



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING**



R.M.K.ENGINEERING COLLEGE

(An Autonomous Institution)

R.S.M. Nagar, Kavaraipettai-601 206

**PROJECT BASED EXPERIENTIAL LEARNING PROGRAM (NALAIYA
THIRAN)**

Global data sales analytics

A PROJECT REPORT

Submitted by

Yeshwanth Lakkalapudi (111719106083)

Chandu Konduru (111719106081)

Yeshwanth Kuntrapakam

(111719106081)

Dinesh N (111719106096)

TEAM ID : PNT2022TMID16071

Contents :

- 1. INTRODUCTION**
 - 1.1. Project Overview
 - 1.2. Purpose
- 2. LITERATURE SURVEY**
 - 2.1. Existing problem
 - 2.2. References
 - 2.3. Problem Statement Definition
- 3. IDEATION & PROPOSED SOLUTION**
 - 3.1. Empathy Map Canvas
 - 3.2. Ideation & Brainstorming
 - 3.3. Proposed Solution
 - 3.4. Problem Solution Fit
- 4. REQUIREMENT ANALYSIS**
 - 4.1. Functional Requirements
 - 4.2. Non-functional Requirements
- 5. PROJECT DESIGN**
 - 5.1. Data Flow Diagrams
 - 5.2. Solution & Technical Architecture
 - 5.3. User Stories
- 6. PROJECT PLANNING & SCHEDULING**
 - 6.1. Sprint Planning & Estimation
 - 6.2. Sprint Delivery Schedule
 - 6.3. Reports From JIRA
- 7. CODING & SOLUTION**
 - 7.1. Feature 1
 - 7.2. Feature 2
 - 7.3. Feature 3
 - 7.4. Feature 4
- 8. TESTING**
 - 8.1. Test Cases
 - 8.2. User Acceptance Testing
- 9. RESULTS**
- 10. ADVANTAGES & DISADVANTAGES**
- 11. CONCLUSION**
- 12. FUTURE SCOPE**
- 13. APPENDIX**
 - 13.1. Source Code

13.2. Github & Project Demo Link

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: Methodological innovations and future research directions - Sheng, Jie and Amankwah-Amoah, Joseph and Khan, Zaheer and Wang, Xiaojun	2021	Descriptive and diagnostic analytics, Predictive analytics	Merits: By comparing with machine learning models, 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	2020	Definitional aspects of big	Merits: Captured linearity and non linearity better

and case implementation of an innovative framework-Iftikhar, Rehan and Khan, Mohammad Saud		data analytics (BDA) in e-commerce	than ARIMA and ARNN gave the best result of 565 RMSE. Demerits: Hybrid Technique can fail if nonlinear model fails to capture residue patterns
--	--	------------------------------------	--

