  <!-- Vendor JS Files -->
  <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
  <script src="assets/vendor/aos/aos.js"></script>
  <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="assets/vendor/isotope-layout/isotope.pkgd.min.js"></script>
  <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
  <script src="assets/vendor/php-email-form/validate.js"></script>
```

<!-- Template Main JS File -->
<script src="assets/js/main.js"></script>

</body>

</html>

8.TESTING

8(A)Test Case

8(B)User Acceptance Testing:

1. ### Purpose of Document

   The purpose of this document is to briefly explain the test coverage and open issues of the [ProductName] project at the time of the release to User Acceptance Testing (UAT).

2. ### Defect Analysis

   This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	5	3	1	0	9
Duplicate	2	1	0	0	3
External	2	2	0	1	5
Fixed	3	2	1	0	6
Not Reproduced	0	0	1	0	1
Skipped	5	2	1	0	8
Won't Fix	3	0	1	0	4
Totals	19	10	5	1	36

3. ### Test Case Analysis

   This report shows the number of test cases that have passed, failed,and untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	5	0	0	5
Client Application	8	0	0	8
Security	1	0	0	1
Outsource Shipping	3	0	0	3
Exception Reporting	2	0	0	2
Final Report Output	1	0	0	1
Version Control		0	0	2
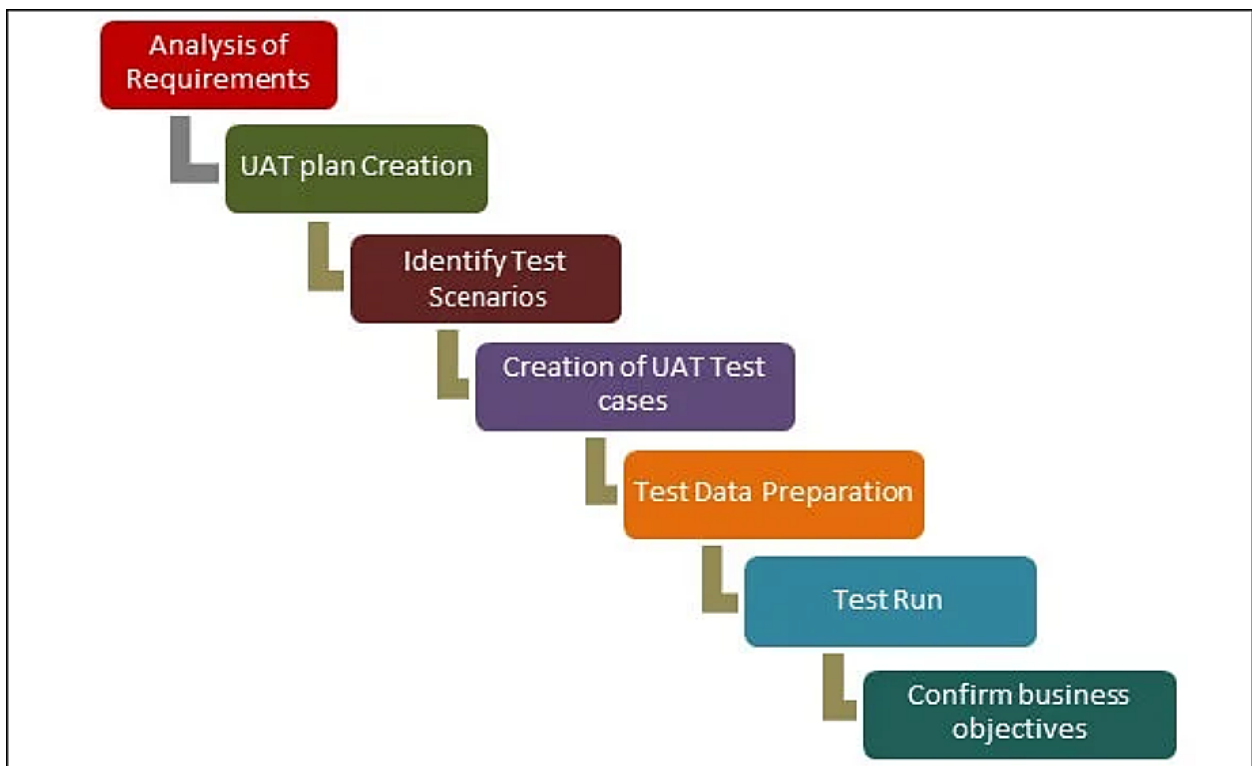
UAT Process

9. RESULT

9(A)Performance Metrics:

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No	Parameter	Values
1	Dashboard design	No.of Visualization:8 No.Of Graphs:2
2	Data Responsiveness	Given dataset responding correctly with Correct credentials
3	Amount of data to rendered DB2 metrices	Loading the Csv files into store data Finalising the loading data process
4	Utilization of data and filters	Enormous amount of filters were done
5	Effective use of story	No.Of scene added=1
6	Descriptive reports	No:Of Visualization-3 No.Of Graphs-1

10.ADVANTAGES & DISADVANTAGES

ADVANTAGES	DISADVANTAGES
➤ It helps to maintain the right amount of stocks	➤ Bureaucracy
➤ It leads to a more organized warehouse	➤ Impersonal touch
➤ It saves time and money	➤ Production problem
➤ Improves efficiency and productivity	➤ Increased space is need to hold the inventory
➤ A well-structured inventory management system leads to improved customer retention	➤ Complexity
➤ Avoid lawsuits and regulatory fines	➤ Some inventory management systems such as the fixed order period system compels a periodic review of all items. This itself makes the system a bit inefficient.
➤ Schedule maintenance	➤ High implementation costs
➤ Reduction in holding costs	➤ Even with an efficient inventory management method, you can control but not eliminate business risk.
➤ Flexibility	➤ The control of inventory is complex because of the many functions it performs. It should thus be viewed as a shared responsibility.

11.CONCLUSION

Inventory management has to do with keeping accurate records of goods that are ready for shipment. This often means having enough stock of goods to the inventory totals as well as subtracting the most recent shipments of finished goods to buyers. When the company has a return policy in place, there is usually a sub-category contained in the finished goods inventory to account for any returned goods that are reclassified or second grade quality. Accurately maintaining figures on the finished goods inventory makes it possible to quickly convey information to sales personnel as to what is available and ready for shipment at any given time by buyer.

