

## PROJECT REPORT

Team ID	PNT2022TMID00545
Project Name	Global Sales Data Analytics

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# 1. INTRODUCTION

## 1.1 Project Overview

Shopping online is currently the need of the hour. Because of this COVID, it is not easy to walk in a store randomly and buy anything you want. So, try to understand a few things like, Customer Analysis and Product Analysis of this Global Super Store. Global Sales covers all activities involved in selling a product or service to a consumer or business. It is important for sales and marketing teams to review their strategies and performance in order to make improvements. Understanding performance with sales data analytics helps sales and marketing teams to review their strategies and performance in order to make improvements. Sales analytics provides valuable information like Customer Analysis and Product Analysis to improve sales methodologies. Users create multiple analytical graphs/charts/Visualizations. One way to measure performance is with sales analytics.

## 1.2 Purpose

Global Sales covers all activities involved in selling a product or service to a consumer or business. It is important for sales and marketing teams to review their strategies and performance in order to make improvements. One way to measure performance is with sales analytics. Sales data analytics refers to the use of technology to collect and use sales data to identify actionable insights. It is used to identify, optimize, and increase sales. An efficient sales model that generates higher revenue for the business.

# 2.LITERATURE SURVEY

Title & Author(s)	Year	Technique	Findings
Big Data Analytics and Deep Learning Based Sentiment Analysis System for Sales Prediction - Khatiwada, Aamod and Kadariya, Pradeep and Agrahari, Sandip and Dhakal, Rabin.	2019	Big data analytics (BDA) applications in e-commerce.	Merits: Used to understand complex datasets in a matter of time with beautiful visual representations.  Demerits: Lack of security since large data processed simultaneously
COVID-19 pandemic in the new era of big data analytics:	2021	Descriptive and diagnostic	Merits: By comparing with machine learning models,

Methodological innovations and future research directions - Sheng, Jie and Amankwah-Amoah, Joseph and Khan, Zaheer and Wang, Xiaojun		analytics, Predictive analytics	we find that the proposed model is superior to others. Demerits: The experiment only considers the features of the product and does not consider external influences, such as the impact of regulations on sales. It uses only small dataset.
Sales Forecasting Based on CatBoost - Jingyi Ding, Ziqing Chen.	2020	CatBoost algorithm.	Merits: The search stops when no improvements over the current best solution have been found in 300 iterations. Demerits: Dataset is limited
Developing and Implementing Big Data Analytics in Marketing - Dina Darwish	2020	Big data analytics, R tool.	Merits: The proposed method is based on similarity measurement without complex training so that forecast can be completed in a short time, and performs well in small-scale data Demerits: The experiment only considers the features of the product and does not consider external influences, such as the impact of regulations on sales. It uses only small dataset.
Social media big data analytics for demand forecasting: development and case implementation of an innovative framework-Iftikhar, Rehan and Khan, Mohammad Saud	2020	Definitional aspects of big data analytics (BDA) in e-commerce	Merits: Captured linearity and non linearity better than ARIMA and ARNN gave the best result of 565 RMSE. Demerits: Hybrid Technique can fail if

			nonlinear model fails to capture residue patterns
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## 2.1 Existing problem

1. Lack of security since large data processed simultaneously
2. Hybrid Technique can fail if nonlinear model fails to capture residue patterns
3. The experiment only considers the features of the product and does not consider external influences, such as the impact of regulations on sales. It uses only small dataset.
4. Dataset is limited
5. The experiment only considers the features of the product and does not consider external influences, such as the impact of regulations on sales. It uses only small dataset.

## 2.2 References

1. Big Data Analytics and Deep Learning Based Sentiment Analysis System for Sales Prediction - Khatiwada, Aamod and Kadariya, Pradeep and Agrahari, Sandip and Dhakal, Rabin.
2. COVID-19 pandemic in the new era of big data analytics: Methodological innovations and future research directions - Sheng, Jie and Amankwah-Amoah, Joseph and Khan, Zaheer and Wang, Xiaojun
3. Sales Forecasting Based on CatBoost - Jingyi Ding, Ziqing Chen.
4. 2020 2nd International Conference on Broadband Communications, Wireless Sensors and Powering (BCWSP)-Wisesa, Oryza and Adriansyah, Andi and Khalaf, Osamah Ibrahim.
5. Developing and Implementing Big Data Analytics in Marketing - Dina Darwish
6. Social media big data analytics for demand forecasting: development and case implementation of an innovative framework-Iftikhar, Rehan and Khan, Mohammad Saud

## 2.3 Problem Statement Definition

1. Structured data focuses on demographic data including name, age, gender, date of birth, address, and preferences, unstructured data includes clicks, likes, links, tweets, voices, etc.
2. The methodological innovations in studying big data analytics and. We provide insights on methods in descriptive/diagnostic, predictive and prescriptive analytics, and how they can be leveraged to study ‘black swan’ events such as the COVID-19-related global crisis.

3. It proposed a sales forecasting system based on CatBoosting. The algorithm is trained on the Walmart sales dataset, by far the largest dataset in this field. We performed effective feature engineering to boost prediction accuracy and speed.
4. The results of this analysis are expected to generate reliable, accurate and effective forecasting data, a valuable resource for sales predictions. It shows good accuracy in forecasting.
5. Companies take informative business decisions in different fields, such as, health care, banking, manufacturing, media and entertainment, education and transportation and many others.
6. Social media big data offers insights that can be used to make predictions of products' future demand and add value to the supply chain performance

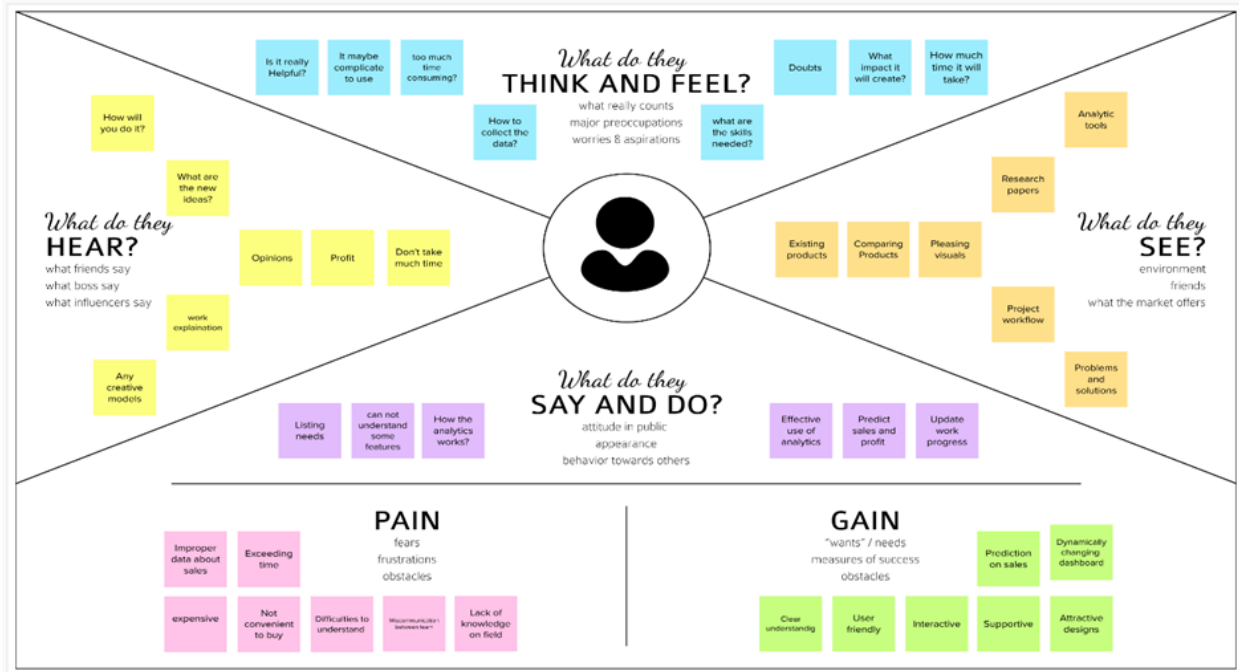
### **3. IDEATION & PROPOSED SOLUTION**

#### **3.1 Empathy Map Canvas**

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes. It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

# Empathy Map Canvas


Global Sales Data Analytics



## 3.2 Ideation & Brainstorming

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




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




### Brainstorm & idea prioritization


#### Global sales data analytics

Global Sales covers all activities involved in selling a product or service to a consumer or business. It is important for sales and marketing teams to review their strategies and performance in order to make improvements. One way to measure performance is with sales analytics.

 10 minutes to prepare  
 1 hour to collaborate  
 2-8 people recommended

 **Before you collaborate**

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

 10 minutes

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**A Team gathering**  
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.


**B Set the goal**  
Think about the problem you'll be focusing on solving in the brainstorming session.

**C Learn how to use the facilitation tools**  
Use the Facilitation Superpowers to run a happy and productive session.


[Open article](#) →

**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

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 **How might we deliver the analytical results?**

 **Key rules of brainstorming**  
To run a 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 Listing and Grouping

### 2 Brainstorm

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

10 minutes

#### Dharmeshprasad R

- Dynamic Dashboard
- Intuitive
- Customizable interface
- Personalized information
- Easy accessible
- Send data
- Market information
- Customer
- Deliver user specified solutions
- Help and support
- Suggestions
- Understand what customer wants

#### Aravindhnan P

- Corporate
- Space time
- Proactive ideas
- Real-time data
- Understanding to customer needs
- Personalized information
- Easy to produce to produce data
- Real-time

#### Tamilvanan N

- To know price of the product
- How much good for user understanding
- Choose what they need
- Notification
- Convenient for users
- Easy to track your account product
- Others
- Give suggestions for new products

#### Suriyaprakash

- Track customer behavior
- Join social media
- Make it easy
- Customize what customer needs product

#### Muthamilselvan

- Use customer data to help user make decisions
- User-friendly
- Advantages
- Listen to the customer

### 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 can break it up into smaller sub-groups.

30 minutes

#### User Interface

- Customize interface
- Real-time
- Easy accessible
- Corporate for data

#### Objectives

- Choose what they need
- Help and support
- Dynamic Dashboard
- Easy to track your account product
- Deliver user specified solutions
- Personalized information

#### Features

- Push notifications
- Help and support
- Others
- Customize interface for new products
- Real-time data
- To know price of the product

## Step-3: Idea Prioritization

### 4 Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

**Importance**

If most of these tasks should get done within a few days/weeks or even, without waiting for the most desirable features.

**Feasibility**

Importance of many important, which focus on more feasible ideas (e.g., design, time, effort, complexity, etc.).