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

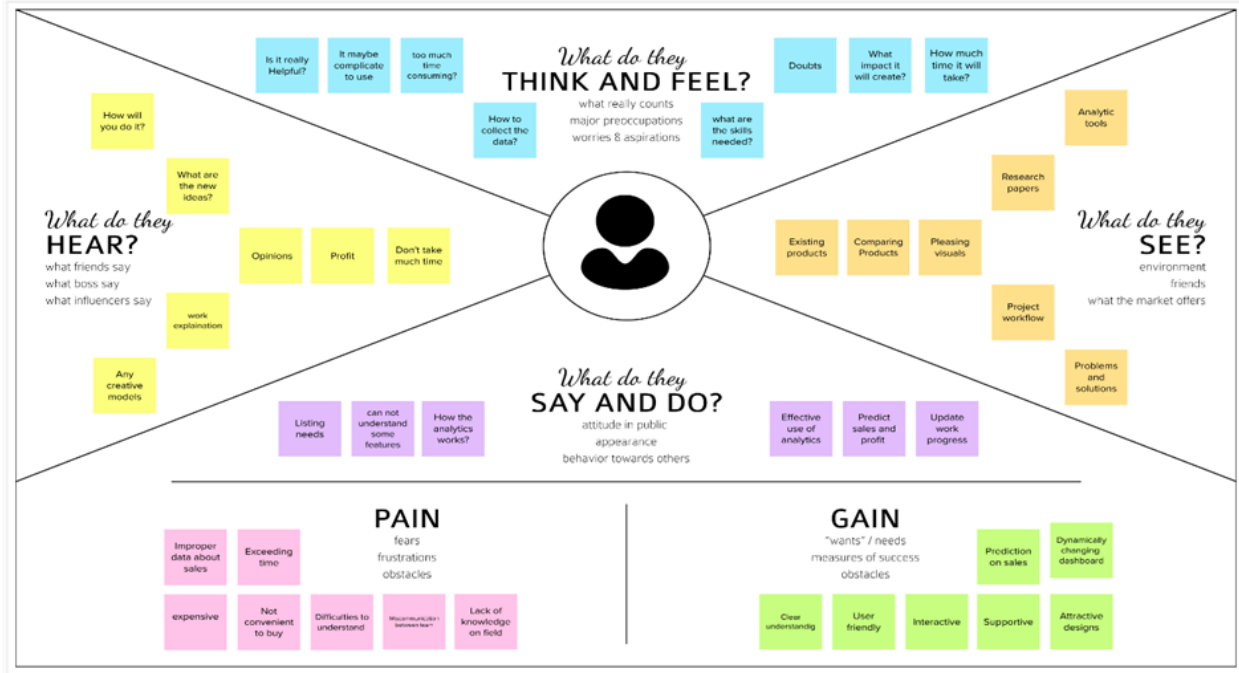
3. IDEATION & PROPOSED SOLUTION

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

- Team gathering**
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.
- Set the goal**
Think about the problem you'll be focusing on solving in the brainstorming session.
- 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

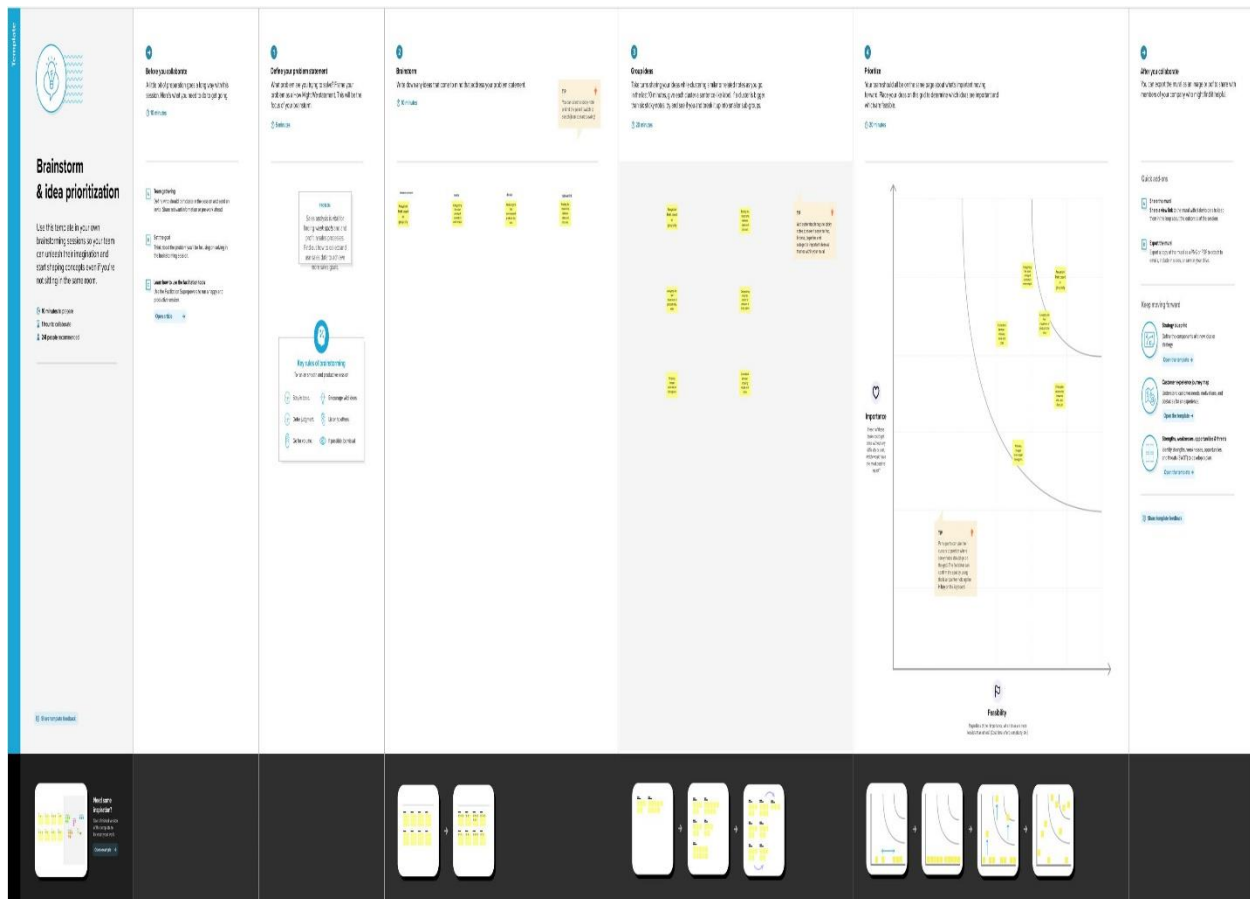
How might we deliver the analytical results?