Inventory management is important for keeping costs down, while meeting regulation. Supply and demand is a delicate balance, and inventory management hopes to ensure that the balance is undisturbed. Highly trained Inventory management and high-quality software will help make Inventory management a success. The ROI of Inventory management will be seen in the forms of increased revenue and profits, positive employee atmosphere, and on overall increase of customer satisfaction.

Retailers can benefit immensely form a structured analytics-driven approach that will help them understand how their customers are using their products and services, how their operations and supply chain are performing, how to manage their workforce and how to identify key risks - insights that they then can then act upon. The pace and the dexterity with which micro data is collected, gives the retailers immediate insights on the shopping trends. This analysis on the move allows them to adjust their prices and add to the lure by announcing on the spot discounts on the sales floor based on their current and previous shopping patterns. This data, often collected through interactive mobile devices in stores, provides the retailer an understanding of the buyers needs and give insights into making smarter decisions about product placement in the store. Data capture and analytics usage certainly have come a long way in the last ten years, and it is interesting to look back on how trends in data analytics have affected the marketplace. As the Internetof Things expandsfurther and our world becomes even more connected, this space will continue to evolve.

12.FUTURE SCOPE

The scope of an inventory system can cover many needs, including valuing the inventory, measuring the change in inventory and planning for future inventory levels. The value of the inventory at the end of each period provides a basis for financial reporting on the balance sheet.Measuring the change in inventory allows the company to determine the cost of inventory sold during the period. This allows the company to plan for future inventory needs.

Retail management software vendorshould be continually enhancing its product,driven both by its expertise in how it sees the marketplace unfolding and by customer requests. When he does this, the result is significant advantages to its retail customers.

"Future vision" is another important aspect of long-term vendor reliability – the ability to anticipate development needs before their becoming critical.

A good Retail management software vendor should demonstrate enough "future vision" to have already committed substantial resources to support new forms of technology such as data synchronization.

Finally, a Retail management software should be organized in such a fashion that it shoulders the responsibilities of a retailer. Despite the power and scope it must be easy to adapt, learn and use. That means you save money on the training and implementation. You save huge money on manpower and employee turnover can be handled easily.

13.APPENDIX

SOURCE CODE:

```css
body {
  font-family: "Open Sans", sans-serif;
  color: #444444;
}


a {
  text-decoration: none;
  color: #346a83;
}


a:hover {
  color: #346a83;
  text-decoration: none;
}


h1,
h2,
h3,
h4,
h5,
h6 {
  font-family: "Raleway", sans-serif;
}


#main {
```

```css
  margin-top: 90px;
}


/*--------------------------------------------------------
# Back to top button
----------------------------------------------------------*/
.back-to-top {
  position: fixed;
  visibility: hidden;
  opacity: 0;
  right: 15px;
  bottom: 15px;
  z-index: 998;
  background: #346a83;
  width: 40px;
  height: 40px;
  border-radius: 50px;
  transition: all 0.4s;
}

.back-to-top i {
  font-size: 24px;
  color: #fff;
  line-height: 0;
}

.back-to-top:hover {
```

```css
  background: #346a83;
  color: #fff;
}


.back-to-top.active {
  visibility: visible;
  opacity: 1;
}


/*----------------------------------------------------------
# Disable aos animation delay on mobile devices
----------------------------------------------------------*/
@media screen and (max-width: 768px) {
  [data-aos-delay] {
    transition-delay: 0 !important;
  }
}


/*----------------------------------------------------------
# Header
----------------------------------------------------------*/
#header {
  transition: all 0.5s;
  z-index: 997;
  transition: all 0.5s;
  padding: 24px 0;
  background: rgba(19, 49, 63, 0.8);
```

```css
}

#header.header-transparent {
  background: transparent;
}

#header.header-scrolled {
  background: rgba(22, 52, 66, 0.9);
  padding: 12px;
}

#header .logo h1 {
  font-size: 24px;
  margin: 0;
  line-height: 1;
  font-weight: 700;
  letter-spacing: 1px;
  font-family: "Poppins", sans-serif;
  text-transform: uppercase;
}

#header .logo h1 a,
#header .logo h1 a:hover {
  color: #fff;
  text-decoration: none;
}
```

```css
#header .logo img {
  padding: 0;
  margin: 0;
  max-height: 40px;
}


@media (max-width: 768px) {
  #header.header-scrolled {
    padding: 15px 0;
  }
}


/*--------------------------------------------------------------
# Navigation Menu
--------------------------------------------------------------*/
/**
* Desktop Navigation
*/
.navbar {
  padding: 0;
}

.navbar ul {
  margin: 0;
  padding: 0;
  display: flex;
  list-style: none;
```

```css
  align-items: center;
}

.navbar li {
  position: relative;
}

.navbar a,
.navbar a:focus {
  display: flex;
  align-items: center;
  justify-content: space-between;
  padding: 8px 16px;
  margin-left: 10px;
  font-family: "Raleway", sans-serif;
  font-size: 16px;
  font-weight: 700;
  color: #fff;
  white-space: nowrap;
  transition: 0.3s;
}

.navbar a i,
.navbar a:focus i {
  font-size: 12px;
  line-height: 0;
  margin-left: 5px;
```

```css
}

.navbar a:hover,
.navbar .active,
.navbar .active:focus,
.navbar li:hover>a {
  background: rgba(255, 255, 255, 0.2);
}

.navbar .dropdown ul {
  display: block;
  position: absolute;
  left: 10px;
  top: calc(100% + 30px);
  margin: 0;
  padding: 10px 0;
  z-index: 99;
  opacity: 0;
  visibility: hidden;
  background: #fff;
  box-shadow: 0px 0px 30px rgba(127, 137, 161, 0.25);
  transition: 0.3s;
}

.navbar .dropdown ul li {
  min-width: 200px;
}
```

```css
.navbar .dropdown ul a {
  padding: 10px 20px;
  font-size: 15px;
  text-transform: none;
  font-weight: 600;
  color: #2f4d5a;
}

.navbar .dropdown ul a i {
  font-size: 12px;
}

.navbar .dropdown ul a:hover,
.navbar .dropdown ul .active:hover,
.navbar .dropdown ul li:hover>a {
  color: #346a83;
}

.navbar .dropdown:hover>ul {
  opacity: 1;
  top: 100%;
  visibility: visible;
}

.navbar .dropdown .dropdown ul {
  top: 0;
```

```css
  left: calc(100% - 30px);
  visibility: hidden;
}

.navbar .dropdown .dropdown:hover>ul {
  opacity: 1;
  top: 0;
  left: 100%;
  visibility: visible;
}