### 3.3 Proposed Solution

S.No.	Parameter	Description
01	Problem Statement (Problem to be solved)	Global Sales covers all activities involved in selling a product or service to a consumer or business. It is important for sales and marketing teams to review their strategies and performance in order to make improvements. One way to measure performance is with sales analytics. Sales data analytics refers to the use of technology to collect and use sales data to identify actionable insights. It is used to identify, optimize, and increase sales. An efficient sales model that generates higher revenue for the business.
02	Idea / Solution description	Use the technology to collect and use sales data to derive actionable insights. It is used to identify, optimize, and forecast sales. It uses sales data to plan an efficient sales model that generates higher revenue for the business. Users can create multiple Analytical Visualizations and can build the required Dashboards.
03	Novelty / Uniqueness	Understanding performance with sales data analytics helps sales and marketing teams to review their strategies and performance in order to make improvements. Sales analytics provides valuable information like Customer Analysis and Product Analysis to improve sales methodologies. Users create multiple analytical graphs/charts/Visualizations.
04	Social Impact / Customer Satisfaction	Analyzing sales helps businesses in understanding their most profitable products and the ones that are not moving, most profitable customers, and potential sales opportunities thereby providing sales which match customer needs and meets their satisfaction. It helps in the perception of profit about particular product and perception of sales in different locations and times.
05	Business Model (Revenue Model)	Global sales analytics can use the sales data and provide actionable insights for selling a product or service to a

		consumer or business. Improve the decision-making process oriented at analyzing scales trends, reducing costs and increasing business revenue.
06	Scalability of the Solution	This solution can be used from small stores to multinational companies. This solution can be processed with less memory and quickly. The solution can be used as user specified so it is easy to customer.

### 3.4 Problem Solution Fit

The problem solution fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps to identify behavioral patterns and recognize on sales.

#### Purpose:

- Solve complex problems in a way that fits the state of your customers. ☐
- Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior. ☐
- Sharpen your communication and marketing strategy with the right triggers and messaging. ☐
- Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems. ☐
- Understand the existing situation in order to improve it for your target group.

## Solution fit:

<p><b>1. CUSTOMER SEGMENT(S)</b> <span>CS</span></p> <p>A Business organization, online store or seller who would like to understand more about sales in global scale.</p>	<p><b>6. CUSTOMER CONSTRAINTS</b> <span>CC</span></p> <p>Check input file structure before uploading a file.</p> <p>Not enable of easy payment.</p>	<p><b>5. AVAILABLE SOLUTIONS</b> <span>AS</span></p> <p>The competition perform analytics and display dashboard with dynamic insights.</p> <p>End product provides facility to add manual or dynamic to the dashboard</p>
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<p><b>2. JOBS-TO-BE-DONE / PROBLEMS</b></p> <p>Determination input file structure</p> <p>What analysis to perform to be useful?</p>	<p><b>9. PROBLEM ROOT CAUSE</b> <span>RC</span></p> <p>Unpredictable sales</p> <p>Market down</p> <p>Big amount of data</p>	<p><b>7. BEHAVIOUR</b> <span>BE</span></p> <p>Collecting sales data</p> <p>Utilize the data in efficient way.</p>
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<p><b>3. TRIGGERS</b> <span>TR</span></p> <p>Have you ever felt that you are unaware of how your business is performing?</p>	<p><b>10. YOUR SOLUTION</b> <span>SL</span></p> <p>Easy payments</p> <p>Responsive design</p> <p>Creating an interactive dashboard.</p> <p>User specified design.</p>	<p><b>8. CHANNELS of BEHAVIOUR</b> <span>CH</span></p> <p><b>ONLINE</b></p> <p>Using third party software or services with automation insights and subscriptions based services to analyze data.</p> <p><b>OFFLINE</b></p> <p>Offline software to analyze complex data in un-intuitive way.</p>
<p><b>4. EMOTIONS: BEFORE / AFTE</b> <span>EM</span></p> <p>Before: Misunderstanding, unpredictable, decision fatigue.</p> <p>After: clear mind, better understanding</p>		

## 4. REQUIREMENT ANALYSIS

### 4.1 Functional Requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Website Registration through Gmail
FR-2	User Confirmation	Confirmation via Email
FR-3	User Login	Login via Gmail and Password
FR-4	Generating Report	User can view the product details

### 4.2 Non-functional Requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	This service will have a simple and user-friendly graphical interface. Users will be able to understand and use all the features easily.
NFR-2	Security	The main security concern is for users login information is end to end encryption should be used to avoid hacking.
NFR-3	Reliability	It has high reliability because when the system is disconnected or internet connection lost, it should save all the process of the users made.
NFR-4	Performance	A good internet speed while browsing the product it had

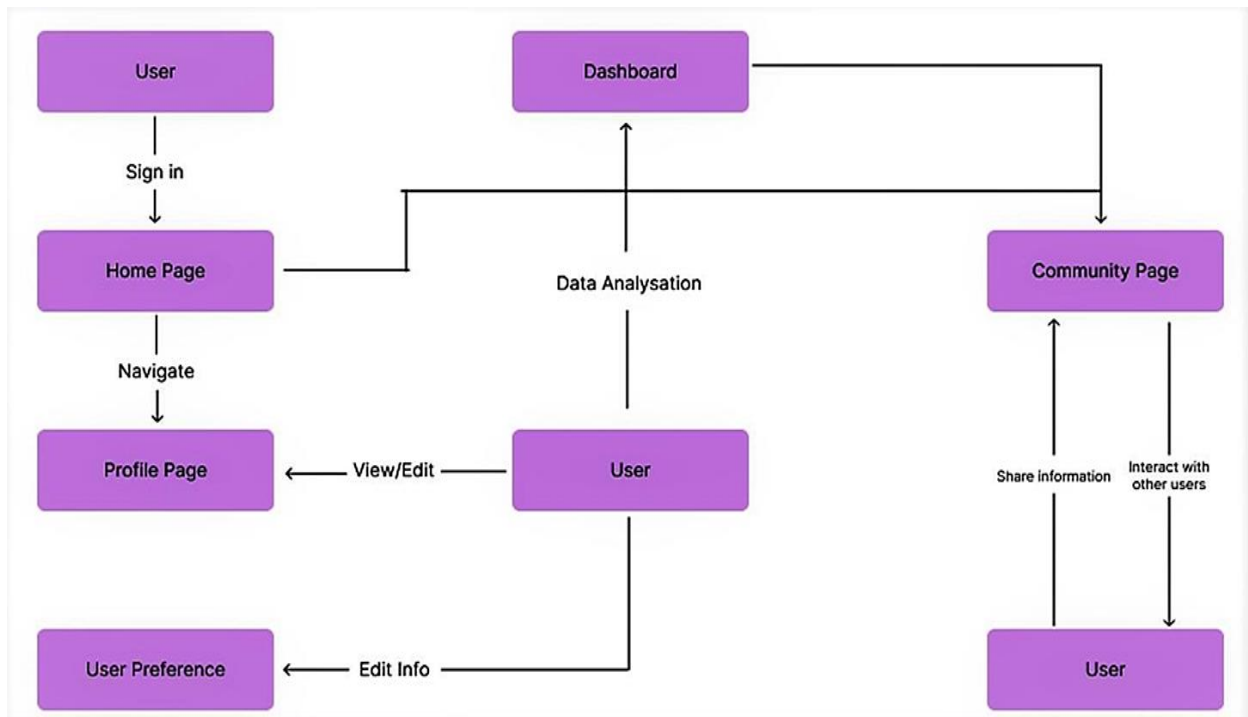
		high performance with efficiency.
NFR-5	Availability	It will be available 24 hours a day and seven days a week. User access anywhere at any time .
NFR-6	Scalability	A Many users can access the website simultaneously.

## 5. PROJECT DESIGN

### 5.1 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.

#### DFD level 0

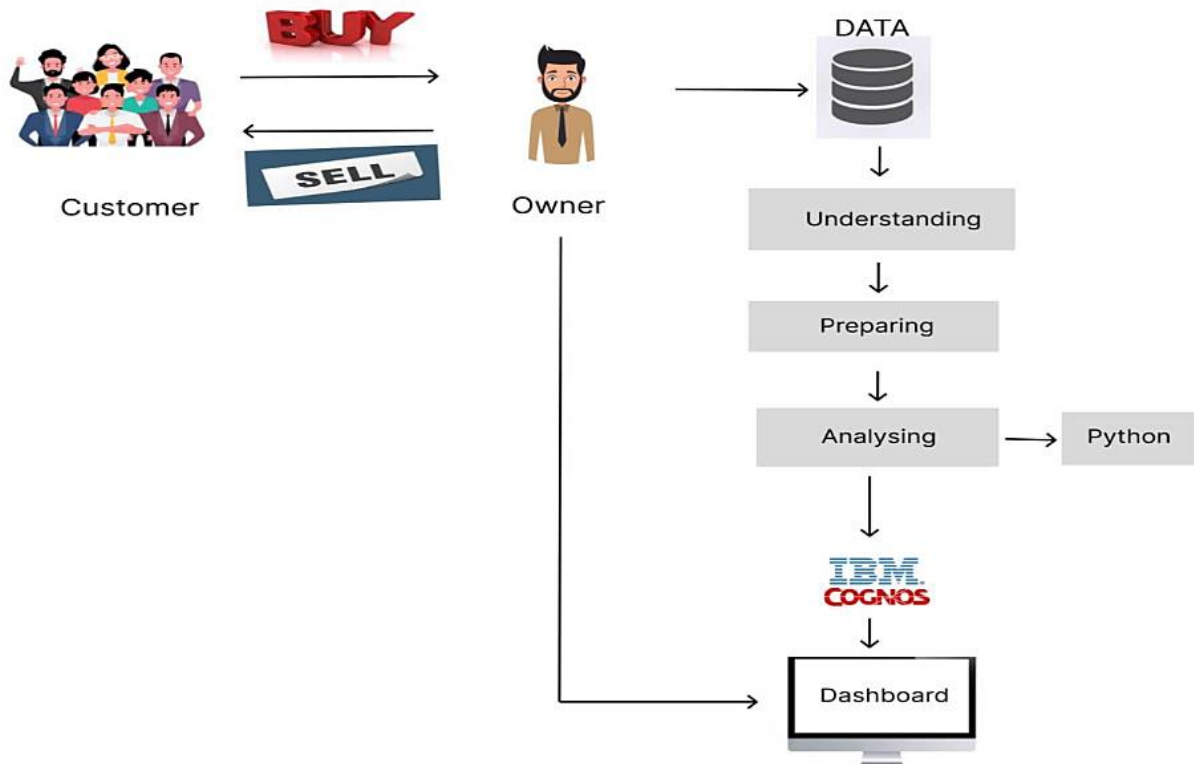


## 5.2 Solution & Technical Architecture

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

### Solution Architecture Diagram:



### 5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
	Collecting dataset	USN-1	As a user, I need to gather the data in the form of CSV/XLS and clean the data.		low	Sprint-1
	Data preparation	USN-2	As a user, I need to filter it for Data visualization.		Medium	Sprint-1
	Data visualization	USN-3	As a user, I need to filter it for Data visualization.		Medium	Sprint-1
	Dashboard	USN-4	Access dashboard in website	Dashboard	medium	Sprint-2
	Report and story	USN-5	As a user, I can view the list of categorized products and their details as a report and story.	Report and Story		Sprint-2
Customer (web user)	Registration	USN-6	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-3
	Login	USN-7	As a user, I need valid credentials to log to my application.	I can receive confirmation email and	High	Sprint-3



				click confirm.		
		USN-8	As a user, I can register for the application through Gmail	I can register and access the dashboard with Login	Low	Sprint-3
		USN-9	As a user, I can log into the application by entering email and password		High	Sprint-4
Administrator		USN-10	It can be easily accessible and responsible.	I can access it easily through application.	High	Sprint-4