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

Step-3: Idea Prioritization



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:

1. CUSTOMER SEGMENT(S) CS A Business organization, online store or seller who would like to understand more about sales in global scale.	6. CUSTOMER CONSTRAINTS CC Check input file structure before uploading a file. Not enable of easy payment.	5. AVAILABLE SOLUTIONS AS The competition perform analytics and display dashboard with dynamic insights. End product provides facility to add manual or dynamic to the dashboard
---	--	--

2. JOBS-TO-BE-DONE / PROBLEMS Determination input file structure What analysis to perform to be useful?	9. PROBLEM ROOT CAUSE RC Unpredictable sales Market down Big amount of data	7. BEHAVIOUR BE Collecting sales data Utilize the data in efficient way.
--	--	--

3. TRIGGERS Have you ever felt that you are unaware of how your business is performing?	10. YOUR SOLUTION SL Easy payments Responsive design Creating an interactive dashboard. User specified design.	8. CHANNELS of BEHAVIOUR CH ONLINE Using third party software or services with automation insights and subscriptions based services to analyze data. OFFLINE Offline software to analyze complex data in un-intuitive way.
4. EMOTIONS: BEFORE / AFTER EM Before: Misunderstanding, unpredictable, decision fatigue. After: clear mind, better understanding		

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
--------	----------------------------	-------------

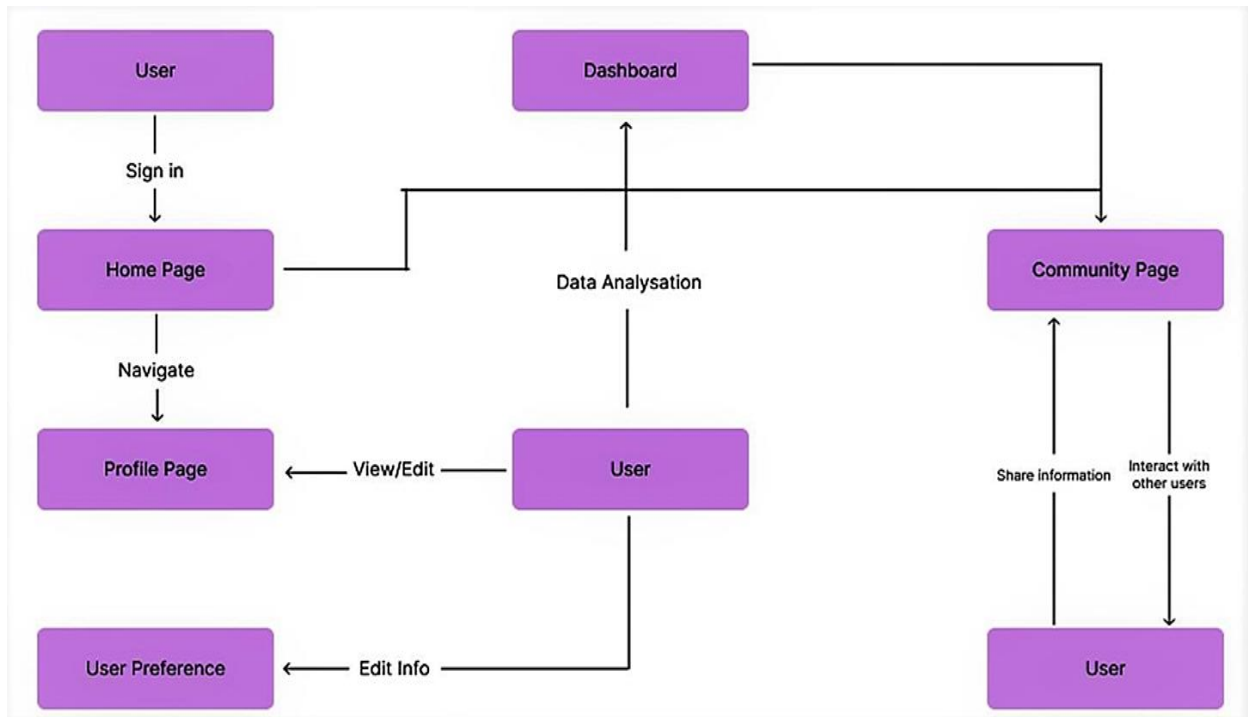
NFR-1	Usability	This service will have a simple and user-friendly graphical interface. Users will be able to understand and use all the features easily.
NFR-2	Security	The main security concern is for users login information is end to end encryption should be used to avoid hacking.
NFR-3	Reliability	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