@media (max-width: 1366px) {
  .navbar .dropdown .dropdown ul {
    left: -90%;
  }

  .navbar .dropdown .dropdown:hover>ul {
    left: -100%;
  }
}

/**
* Mobile Navigation
*/
.mobile-nav-toggle {
  color: #fff;
  font-size: 28px;
```

```css
  cursor: pointer;
  display: none;
  line-height: 0;
  transition: 0.5s;
}


@media (max-width: 991px) {
  .mobile-nav-toggle {
    display: block;
  }


  .navbar ul {
    display: none;
  }
}

.navbar-mobile {
  position: fixed;
  overflow: hidden;
  top: 0;
  right: 0;
  left: 0;
  bottom: 0;
  background: rgba(43, 111, 142, 0.9);
  transition: 0.3s;
}
```

```css
.navbar-mobile .mobile-nav-toggle {
  position: absolute;
  top: 15px;
  right: 15px;
}

.navbar-mobile ul {
  display: block;
  position: absolute;
  top: 55px;
  right: 15px;
  bottom: 15px;
  left: 15px;
  padding: 10px 0;
  background-color: #fff;
  overflow-y: auto;
  transition: 0.3s;
}

.navbar-mobile a,
.navbar-mobile a:focus {
  padding: 10px 20px;
  font-size: 15px;
  color: #2f4d5a;
}

.navbar-mobile a:hover,
```

```css
.navbar-mobile .active,
.navbar-mobile li:hover>a {
  color: #346a83;
}

.navbar-mobile .getstarted,
.navbar-mobile .getstarted:focus {
  margin: 15px;
}

.navbar-mobile .dropdown ul {
  position: static;
  display: none;
  margin: 10px 20px;
  padding: 10px 0;
  z-index: 99;
  opacity: 1;
  visibility: visible;
  background: #fff;
  box-shadow: 0px 0px 30px rgba(127, 137, 161, 0.25);
}

.navbar-mobile .dropdown ul li {
  min-width: 200px;
}

.navbar-mobile .dropdown ul a {
```

```css
  padding: 10px 20px;
}


.navbar-mobile .dropdown ul a i {
  font-size: 12px;
}


.navbar-mobile .dropdown ul a:hover,
.navbar-mobile .dropdown ul .active:hover,
.navbar-mobile .dropdown ul li:hover>a {
  color: #67b0d1;
}


.navbar-mobile .dropdown>.dropdown-active {
  display: block;
}


/*--------------------------------------------------------------
# Hero Section
--------------------------------------------------------------*/
#hero {
  width: 100%;
  height: 100vh;
  background: linear-gradient(rgba(55, 142, 181, 0.5), rgba(55, 142, 181, 0.2)),
url("assets/img/back2.jpeg") top center;
  background-size: cover;
  position: relative;
```

```css
  margin-bottom: -90px;
}


#hero .hero-container {
  position: absolute;
  bottom: 0;
  top: 0;
  left: 0;
  right: 0;
  display: flex;
  justify-content: center;
  align-items: center;
  flex-direction: column;
  text-align: center;
}


#hero h1 {
  margin: 0 0 10px 0;
  font-size: 64px;
  font-weight: 700;
  line-height: 56px;
  text-transform: uppercase;
  color: #fff;
  text-shadow: -1px 0 2px #2f4d5a;
}


#hero h2 {
```

```css
  color: #fff;

  margin-bottom: 50px;

  font-size: 20px;

  text-transform: uppercase;

  font-weight: 700;

  text-shadow: -1px 0 2px #2f4d5a;

}


#hero .btn-get-started {

  font-size: 36px;

  display: inline-block;

  padding: 4px 0;

  border-radius: 50px;

  transition: 0.3s ease-in-out;

  margin: 10px;

  width: 64px;

  height: 64px;

  text-align: center;

  border: 2px solid #fff;

  color: #fff;

}


#hero .btn-get-started:hover {

  padding-top: 8px;

  background: rgba(255, 255, 255, 0.15);

}
```

```css
@media (min-width: 1024px) {
  #hero {
    background-attachment: fixed;
  }
}