## 6. PROJECT PLANNING & SCHEDULING

### 6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint -1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	5	High	Sarveshawarran G, Sathish S, Shajahan I, Shakthi Vignesh M.
Sprint -1	Login	USN-2	As a user, I need valid credentials	5	High	Sarveshawarran G, Sathish S, Shajahan I

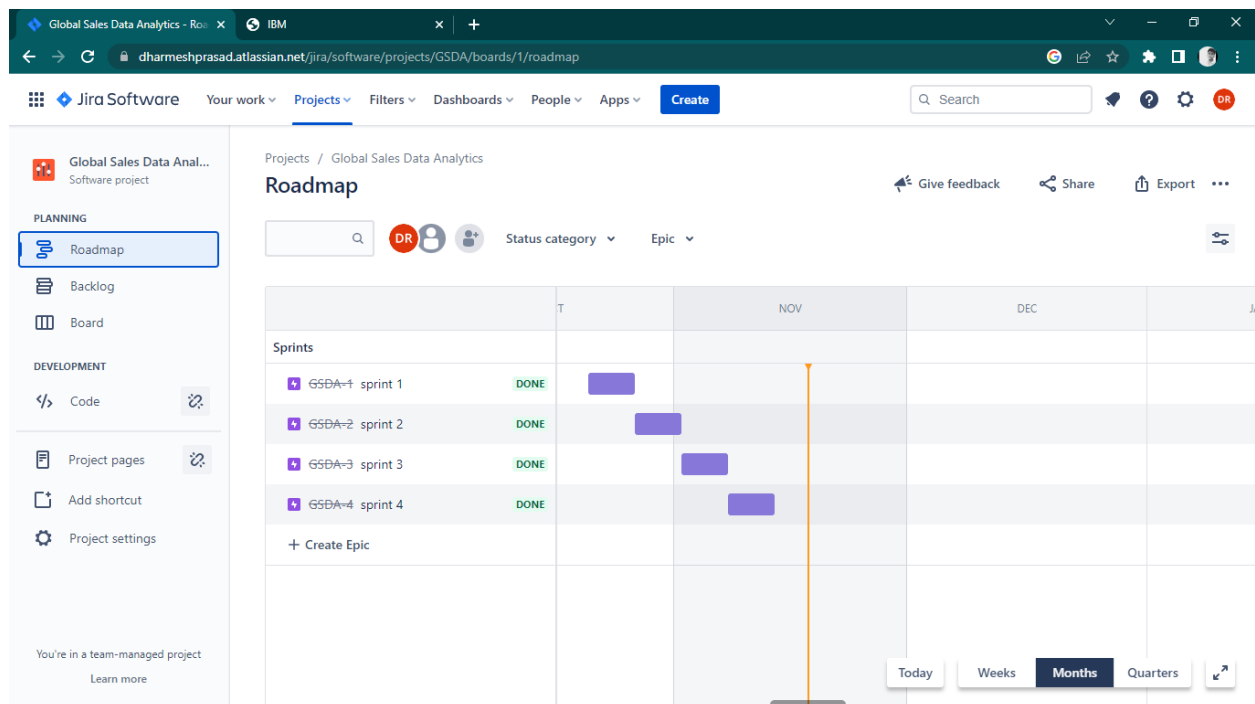
			to log to my application.			
Sprint -1	Data collection	USN-3	As a user, I need to gather the data in the form of CSV/XLS and clean the data.	5	High	Sarveshawarran G, Sathish S, Shajahan I.
Sprint -1	Upload dataset	USN-4	As a user, I can view the data of the products.	5	High	Shajahan I, Shakthi Vignesh M.
Sprint -2	Data preparation	USN-5	As a user, I need to filter it for Data visualization.	5	High	Sarveshawarran G, Shajahan I, Shakthi Vignesh M.
Sprint -2	Data visualization	USN-6	As a user, I need to filter it for Data visualization.	5		Sarveshawarran G, Sathish S, Shakthi Vignesh M.
Sprint -2	Dashboard	USN-7	As a user, I need to filter it for Data visualization.	10	High	Shajahan I, Shakthi Vignesh M.
Sprint -3	Dashboard	USN-8	As a user, I must plan visualizations in a way that I'm able to gain insights regarding the sales based upon the category of sales and the respective region.	4	High	Sarveshawarran G, Sathish S,
Sprint -3	Dashboard	USN-9	As a user, I must be able to	10	Medium	Sarveshawarran G, Sathish S,

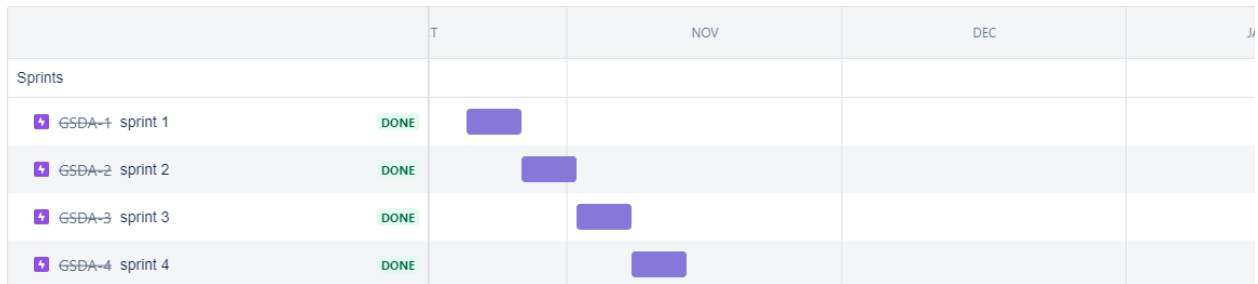
			gain insights from the charts/graphs through a variety of relationships established on the dashboard.			Shajahan I.
Sprint -4	Prediction	USN-10	As a user, I see the prediction of the specific product's future sales expectation.	10	Medium	Sathish S, Shajahan I, Shakthi Vignesh M.
Sprint -4	Report	USN-11	As a user, I can view the list of categorized products and their details as a report.	10	High	Sarveshawarran G, Shajahan I, Shakthi Vignesh M.
Sprint -4	Story	USN-12	As a user, I can view the product and customer description and more additional information as a story.	10	High	Sarveshawarran G, Sathish S, Shakthi Vignesh M.

## 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	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

## 6.3 Reports From JIRA





Projects / GSDA

## Backlog

KJ
+
Epic

Insights

▼ Backlog (6 issues)
0 0 0 Create sprint

GSDA-7 As a user, I can view the data in the form of CSV/XLS file for filtration.

DATA COLLECTION

IN PROGRESS

GSDA-8 As a user, I can custom or filter the gathered data.

DATA FILTERATION

IN PROGRESS

GSDA-9 As a user, I can easily visualize the data in the form of charts.

DATA VISUALIZATIONS

IN PROGRESS

GSDA-10 As a user, I can view my dashboard and can perform stock prediction and analysis.

DASHBOARD CREATION

IN PROGRESS

GSDA-11 As a user, I can view the list of categorized products and their details as a report.

REPORTS

IN PROGRESS

GSDA-12 As a user, I can view the product and customer description and more additional information as a story.

STORY

IN PROGRESS

+ Create issue

## 7.CODING & SOLUTION

### Feature 1 - Login page:

```

1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8" />
5     <meta name="author" content="Kodinger" />
6     <meta name="viewport" content="width=device-width,initial-
  scale=1" />
7     <title>Global Sales Data Analytics</title>
8     <link rel="stylesheet" type="text/css" href="assets/css/my-
  login.css" />
9   </head>
10  <body class="my-login-page">
11    <section class="h-100">
12      <div class="container h-100">
13        <div class="row justify-content-md-center h-100">

```

```

14         <div class="card-wrapper">
15             <div class="brand">
16                 
17             </div>
18             <div class="card fat">
19                 <div class="card-body">
20                     <h4 class="card-title">Login</h4>
21                     <form method="POST" class="my-login-validation"
novalidate="">
22                         <div class="form-group">
23                             <label for="email">E-Mail Address</label>
24                             <input
25                                 id="email"
26                                 type="email"
27                                 class="form-control"
28                                 name="email"
29                                 value=""
30                                 required
31                                 autofocus
32                             />
33                             <div class="invalid-feedback">Email is
invalid</div>
34                         </div>
35
36                         <div class="form-group">
37                             <label for="password"
38                                 >Password
39                             <a href="forgot.html" class="float-right">
40                                 Forgot Password?
41                             </a>
42                         </label>
43                         <input
44                             id="password"
45                             type="password"
46                             class="form-control"
47                             name="password"
48                             required
49                             data-eye

```

```

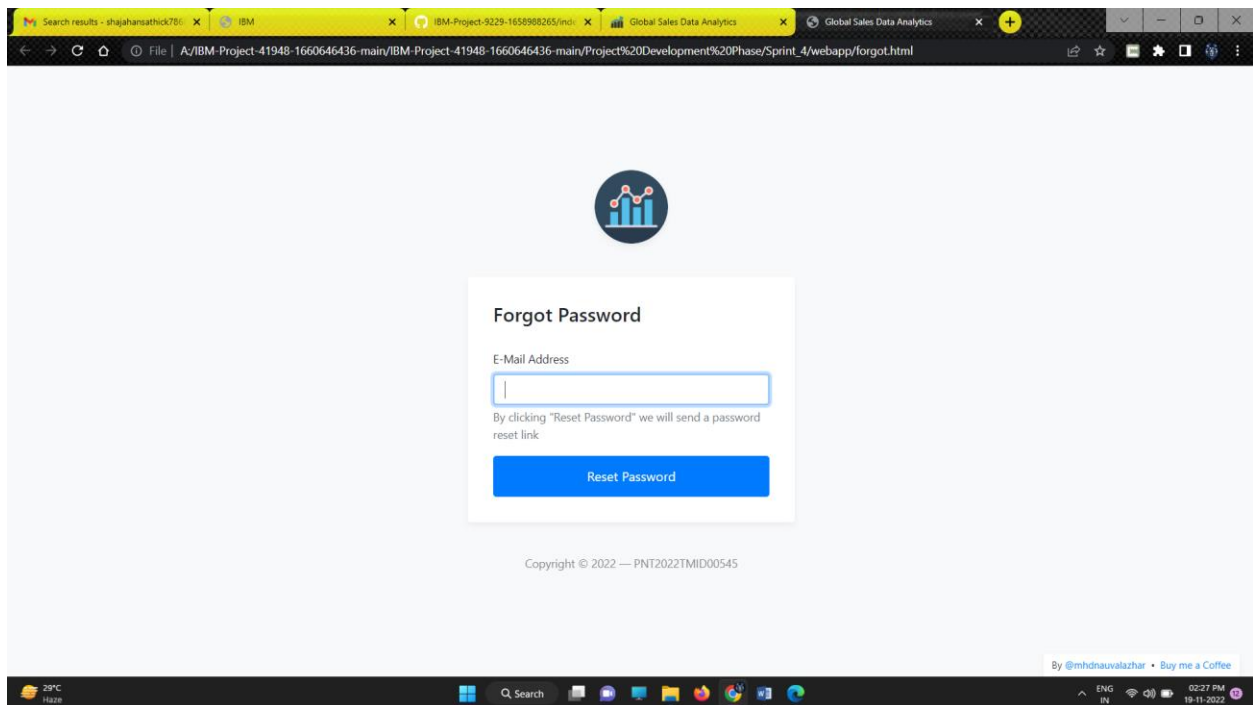
50             />
51             <div class="invalid-feedback">Password is
required</div>
52         </div>
53
54         <div class="form-group">
55             <div class="custom-checkbox custom-control">
56                 <input
57                     type="checkbox"
58                     name="remember"
59                     id="remember"
60                     class="custom-control-input"
61                 />
62                 <label for="remember" class="custom-
control-label"
63                     >Remember Me</label>
64             >
65         </div>
66     </div>
67
68     <div class="form-group m-0">
69         <button
70             type="submit"
71             id="mybutton"
72             class="btn btn-primary btn-block"
73         >
74             Login
75         </button>
76     </div>
77     <div class="mt-4 text-center">
78         Don't have an account?
79         <a href="register.html">Create One</a>
80     </div>
81 </form>
82 </div>
83 </div>
84 <div class="footer">
85     Copyright &copy; 2022 &mdash; PNT2022TMI00545