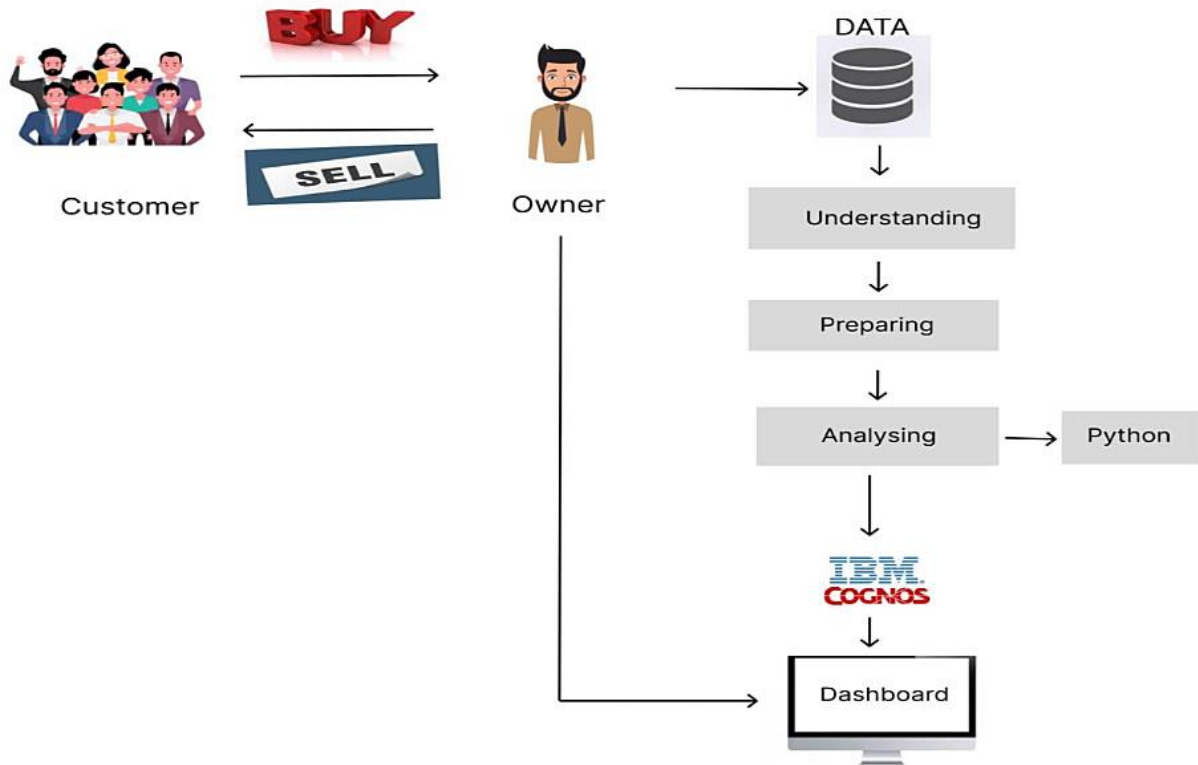


5.2 Solution & Technical Architecture

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		Medium	Sprint-1

			Data visualization.			
	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 click confirm.	High	Sprint-3
		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	5	High	Yeshwanth L Chandu K Yeshwanth K