@media (max-width: 768px) {
  #hero h1 {
    font-size: 28px;
    line-height: 36px;
  }


  #hero h2 {
    font-size: 18px;
    line-height: 24px;
    margin-bottom: 30px;
  }
}


/*-----------------------------------------------------------
# Sections General
-----------------------------------------------------------*/
section {
  padding: 60px 0;
  overflow: hidden;
}
```

```css
.section-bg {
  background-color: #f4f9fc;
}

.section-title {
  text-align: center;
  padding-bottom: 30px;
}

.section-title h2 {
  font-size: 32px;
  font-weight: bold;
  position: relative;
  margin-bottom: 30px;
  color: #2f4d5a;
  z-index: 2;
}

.section-title h2::after {
  content: "";
  position: absolute;
  left: 50%;
  top: 50%;
  transform: translate(-50%, -50%);
  width: 122px;
  height: 66px;
  background: url(../img/section-title-bg.png) no-repeat;
```

```css
  z-index: -1;
}


.section-title p {
  margin-bottom: 0;
}


/*-----------------------------------------------------------
# Breadcrumbs
-----------------------------------------------------------*/
.breadcrumbs {
  padding: 15px 0;
  background-color: #f8fbfd;
  min-height: 40px;
}


.breadcrumbs h2 {
  font-size: 24px;
  font-weight: 300;
}


.breadcrumbs ol {
  display: flex;
  flex-wrap: wrap;
  list-style: none;
  padding: 0;
  margin: 0;
```

```css
  font-size: 14px;
}


.breadcrumbs ol li+li {
  padding-left: 10px;
}


.breadcrumbs ol li+li::before {
  display: inline-block;
  padding-right: 10px;
  color: #6c757d;
  content: "/";
}


@media (max-width: 768px) {
  .breadcrumbs .d-flex {
    display: block !important;
  }


  .breadcrumbs ol {
    display: block;
  }


  .breadcrumbs ol li {
    display: inline-block;
  }
}
```

```
/*-----------------------------------------------------------

# About

--------------------------------------------------------*/
.about {
  background: url("../img/about-bg.jpg") center center no-repeat;
  background-size: cover;
  padding: 60px 0;
  position: relative;
}

.about::before {
  content: "";
  position: absolute;
  left: 0;
  right: 0;
  top: 0;
  bottom: 0;
  background: rgba(255, 255, 255, 0.75);
  z-index: 9;
}

.about .container {
  position: relative;
  z-index: 10;
}
```

```css
.about .content {
  padding: 30px 30px 30px 0;
}

.about .content h3 {
  font-weight: 700;
  font-size: 34px;
  color: #2f4d5a;
  margin-bottom: 30px;
}

.about .content p {
  margin-bottom: 30px;
}

.about .content .about-btn {
  display: inline-block;
  background: #346a83;
  padding: 6px 44px 8px 30px;
  color: #fff;
  border-radius: 50px;
  transition: 0.3s;
  position: relative;
}

.about .content .about-btn i {
  font-size: 18px;
```

```css
  position: absolute;

  right: 18px;

  top: 9px;

}


.about .content .about-btn:hover {

  background: #346a83;

}


.about .icon-boxes .icon-box {

  margin-top: 30px;

}


.about .icon-boxes .icon-box i {

  font-size: 40px;

  color: #346a83;

  margin-bottom: 10px;

}


.about .icon-boxes .icon-box h4 {

  font-size: 20px;

  font-weight: 700;

  margin: 0 0 10px 0;

}


.about .icon-boxes .icon-box p {

  font-size: 15px;
```

```css
  color: #848484;
}


@media (max-width: 1200px) {
  .about .content {
    padding-right: 0;
  }
}


@media (max-width: 768px) {
  .about {
    text-align: center;
  }
}


/*--------------------------------------------------------------
# Services
--------------------------------------------------------------*/
.services .icon-box {
  padding: 30px;
  position: relative;
  overflow: hidden;
  background: #fff;
  box-shadow: 0 0 29px 0 rgba(68, 88, 144, 0.12);
  transition: all 0.3s ease-in-out;
  border-radius: 8px;
  z-index: 1;
```

```css
}

.services .icon-box::before {
  content: "";
  position: absolute;
  background: white;
  right: 0;
  left: 0;
  bottom: 0;
  top: 100%;
  transition: all 0.3s;
  z-index: -1;
}