```

```

86         </div>
87     </div>
88 </div>
89 </div>
90 </section>
91
92 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
    integrity="sha384-
    UO2eT0CpHqdSJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W1
    " crossorigin="anonymous"></script>
93 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
    integrity="sha384-
    JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM"
    crossorigin="anonymous"></script> -->
94 <script src="assets/js/my-login.js"></script>
95 </body>
96 </html>

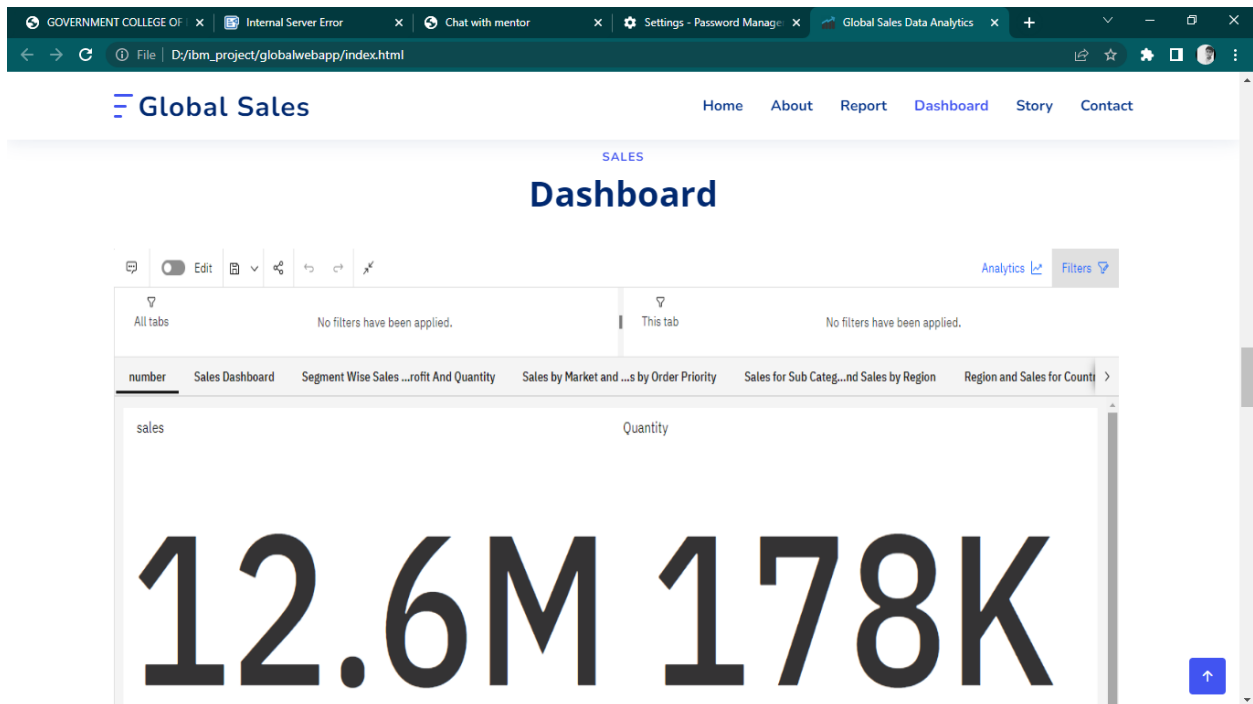
```





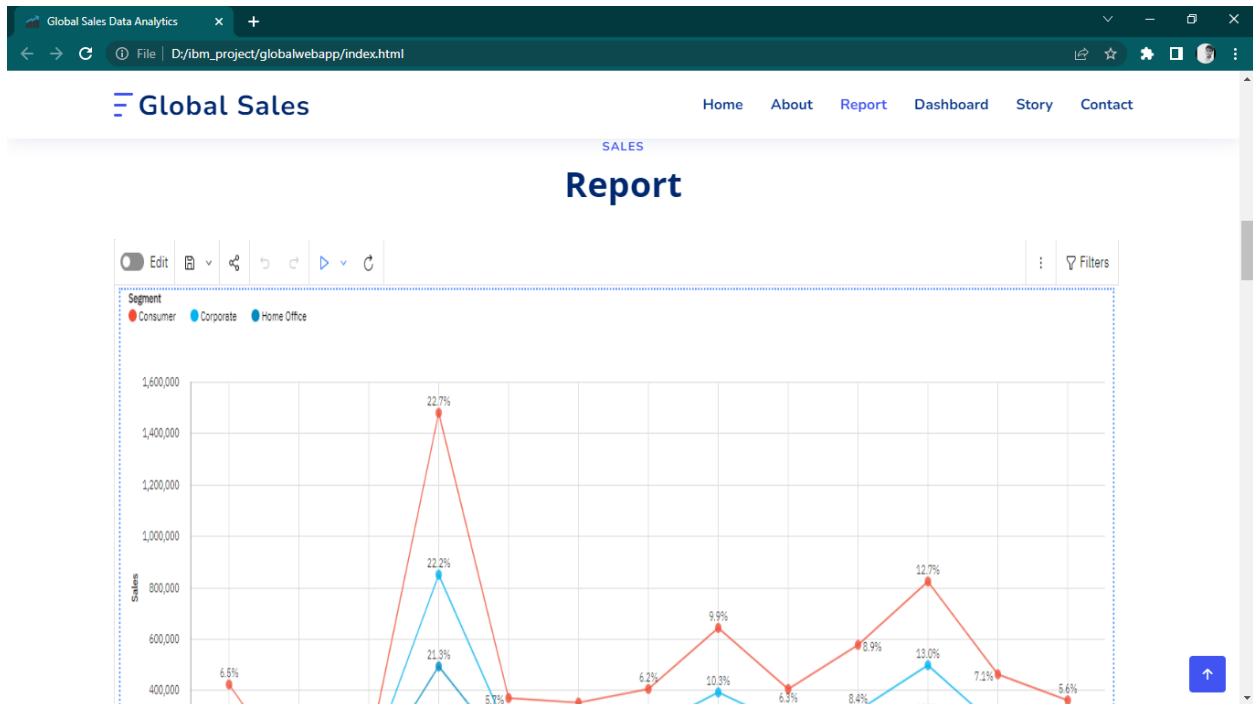
## Feature 2 - Embedding dashboard to web app:

```
1 <iframe
  src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&
  mp;pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Dashboard&
  closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false
  &shareMode=embedded&action=view&mode=dashboard&subView=model000001847746ca80_00000000" width="1200" height="1000"
  frameborder="0" gesture="media" allow="encrypted-media"
  allowfullscreen=""></iframe>
```



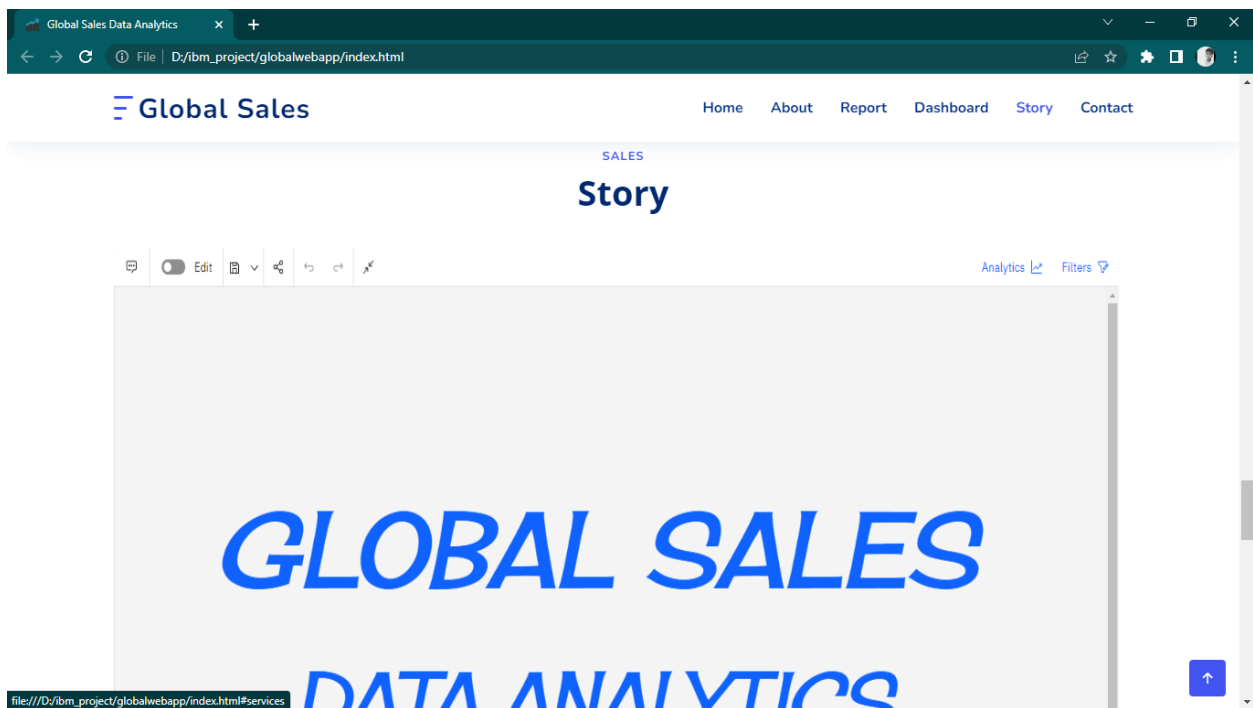
### Feature 3 - Embedding report to web app:

```
1 <iframe
  src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2Fg
  lobalsale%2FGlobalsales_Report&closeWindowOnLastView=true&
  ;ui_appbar=false&ui_navbar=false&shareMode=embedded&a
  ction=edit" width="1300" height="1000" frameborder="0"
  gesture="media" allow="encrypted-media"
  allowfullscreen=""></iframe>
```