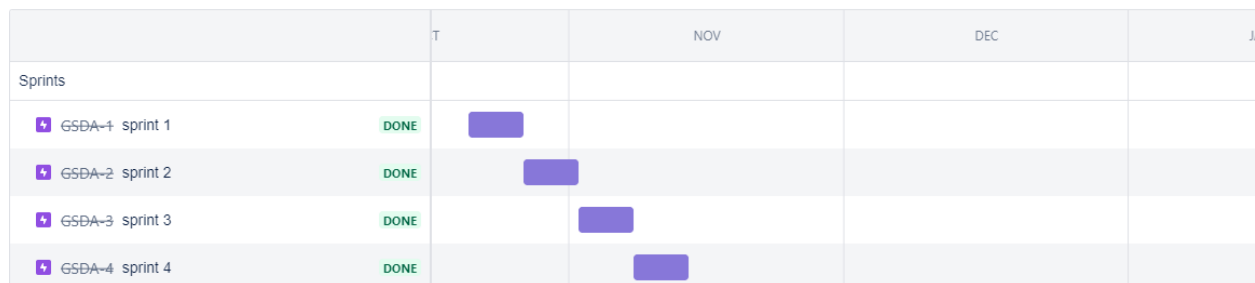
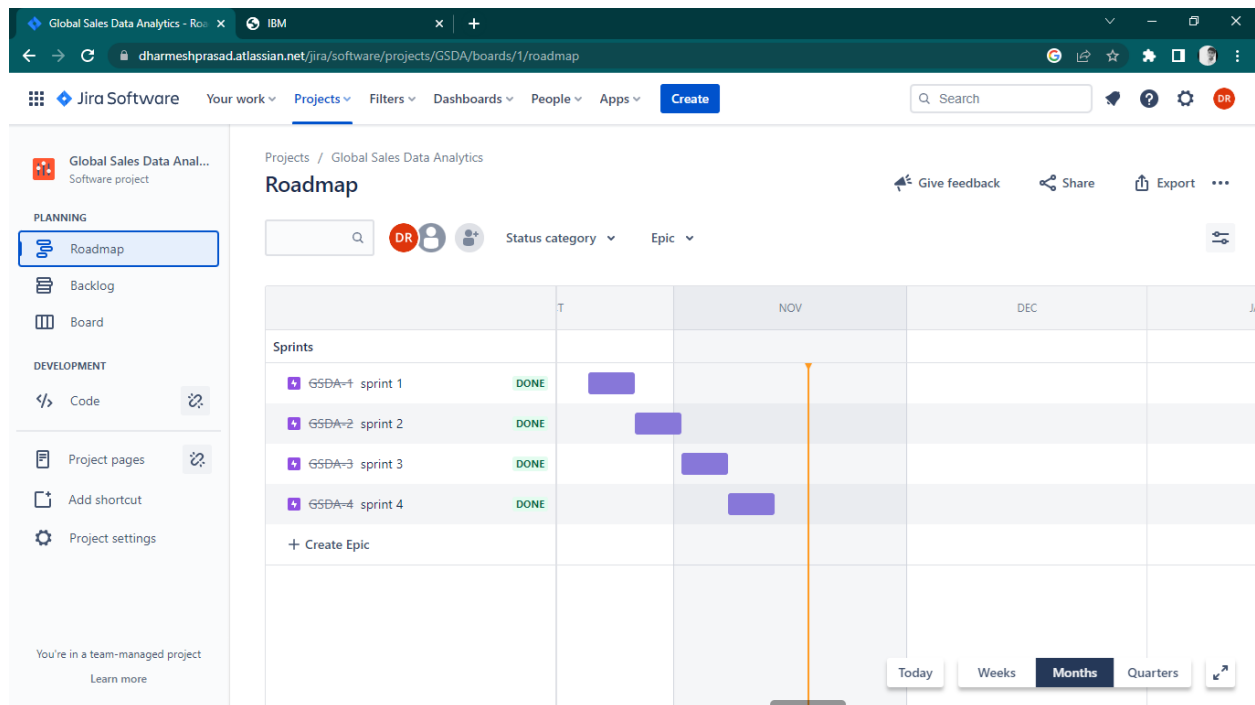
			entering my email, password, and confirming my password.			Dinesh N
Sprint -1	Login	USN-2	As a user, I need valid credentials to log to my application.	5	High	Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -1	Data collection	USN-3	As a user, I need to gather the data in the form of CSV/XLS and clean the data.	5	High	Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -1	Upload dataset	USN-4	As a user, I can view the data of the products.	5	High	Yeshwanth L Chandu K
Sprint -2	Data preparation	USN-5	As a user, I need to filter it for Data visualization.	5	High	Dharmeshprasad R, Tamilvanan N
Sprint -2	Data visualization	USN-6	As a user, I need to filter it for Data visualization.	5		Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -2	Dashboard	USN-7	As a user, I need to filter it for Data visualization.	10	High	Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -3	Dashboard	USN-8	As a user, I must plan visualizations in a way that I'm able to gain insights regarding the	4	High	Yeshwanth L Chandu K Yeshwanth K Dinesh N