.services .icon-box:hover::before {
  background: #346a83;
  top: 0;
  border-radius: 0px;
}

.services .icon {
  margin-bottom: 15px;
}

.services .icon i {
  font-size: 48px;
  line-height: 1;
```

```css
  color: #346a83;

  transition: all 0.3s ease-in-out;

}


.services .title {

 font-weight: 700;

 margin-bottom: 15px;

 font-size: 18px;

}


.services .title a {

  color: #111;

}


.services .description {

 font-size: 15px;

 line-height: 28px;

 margin-bottom: 0;

}


.services .icon-box:hover .title a,

.services .icon-box:hover .description {

 color: #fff;

}


.services .icon-box:hover .icon i {

 color: #fff;
```

```css
}

/*-----------------------------------------------------------
# Cta
-----------------------------------------------------------*/
.cta {
  background: linear-gradient(rgba(42, 97, 122, 0.8), rgba(103, 176, 209, 0.8)),
url("assets/img/back3.jpeg") fixed center center;
  background-size: cover;
  padding: 60px 0;
}

.cta h3 {
  color: #fff;
  font-size: 28px;
  font-weight: 700;
}

.cta p {
  color: #fff;
}

.cta .cta-btn {
  font-family: "Raleway", sans-serif;
  text-transform: uppercase;
  font-weight: 500;
  font-size: 16px;
```

```css
  letter-spacing: 1px;

  display: inline-block;

  padding: 8px 28px;

  border-radius: 25px;

  transition: 0.5s;

  margin-top: 10px;

  border: 2px solid rgba(255, 255, 255, 0.5);

  color: #fff;

}


.cta .cta-btn:hover {

  border-color: #fff;

}


/*--------------------------------------------------------------

# Portfolio

--------------------------------------------------------------*/

.portfolio .portfolio-item {

  margin-bottom: 30px;

}


.portfolio #portfolio-flters {

  padding: 0;

  margin: 0 auto 35px auto;

  list-style: none;

  text-align: center;

  background: #ecf5f9;
```

```css
  border-radius: 50px;

  padding: 2px 15px;

}


.portfolio #portfolio-flters li {

  cursor: pointer;

  display: inline-block;

  padding: 10px 15px 8px 15px;

  font-size: 14px;

  font-weight: 600;

  line-height: 1;

  text-transform: uppercase;

  color: #2f4d5a;

  margin-bottom: 5px;

  transition: all 0.3s ease-in-out;

}


.portfolio #portfolio-flters li:hover,

.portfolio #portfolio-flters li.filter-active {

  color: #346a83;

}


.portfolio #portfolio-flters li:last-child {

  margin-right: 0;

}


.portfolio .portfolio-wrap {
```

```css
    transition: 0.3s;

    position: relative;

    overflow: hidden;

    z-index: 1;

}


.portfolio .portfolio-wrap::before {

    content: "";

    background: rgba(255, 255, 255, 0.5);

    position: absolute;

    left: 0;

    right: 0;

    top: 0;

    bottom: 0;

    transition: all ease-in-out 0.3s;

    z-index: 2;

    opacity: 0;

}

.portfolio .portfolio-wrap .portfolio-links {

    opacity: 1;

    left: 0;

    right: 0;

    bottom: -60px;

    z-index: 3;

    position: absolute;

    transition: all ease-in-out 0.3s;
```

```css
  display: flex;
  justify-content: center;
}

.portfolio .portfolio-wrap .portfolio-links a {
  color: #fff;
  font-size: 28px;
  text-align: center;
  background: rgba(103, 176, 209, 0.75);
  transition: 0.3s;
  width: 50%;
}

.portfolio .portfolio-wrap .portfolio-links a:hover {
  background: rgba(103, 176, 209, 0.95);
}

.portfolio .portfolio-wrap .portfolio-links a+a {
  border-left: 1px solid #8ec4dd;
}

.portfolio .portfolio-wrap:hover::before {
  top: 0;
  left: 0;
  right: 0;
  bottom: 0;
  opacity: 1;
```

```css
}

.portfolio .portfolio-wrap:hover .portfolio-links {
  opacity: 1;
  bottom: 0;
}


/*--------------------------------------------------------------
# Team
--------------------------------------------------------------*/
.team .member {
  text-align: center;
  margin-bottom: 80px;
  position: relative;
}