## Feature 4 - Embedding story to web app:

```
1 <iframe
  src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&p
  athRef=.my_folders%2Fglobalsale%2FNew%2Bstory&closeWindowOnLa
  stView=true&ui_appbar=false&ui_navbar=false&shareMode
  =embedded&action=view&sceneId=model000001847a103dc5_00000
  000&sceneTime=600" width="1300" height="1000" frameborder="0"
  gesture="media" allow="encrypted-media"
  allowfullscreen=""></iframe>
```



## 8. TESTING

### 8.1 Test Cases

#### Test Scenarios

- Verify user able to see login page
- Verify user able to login to application or not?
- Verify user able to navigate to create your account page?
- Verify user able to recovery password
- Verify login page elements

#### Access visualizations

- User able to see dashboard
- User able to see report
- User able to see stories

### 8.2 User Acceptance Testing

#### Defect Analysis:

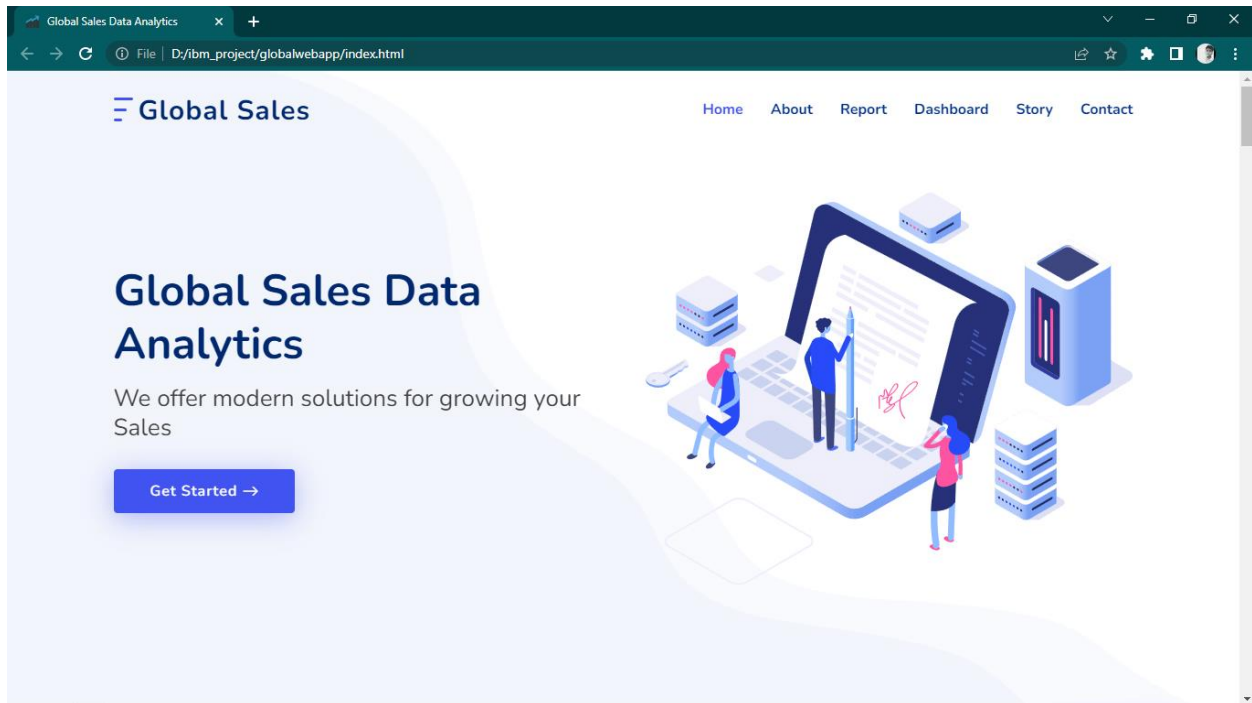
Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	5	2	1	1	9
Duplicate	0	0	0	0	0
External	2	3	0	1	6
Fixed	4	1	2	2	9
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	11	6	3	4	24

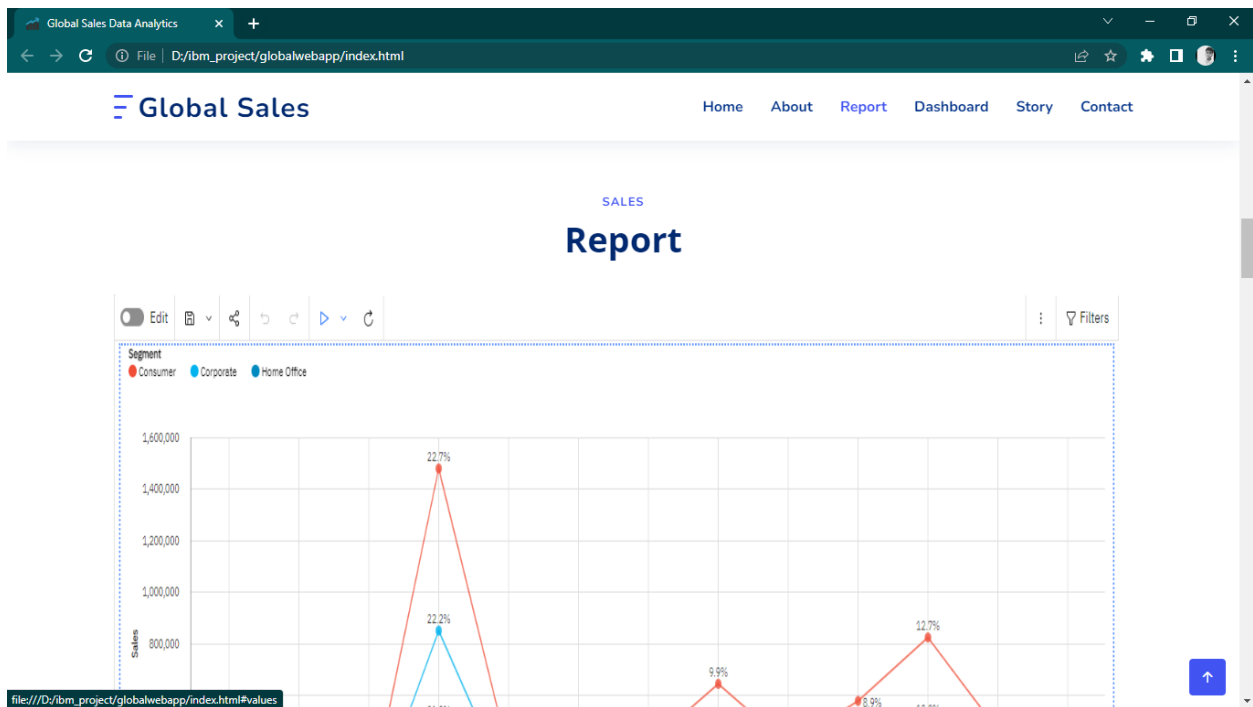
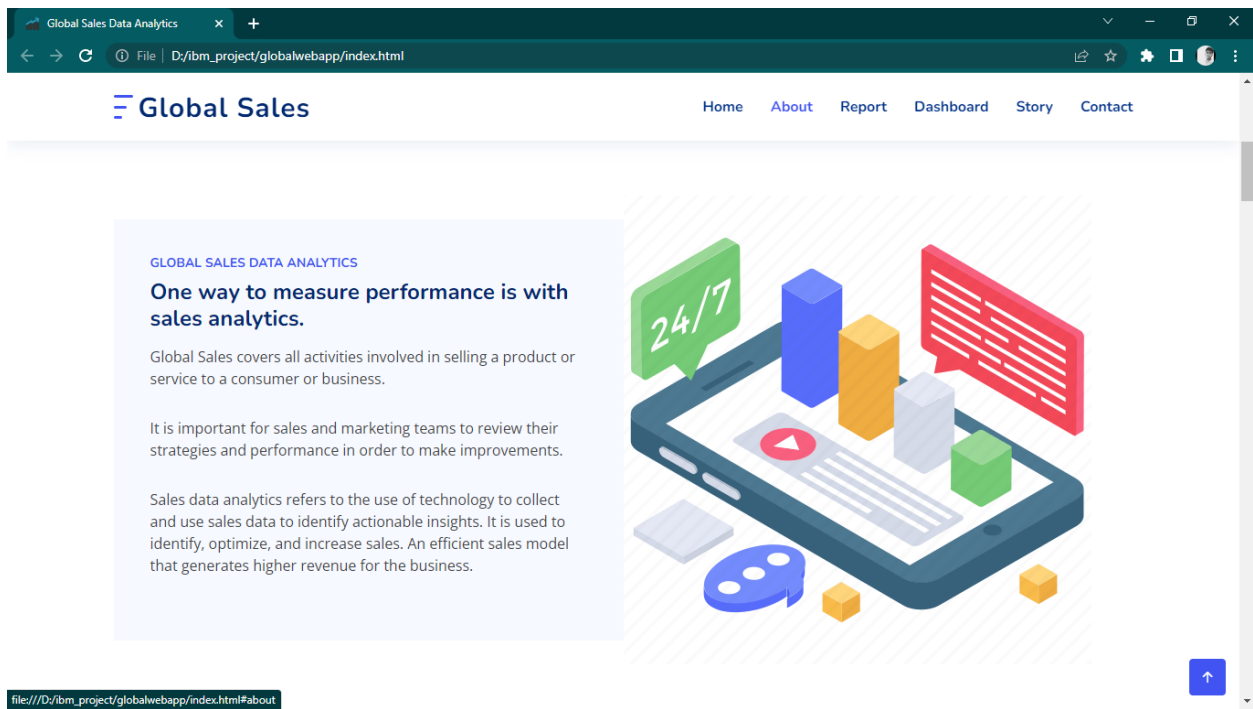
## Test Case Analysis:

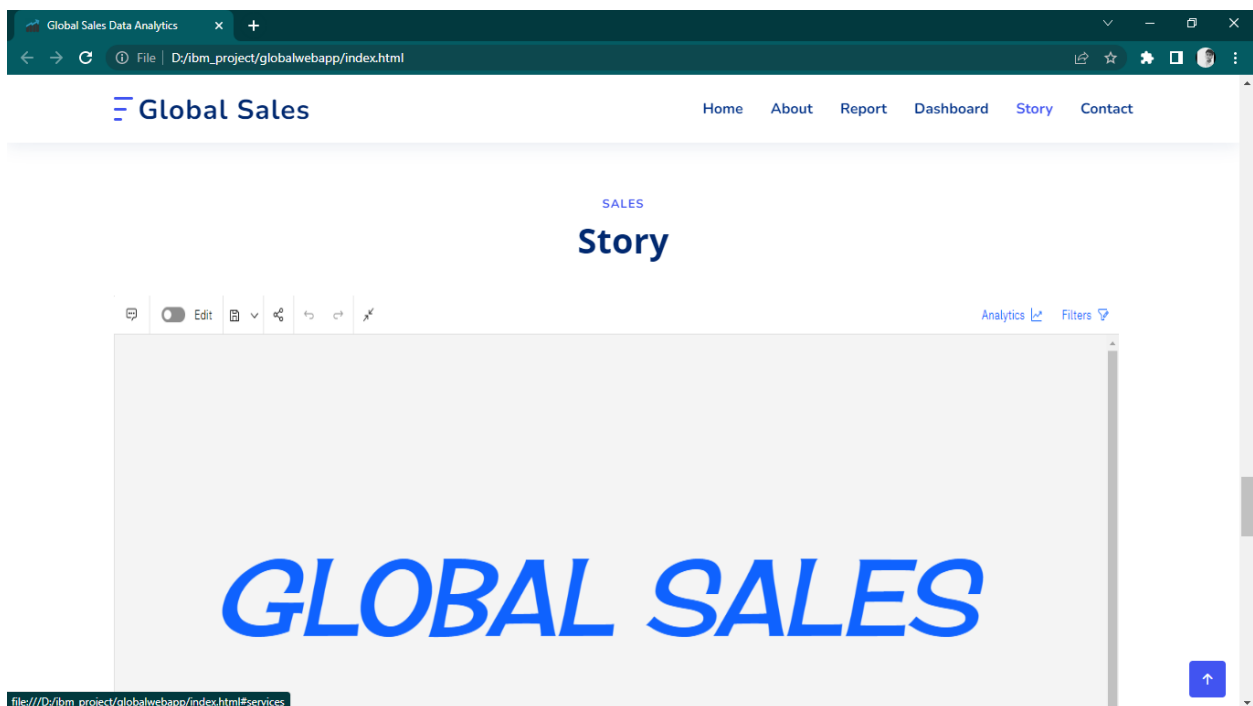
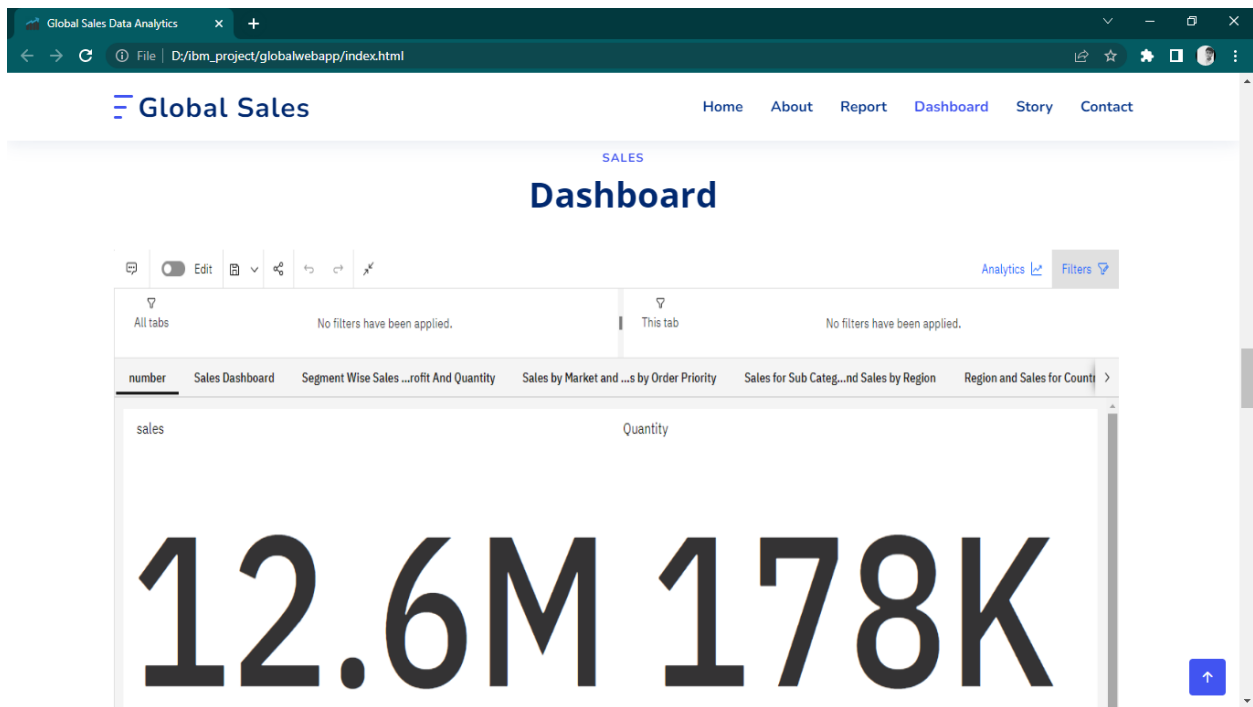
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	0	0	0	0
Client Application	6	0	0	6
Security	0	0	0	0
Outsource Shipping	0	0	0	0
Exception Reporting	7	0	0	7
Final ReportOutput	0	0	0	0
Version Control	0	0	0	0

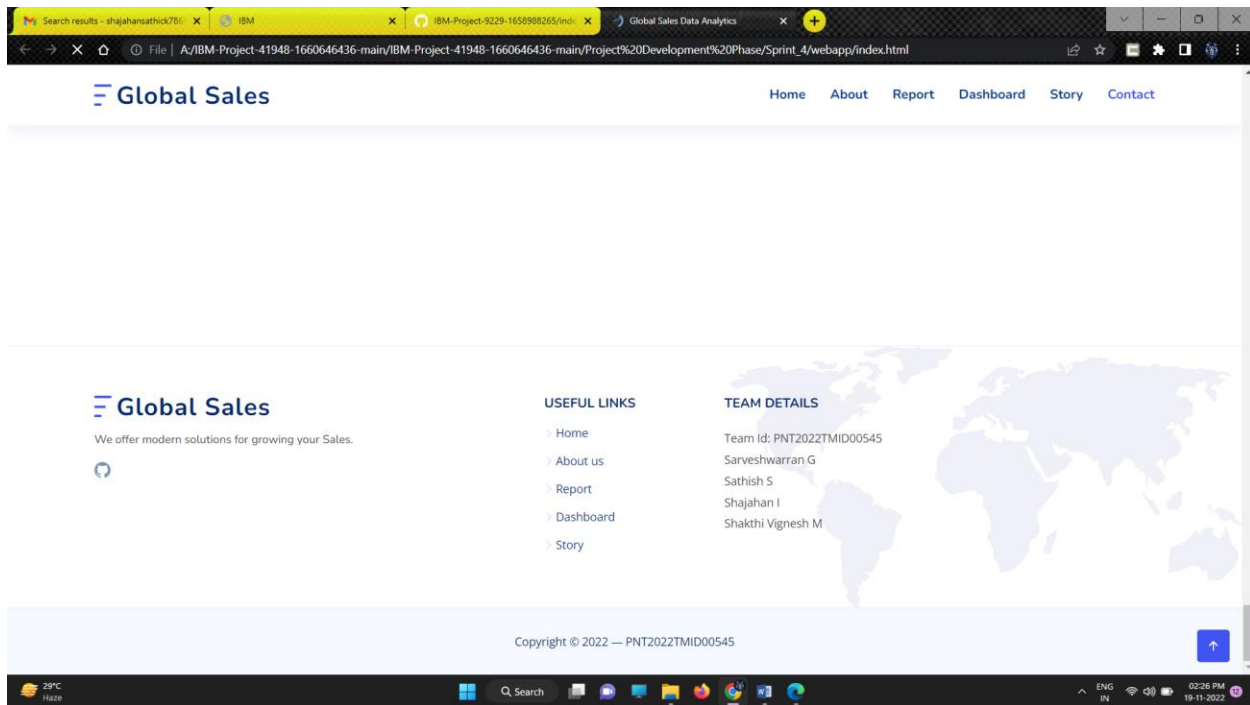
## 9. RESULTS

### Screenshots of web application:









## 10. ADVANTAGES & DISADVANTAGES

### Advantages:

- It is used to identify, optimize, and forecast sales.
- Sales data will help a company to take a future decision in terms of inventory management, marketing activities, schemes or offers to be rolled and changes in manufacturing processes if applicable.
- An efficient sales model that generates higher revenue for the business.
- Better prediction, Profit function performance.
- Helps to review their strategies and performance in order to make improvements.

### Disadvantages:

- Sales pattern can be changed
- insufficient data may lead to wrong path.
- data may have been collected for historical reasons may not be suitable to answer the questions that we ask today.
- business users do not see results immediately



## 11. CONCLUTION

Analyzing sales helps businesses in understanding their most profitable products and the ones that are not moving, most profitable customers, and potential sales opportunities thereby providing sales which match customer needs and meets their satisfaction. An efficient sales model that generates higher revenue for the business. It helps in the perception of profit about particular product and perception of sales in different locations and times.

## 12. FUTURE SCOPE

Use the technology to collect and use sales data to derive actionable insights. It is used to identify, optimize, and forecast sales. An efficient sales model that generates higher revenue for the business. An efficient sales model that generates higher revenue for the business.