.team .member .pic {
  overflow: hidden;
}

.team .member .member-info {
  position: absolute;
  top: 85%;
  left: 20px;
  right: 20px;
  background: #fff;
  padding: 20px 0;
```

```css
  color: #2f4d5a;
  box-shadow: 0px 2px 15px rgba(0, 0, 0, 0.1);
  max-height: 95px;
  overflow: hidden;
  transition: max-height 0.5s ease-in-out;
}

.team .member:hover .member-info {
  max-height: 300px;
}

.team .member h4 {
  font-weight: 700;
  margin-bottom: 10px;
  font-size: 16px;
  color: #2f4d5a;
  position: relative;
  padding-bottom: 10px;
}

.team .member h4::after {
  content: "";
  position: absolute;
  display: block;
  width: 50px;
  height: 1px;
  background: #b1cbd7;
```

```css
  bottom: 0;
  left: calc(50% - 25px);
}

.team .member span {
  font-style: italic;
  display: block;
  font-size: 13px;
}

.team .member .social {
  margin-top: 15px;
}

.team .member .social a {
  transition: color 0.3s;
  color: #52869d;
}

.team .member .social a:hover {
  color: #346a83;
}

.team .member .social i {
  font-size: 16px;
  margin: 0 2px;
}
```

```css
@media (max-width: 992px) {
  .team .member {
    margin-bottom: 110px;
  }
}


/*--------------------------------------------------------------
# Contact
----------------------------------------------------------------*/
.contact {
  padding-bottom: 80px;
}

.contact .info-box {
  color: #444444;
  background: #fff;
  text-align: center;
  box-shadow: 0 0 30px rgba(214, 215, 216, 0.6);
  padding: 20px 0 30px 0;
}

.contact .info-box i {
  font-size: 32px;
  color: #67b0d1;
  border-radius: 50%;
  padding: 8px;
```

```css
  border: 2px dotted #f0f7fa;
}


.contact .info-box h3 {
  font-size: 20px;
  color: #777777;
  font-weight: 700;
  margin: 10px 0;
}


.contact .info-box p {
  padding: 0;
  line-height: 24px;
  font-size: 14px;
  margin-bottom: 0;
}


.contact .php-email-form {
  box-shadow: 0 0 30px rgba(214, 215, 216, 0.6);
  padding: 30px;
  background: #fff;
}


.contact .php-email-form .error-message {
  display: none;
  color: #fff;
  background: #ed3c0d;
```

```css
    text-align: left;
    padding: 15px;
    font-weight: 600;
}


.contact .php-email-form .error-message br+br {
    margin-top: 25px;
}


.contact .php-email-form .sent-message {
    display: none;
    color: #fff;
    background: #18d26e;
    text-align: center;
    padding: 15px;
    font-weight: 600;
}


.contact .php-email-form .loading {
    display: none;
    background: #fff;
    text-align: center;
    padding: 15px;
}


.contact .php-email-form .loading:before {
    content: "";
```

```css
  display: inline-block;
  border-radius: 50%;
  width: 24px;
  height: 24px;
  margin: 0 10px -6px 0;
  border: 3px solid #18d26e;
  border-top-color: #eee;
  -webkit-animation: animate-loading 1s linear infinite;
  animation: animate-loading 1s linear infinite;
}


.contact .php-email-form input,
.contact .php-email-form textarea {
  border-radius: 0;
  box-shadow: none;
  font-size: 14px;
}


.contact .php-email-form input::focus,
.contact .php-email-form textarea::focus {
  background-color: #346a83;
}


.contact .php-email-form input {
  padding: 10px 15px;
}
```

```css
.contact .php-email-form textarea {
  padding: 12px 15px;
}

.contact .php-email-form button[type=submit] {
  background: #346a83;
  border: 0;
  padding: 10px 24px;
  color: #fff;
  transition: 0.4s;
}

.contact .php-email-form button[type=submit]:hover {
  background: #8ec4dd;
}

@-webkit-keyframes animate-loading {
  0% {
    transform: rotate(0deg);
  }

  100% {
    transform: rotate(360deg);
  }
}

@keyframes animate-loading {
```

```css
  0% {
    transform: rotate(0deg);
  }


  100% {
    transform: rotate(360deg);
  }
}


/*--------------------------------------------------------
# Footer
----------------------------------------------------------*/
#footer {
  background: #263f49;
  padding: 0 0 30px 0;
  color: #fff;
  font-size: 14px;
}

#footer .footer-top {
  padding: 60px 0 30px 0;
}

#footer .footer-top .footer-info {
  margin-top: -90px;
  margin-bottom: 15px;
  background: white;
```

```css
  color: #2f4d5a;

  border-top: 4px solid #346a83;

  text-align: center;

  padding: 30px 20px;

}


#footer .footer-top .footer-info h3 {

  font-size: 24px;

  margin: 0 0 20px 0;

  padding: 2px 0 2px 0;

  line-height: 1;

  font-weight: 700;

}


#footer .footer-top .footer-info p {

  font-size: 14px;

  line-height: 24px;

  margin-bottom: 0;

  font-family: "Raleway", sans-serif;

}


#footer .footer-top .social-links a {

  font-size: 18px;

  display: inline-block;

  background: #1e4f64;

  color: #fff;

  line-height: 1;
```

```css
  padding: 8px 0;

  margin-right: 4px;

  border-radius: 50%;

  text-align: center;

  width: 36px;

  height: 36px;

  transition: 0.3s;

}


#footer .footer-top .social-links a:hover {

  background: #346a83;

  color: #fff;

  text-decoration: none;

}


#footer .footer-top h4 {

  font-size: 16px;

  font-weight: 600;

  color: #fff;

  position: relative;

  padding-bottom: 12px;

}


#footer .footer-top .footer-links {

  margin-bottom: 30px;

}
```

```css
#footer .footer-top .footer-links ul {
  list-style: none;
  padding: 0;
  margin: 0;
}

#footer .footer-top .footer-links ul i {
  padding-right: 2px;
  color: #b5d9e9;
  font-size: 18px;
  line-height: 1;
}

#footer .footer-top .footer-links ul li {
  padding: 10px 0;
  display: flex;
  align-items: center;
}

#footer .footer-top .footer-links ul li:first-child {
  padding-top: 0;
}

#footer .footer-top .footer-links ul a {
  color: #fff;
  transition: 0.3s;
  display: inline-block;
```

```css
  line-height: 1;
}

#footer .footer-top .footer-links ul a:hover {
  color: #a2cfe3;
}

#footer .footer-top .footer-newsletter form {
  margin-top: 30px;
  background: #fff;
  padding: 6px 10px;
  position: relative;
  border-radius: 4;
}

#footer .footer-top .footer-newsletter form input[type=email] {
  border: 0;
  padding: 4px;
  width: calc(100% - 110px);
}

#footer .footer-top .footer-newsletter form input[type=submit] {
  position: absolute;
  top: 0;
  right: 0;
  bottom: 0;
  border: 0;
```

```css
  background: none;

  font-size: 16px;

  padding: 0 20px;

  background: #346a83;

  color: #fff;

  transition: 0.3s;

  border-radius: 4;

}


#footer .footer-top .footer-newsletter form input[type=submit]:hover {

  background: #346a83;

}


#footer .copyright {

  border-top: 1px solid #385b6b;

  text-align: center;

  padding-top: 30px;

}


#footer .credits {

  padding-top: 10px;

  text-align: center;

  font-size: 13px;

  color: #fff;

}


@media (max-width: 575px) {
```

```
#footer .footer-top .footer-info {

    margin: -20px 0 30px 0;

  }

}
```

GitHub Links:

Login page:

https://github.com/IBM-EPBL/IBM-Project-30841-
1660191072/tree/main/Final%20Deliverables/login%20page

Main Page:

https://github.com/IBM-EPBL/IBM-Project-30841-
1660191072/tree/main/Final%20Deliverables/Main%20page

Registration Page:

https://github.com/IBM-EPBL/IBM-Project-30841-
1660191072/tree/main/Final%20Deliverables/Registration

GITHUB LINK:

https://github.com/IBM-EPBL/IBM-Project-30841-1660191072

Project Demo Video Drive Link:

https://drive.google.com/file/d/1Gr7FG-gCho4byy7CE3ohEeCMo39qD1uB/view?usp=share_link