## 13. APPENDIX

### 13.1 Source Code

#### kaggle api to gather the dataset

```
1 !pip install -q kaggle
2 !mkdir ~/.kaggle
3 !cp kaggle.json ~/.kaggle/
4 !kaggle datasets download -d mrhatrider/global-sales
5 !unzip /content/global-sales.zip
```

#### index.html

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8" />
5     <meta content="width=device-width, initial-scale=1.0"
6       name="viewport" />
```

```

7      <title>Global Sales Data Analytics</title>
8      <meta content="" name="description" />
9
10     <meta content="" name="keywords" />
11
12     <!-- Favicons -->
13     <link href="assets/img/favicon.png" rel="icon" />
14     <link href="assets/img/apple-touch-icon.png" rel="apple-
touch-icon" />
15
16     <!-- Google Fonts -->
17     <link
18         href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,
400,400i,600,600i,700,700i|Nunito:300,300i,400,400i,600,600i,700,
700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i"
19         rel="stylesheet"
20     />
21
22     <!-- Vendor CSS Files -->
23     <link href="assets/vendor/aos/aos.css" rel="stylesheet" />
24     <link
25         href="assets/vendor/bootstrap/css/bootstrap.min.css"
26         rel="stylesheet"
27     />
28     <link
29         href="assets/vendor/bootstrap-icons/bootstrap-icons.css"
30         rel="stylesheet"
31     />
32     <link
33         href="assets/vendor/glightbox/css/glightbox.min.css"
34         rel="stylesheet"
35     />
36     <link href="assets/vendor/remixicon/remixicon.css"
rel="stylesheet" />
37     <link href="assets/vendor/swiper/swiper-bundle.min.css"
rel="stylesheet" />
38

```

```

39     <!-- Main CSS File -->
40     <link href="assets/css/style.css" rel="stylesheet" />
41 </head>
42
43 <body>
44     <!-- ===== Header ===== -->
45     <header id="header" class="header fixed-top">
46         <div
47             class="container-fluid container-xl d-flex align-items-
center justify-content-between"
48         >
49             <a href="index.html" class="logo d-flex align-items-
center">
50                 
51                 <span>Global Sales</span>
52             </a>
53
54             <nav id="navbar" class="navbar">
55                 <ul>
56                     <li><a class="nav-link scrollto active"
href="#hero">Home</a></li>
57                     <li><a class="nav-link scrollto"
href="#about">About</a></li>
58                     <li><a class="nav-link scrollto"
href="#values">Report</a></li>
59                     <li><a class="nav-link scrollto"
href="#features">Dashboard</a></li>
60                     <li><a class="nav-link scrollto"
href="#services">Story</a></li>
61                     <li><a class="nav-link scrollto"
href="#contact">Contact</a></li>
62                 </ul>
63                 <i class="bi bi-list mobile-nav-toggle"></i>
64             </nav>
65         <!-- .navbar -->
66     </div>
67 </header>
68 <!-- End Header -->

```

```

69
70     <!-- ===== Hero Section ===== -->
71     <section id="hero" class="hero d-flex align-items-center">
72         <div class="container">
73             <div class="row">
74                 <div class="col-lg-6 d-flex flex-column justify-content-
center">
75                     <h1      data-aos="fade-up">Global      Sales      Data
Analytics</h1>
76                     <h2 data-aos="fade-up" data-aos-delay="400">
77                         We offer modern solutions for growing your Sales
78                     </h2>
79                     <div data-aos="fade-up" data-aos-delay="600">
80                         <div class="text-center text-lg-start">
81                             <a
82                                 href="#about"
83                                 class="btn-get-started scrollto d-inline-flex
align-items-center justify-content-center align-self-center"
84                             >
85                                 <span>Get Started</span>
86                                 <i class="bi bi-arrow-right"></i>
87                             </a>
88                         </div>
89                     </div>
90                 </div>
91                 <div
92                     class="col-lg-6 hero-img"
93                     data-aos="zoom-out"
94                     data-aos-delay="200"
95                 >
96                     
97                 </div>
98             </div>
99         </div>
100     </section>
101     <!-- End Hero -->
102

```

```

103     <main id="main">
104         <!-- ===== About Section ===== -->
105         <section id="about" class="about">
106             <div class="container" data-aos="fade-up">
107                 <div class="row gx-0">
108                     <div
109                         class="col-lg-6 d-flex flex-column justify-
content-center"
110                         data-aos="fade-up"
111                         data-aos-delay="200"
112                     >
113                         <div class="content">
114                             <h3>Global Sales Data Analytics</h3>
115                             <h2>One way to measure performance is with sales
analytics.</h2>
116                             <p>
117                                 Global Sales covers all activities involved in
selling a
118                                 product or service to a consumer or business.
119                             </p>
120                             <p>
121                                 It is important for sales and marketing teams
to review their
122                                 strategies and performance in order to make
improvements.
123                             </p>
124                             <p>
125                                 Sales data analytics refers to the use of
technology to
126                                 collect and use sales data to identify
actionable insights. It
127                                 is used to identify, optimize, and increase
sales. An
128                                 efficient sales model that generates higher
revenue for the
129                                 business.
130                             </p>
131                         </div>

```

```

132         </div>
133
134         <div
135             class="col-lg-6 d-flex align-items-center"
136             data-aos="zoom-out"
137             data-aos-delay="200"
138         >
139             
140         </div>
141     </div>
142 </div>
143 </section>
144 <!-- End About Section -->
145
146 <!-- ===== Counts Section ===== -->
147 <section id="counts" class="counts">
148     <div class="container" data-aos="fade-up">
149         <div class="row gy-4">
150             <div class="col-lg-3 col-md-6">
151                 <div class="count-box">
152                     <i class="bi bi-star-fill"></i>
153                     <div>
154                         <span
155                             data-purecounter-start="0"
156                             data-purecounter-end="12.6"
157                             data-purecounter-duration="1"
158                             class="purecounter"
159                         ></span>
160                         <p>Sales(millions)</p>
161                     </div>
162                 </div>
163             </div>
164
165             <div class="col-lg-3 col-md-6">
166                 <div class="count-box">
167                     <i class="bi bi-star-fill"></i>
168                     <div>

```

```

169         <span
170             data-purecounter-start="0"
171             data-purecounter-end="1.6"
172             data-purecounter-duration="1"
173             class="purecounter"
174         ></span>
175         <p>Profit (millions)</p>
176     </div>
177 </div>
178 </div>
179
180 <div class="col-lg-3 col-md-6">
181     <div class="count-box">
182         <i class="bi bi-star-fill"></i>
183     <div>
184         <span
185             data-purecounter-start="0"
186             data-purecounter-end="17.86"
187             data-purecounter-duration="1"
188             class="purecounter"
189         ></span>
190         <p>Quantity (millions)</p>
191     </div>
192 </div>
193 </div>
194
195 <div class="col-lg-3 col-md-6">
196     <div class="count-box">
197         <i class="bi bi-star-fill"></i>
198     <div>
199         <span
200             data-purecounter-start="0"
201             data-purecounter-end="1.6"
202             data-purecounter-duration="1"
203             class="purecounter"
204         ></span>
205         <p>Sales cost (millions)</p>
206     </div>

```

```

207             </div>
208         </div>
209     </div>
210 </div>
211 </section>
212 <!-- End Counts Section -->
213
214 <!-- ===== Values Section ===== -->
215 <section id="values" class="values">
216     <div class="container" data-aos="fade-up">
217         <header class="section-header">
218             <h2>Sales</h2>
219             <p>Report</p>
220         </header>
221         <iframe
222             src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2Fg
lobalsale%2FGlobalsales_Report&closeWindowOnLastView=true&
;ui_appbar=false&ui_navbar=false&shareMode=embedded&a
ction=edit"
223             width="1300"
224             height="1000"
225             frameborder="0"
226             gesture="media"
227             allow="encrypted-media"
228             allowfullscreen=""
229         ></iframe>
230
231     <div class="row">
232         <div class="col-lg-4" data-aos="fade-up" data-aos-
delay="200">
233             <div class="box">
234                 
235                 <h3>Report</h3>
236                 <p>
237                     sorting and organization of data, while
analytics derive

```



```

238             insights from that data and often influence
        business
239             decisions.
240         </p>
241     </div>
242 </div>
243
244     <div
245         class="col-lg-4 mt-4 mt-lg-0"
246         data-aos="fade-up"
247         data-aos-delay="400"
248     >
249         <div class="box">
250             
251             <h3>Stroy</h3>
252             <p>
253                 a methodology for communicating information,
        tailored to a
254                 specific audience, with a compelling narrative.
255             </p>
256         </div>
257     </div>
258
259     <div
260         class="col-lg-4 mt-4 mt-lg-0"
261         data-aos="fade-up"
262         data-aos-delay="600"
263     >
264         <div class="box">
265             
266             <h3>Dashboard</h3>
267             <p>
268                 a tool used to multi-task, organize, visualize,
        analyze, and
269                 track data.View automatically updated data with
        interactive

```

```

270             charts, graphs and tables.
271         </p>
272     </div>
273 </div>
274 </div>
275 </div>
276 </section>
277 <!-- End Values Section -->
278
279 <!-- ===== Features Section ===== -->
280 <section id="features" class="features">
281     <div class="container" data-aos="fade-up">
282         <header class="section-header">
283             <h2>Sales</h2>
284             <p>Dashboard</p>
285         </header>
286         <iframe
287             src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&
mp;pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Dashboard&mp;c
loseWindowOnLastView=true&mp;ui_appbar=false&mp;ui_navbar=false
&mp;shareMode=embedded&mp;action=view&mp;mode=dashboard&mp;su
bView=model000001847746ca80_00000000"
288             width="1200"
289             height="1000"
290             frameborder="0"
291             gesture="media"
292             allow="encrypted-media"
293             allowfullscreen=""
294         ></iframe>
295
296         <div class="row">
297             <div class="col-lg-6 mt-5 mt-lg-0 d-flex">
298                 <div class="row align-self-center gy-4">
299                     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="200">
300                         <div class="feature-box d-flex align-items-
center">

```

```

301             <i class="bi bi-check"></i>
302             <h3>Segment Wise Sales , Profit And
Quantity</h3>
303         </div>
304     </div>
305
306     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="300">
307         <div class="feature-box d-flex align-items-
center">
308             <i class="bi bi-check"></i>
309             <h3>Sales By Market</h3>
310         </div>
311     </div>
312
313     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="400">
314         <div class="feature-box d-flex align-items-
center">
315             <i class="bi bi-check"></i>
316             <h3>Sales By Sub Category And Sales By
Region</h3>
317         </div>
318     </div>
319
320     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="500">
321         <div class="feature-box d-flex align-items-
center">
322             <i class="bi bi-check"></i>
323             <h3>Country Wise Sales Using Map Points</h3>
324         </div>
325     </div>
326
327     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="600">
328         <div class="feature-box d-flex align-items-
center">

```

```

329             <i class="bi bi-check"></i>
330             <h3>
331                 Sub Category Wise Sales And Profits Using
Line And Bar
332                 Chart
333             </h3>
334         </div>
335     </div>
336
337     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="700">
338         <div class="feature-box d-flex align-items-
center">
339             <i class="bi bi-check"></i>
340             <h3>
341                 Sales Vs Profit Scatter Plot With Sub
Categories And
342                 Regions
343             </h3>
344         </div>
345     </div>
346     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="700">
347         <div class="feature-box d-flex align-items-
center">
348             <i class="bi bi-check"></i>
349             <h3>Sales Dashboard</h3>
350         </div>
351     </div>
352 </div>
353 </div>
354
355     <div class="col-lg-6 mt-5 mt-lg-0 d-flex">
356         <div class="row align-self-center gy-4">
357             <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="200">
358                 <div class="feature-box d-flex align-items-
center">

```

```

359             <i class="bi bi-check"></i>
360             <h3>Regional Sales And Profit Forecast</h3>
361         </div>
362     </div>
363
364     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="300">
365         <div class="feature-box d-flex align-items-
center">
366             <i class="bi bi-check"></i>
367             <h3>Sales Forecast By Order Priority</h3>
368         </div>
369     </div>
370
371     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="400">
372         <div class="feature-box d-flex align-items-
center">
373             <i class="bi bi-check"></i>
374             <h3>Sales By Sub Category Analytics</h3>
375         </div>
376     </div>
377
378     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="500">
379         <div class="feature-box d-flex align-items-
center">
380             <i class="bi bi-check"></i>
381             <h3>Regional Quantity using Radar Chart</h3>
382         </div>
383     </div>
384
385     <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="500">
386         <div class="feature-box d-flex align-items-
center">
387             <i class="bi bi-check"></i>
388             <h3>profit Forecast using Radar Chart</h3>

```

```

389             </div>
390         </div>
391
392         <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="600">
393             <div class="feature-box d-flex align-items-
center">
394                 <i class="bi bi-check"></i>
395                 <h3>Sales Vs Profit By Countries</h3>
396             </div>
397         </div>
398
399         <div class="col-md-6" data-aos="zoom-out" data-
aos-delay="700">
400             <div class="feature-box d-flex align-items-
center">
401                 <i class="bi bi-check"></i>
402                 <h3>Country Wise Sales Vs Profit Using Word
Cloud</h3>
403             </div>
404         </div>
405     </div>
406 </div>
407 </div>
408 <!-- / row -->
409 </div>
410 </section>
411 <!-- End Features Section -->
412
413 <!-- ===== Services Section ===== -->
414 <section id="services" class="services">
415     <div class="container" data-aos="fade-up">
416         <header class="section-header">
417             <h2>Sales</h2>
418             <p>Story</p>
419         </header>
420         <iframe

```

```

421      src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&p
      athRef=.my_folders%2Fglobalsale%2FNew%2Bstory&closeWindowOnLa
      stView=true&ui_appbar=false&ui_navbar=false&shareMode
      =embedded&action=view&sceneId=model000001847a103dc5_00000
      000&sceneTime=600"
422          width="1300"
423          height="1000"
424          frameborder="0"
425          gesture="media"
426          allow="encrypted-media"
427          allowfullscreen=""
428      ></iframe>
429  </div>
430 </section>
431 <!-- End Services Section -->
432
433 <!-- ===== F.A.Q Section ===== -->
434 <section id="faq" class="faq">
435     <div class="container" data-aos="fade-up">
436         <header class="section-header">
437             <h2>F.A.Q</h2>
438             <p>Frequently Asked Questions</p>
439         </header>
440
441         <div class="row">
442             <div class="col-lg-6">
443                 <!-- F.A.Q List 1-->
444                 <div class="accordion accordion-flush"
445 id="faqlist1">
446                     <div class="accordion-item">
447                         <h2 class="accordion-header">
448                             <button
449                                 class="accordion-button collapsed"
450                                 type="button"
451                                 data-bs-toggle="collapse"
452                                 data-bs-target="#faq-content-1"

```

```

453         When does the issue occur?
454     </button>
455 </h2>
456 <div
457     id="faq-content-1"
458     class="accordion-collapse collapse"
459     data-bs-parent="#faqlist1"
460 >
461     <div class="accordion-body">
462         Consumers shopping patterns have changed
463         since the
464         pandemic, with more emphasis on e-commerce
465         and contactless
466         payments.
467     </div>
468 </div>
469 <div class="accordion-item">
470     <h2 class="accordion-header">
471         <button
472             class="accordion-button collapsed"
473             type="button"
474             data-bs-toggle="collapse"
475             data-bs-target="#faq-content-2"
476         >
477             Where does the issue occur?
478         </button>
479     </h2>
480     <div
481         id="faq-content-2"
482         class="accordion-collapse collapse"
483         data-bs-parent="#faqlist1"
484     >
485         <div class="accordion-body">
486             The issue occurs on online shopping.
487         </div>
488     </div>

```



```

489         </div>
490
491     <div class="accordion-item">
492         <h2 class="accordion-header">
493             <button
494                 class="accordion-button collapsed"
495                 type="button"
496                 data-bs-toggle="collapse"
497                 data-bs-target="#faq-content-3"
498             >
499                 Why is it important that we fix the problem?
500             </button>
501         </h2>
502         <div
503             id="faq-content-3"
504             class="accordion-collapse collapse"
505             data-bs-parent="#faqlist1"
506         >
507             <div class="accordion-body">
508                 Data-driven sales organizations now operate
509                 more like
510                 scientists and strategists, and the results
511                 speak for
512                 themselves.
513             </div>
514         </div>
515     </div>
516
517     <div class="col-lg-6">
518         <!-- F.A.Q List 2-->
519         <div class="accordion accordion-flush"
520             id="faqlist2">
521             <div class="accordion-item">
522                 <h2 class="accordion-header">
523                     <button

```

```

524         type="button"
525         data-bs-toggle="collapse"
526         data-bs-target="#faq2-content-1"
527     >
528         Who does the problem affect??
529     </button>
530 </h2>
531 <div
532     id="faq2-content-1"
533     class="accordion-collapse collapse"
534     data-bs-parent="#faqlist2"
535 >
536     <div class="accordion-body">
537         It will affect both the customer and the
store.
538     </div>
539 </div>
540 </div>
541
542 <div class="accordion-item">
543     <h2 class="accordion-header">
544         <button
545             class="accordion-button collapsed"
546             type="button"
547             data-bs-toggle="collapse"
548             data-bs-target="#faq2-content-2"
549         >
550             What are the boundaries of the problem?
551         </button>
552     </h2>
553     <div
554         id="faq2-content-2"
555         class="accordion-collapse collapse"
556         data-bs-parent="#faqlist2"
557     >
558         <div class="accordion-body">
559             Low data proficiency among sales will
greatly limits the

```

```

560             value of analytical insights and inhibits
data-driven
561             decision making.
562         </div>
563     </div>
564 </div>
565
566 <div class="accordion-item">
567     <h2 class="accordion-header">
568         <button
569             class="accordion-button collapsed"
570             type="button"
571             data-bs-toggle="collapse"
572             data-bs-target="#faq2-content-3"
573         >
574             What is the issue?
575         </button>
576     </h2>
577     <div
578         id="faq2-content-3"
579         class="accordion-collapse collapse"
580         data-bs-parent="#faqlist2"
581     >
582         <div class="accordion-body">
583             Cannot identify most profitable products
and the ones that
584             aren't moving, most profitable customers,
and potential
585             sales opportunities.
586         </div>
587     </div>
588 </div>
589 </div>
590 </div>
591 </div>
592 </div>
593 </section>
594 <!-- End F.A.Q Section -->

```

```

595
596 <!-- ===== Contact Section ===== -->
597 <section id="contact" class="contact">
598     <div class="container" data-aos="fade-up">
599         <header class="section-header">
600             <h2>Contact</h2>
601             <p>Contact Us</p>
602         </header>
603
604         <div class="row gy-4">
605             <div class="col-lg-6">
606                 <form
607                     action="forms/contact.php"
608                     method="post"
609                     class="php-email-form"
610                 >
611                     <div class="row gy-4">
612                         <div class="col-md-6">
613                             <input
614                                 type="text"
615                                 name="name"
616                                 class="form-control"
617                                 placeholder="Your Name"
618                                 required
619                             />
620                         </div>
621
622                         <div class="col-md-6">
623                             <input
624                                 type="email"
625                                 class="form-control"
626                                 name="email"
627                                 placeholder="Your Email"
628                                 required
629                             />
630                         </div>
631
632                     <div class="col-md-12">

```

```

633         <input
634             type="text"
635             class="form-control"
636             name="subject"
637             placeholder="Subject"
638             required
639         />
640     </div>
641
642     <div class="col-md-12">
643         <textarea
644             class="form-control"
645             name="message"
646             rows="6"
647             placeholder="Message"
648             required
649         ></textarea>
650     </div>
651
652     <div class="col-md-12 text-center">
653         <div class="loading">Loading</div>
654         <div class="error-message"></div>
655         <div class="sent-message">
656             Your message has been sent. Thank you!
657         </div>
658
659         <button type="submit">Send Message</button>
660     </div>
661 </div>
662 </form>
663 </div>
664 </div>
665 </div>
666 </section>
667 <!-- End Contact Section -->
668 </main>
669 <!-- End #main -->
670

```

```

671     <!-- ===== Footer ===== -->
672     <footer id="footer" class="footer">
673         <div class="footer-top">
674             <div class="container">
675                 <div class="row gy-4">
676                     <div class="col-lg-5 col-md-12 footer-info">
677                         <a href="index.html" class="logo d-flex align-
items-center">
678                             
679                             <span>Global Sales</span>
680                         </a>
681                         <p>We offer modern solutions for growing your
Sales.</p>
682                         <div class="social-links mt-3">
683                             <a
684                                 href="https://github.com/IBM-EPBL/IBM-Project-
41948-1660646436"
685                                 class="github"
686                                 ><i class="bi bi-github"></i>
687                             </a>
688                         </div>
689                     </div>
690
691                     <div class="col-lg-2 col-6 footer-links">
692                         <h4>Useful Links</h4>
693                         <ul>
694                             <li>
695                                 <i class="bi bi-chevron-right"></i> <a
href="#home">Home</a>
696                             </li>
697                             <li>
698                                 <i class="bi bi-chevron-right"></i>
699                                 <a href="#about">About us</a>
700                             </li>
701                             <li>
702                                 <i class="bi bi-chevron-right"></i>
703                                 <a href="#values">Report</a>
704                             </li>

```

```

705         <li>
706             <i class="bi bi-chevron-right"></i>
707             <a href="#features">Dashboard</a>
708         </li>
709         <li>
710             <i class="bi bi-chevron-right"></i>
711             <a href="#services">Story</a>
712         </li>
713     </ul>
714 </div>
715
716     <div
717         class="col-lg-3 col-md-12 footer-contact text-
center text-md-start"
718     >
719         <h4>Team Details</h4>
720         <p>
721             Team Id: PNT2022TMID00545 <br />
722             Sarveshwarran G<br />
723             Sathish S<br />
724             Shajahan I<br />
725             Shakthi Vignesh M<br />
726         </p>
727     </div>
728 </div>
729 </div>
730 </div>
731
732     <div class="container">
733         <div class="copyright">
734             &copy; Copyright <strong><span> PNT2022TMID00545
</span></strong>
735             >. All Rights Reserved
736         </div>
737     </div>
738 </footer>
739 <!-- End Footer -->
740

```

```

741     <a
742         href="#"
743         class="back-to-top d-flex align-items-center justify-
            content-center"
744         ><i class="bi bi-arrow-up-short"></i
745     ></a>
746
747     <!-- Vendor JS Files -->
748     <script
        src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
749     <script src="assets/vendor/aos/aos.js"></script>
750     <script
        src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script
        >
751     <script
        src="assets/vendor/glightbox/js/glightbox.min.js"></script>
752     <script                                src="assets/vendor/isotope-
        layout/isotope.pkgd.min.js"></script>
753     <script                                src="assets/vendor/swiper/swiper-
        bundle.min.js"></script>
754     <script                                src="assets/vendor/php-email-
        form/validate.js"></script>
755
756     <!-- Main JS File -->
757     <script src="assets/js/main.js"></script>
758 </body>
759 </html>
760

```

## 13.2 Github & Project Demo Link:

### GitHub:

Link: <https://github.com/IBM-EPBL/IBM-Project-9229-1658988265>