			sales based upon the category of sales and the respective region.			
Sprint -3	Dashboard	USN-9	As a user, I must be able to gain insights from the charts/graphs through a variety of relationships established on the dashboard.	10	Medium	Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -4	Prediction	USN-10	As a user, I see the prediction of the specific product's future sales expectation.	10	Medium	Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -4	Report	USN-11	As a user, I can view the list of categorized products and their details as a report.	10	High	Yeshwanth L Chandu K Yeshwanth K Dinesh N
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	Yeshwanth L Chandu K Yeshwanth K Dinesh N

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



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         />

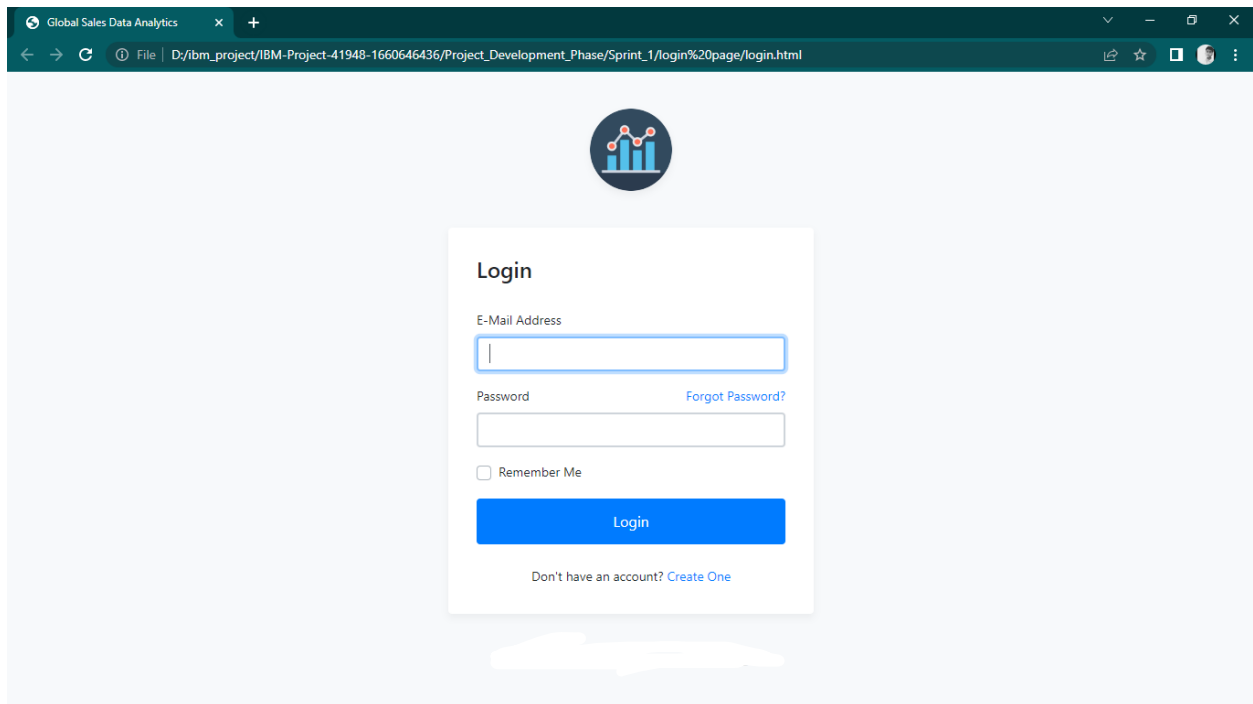
```

```

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;
PNT2022TMID41225
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>

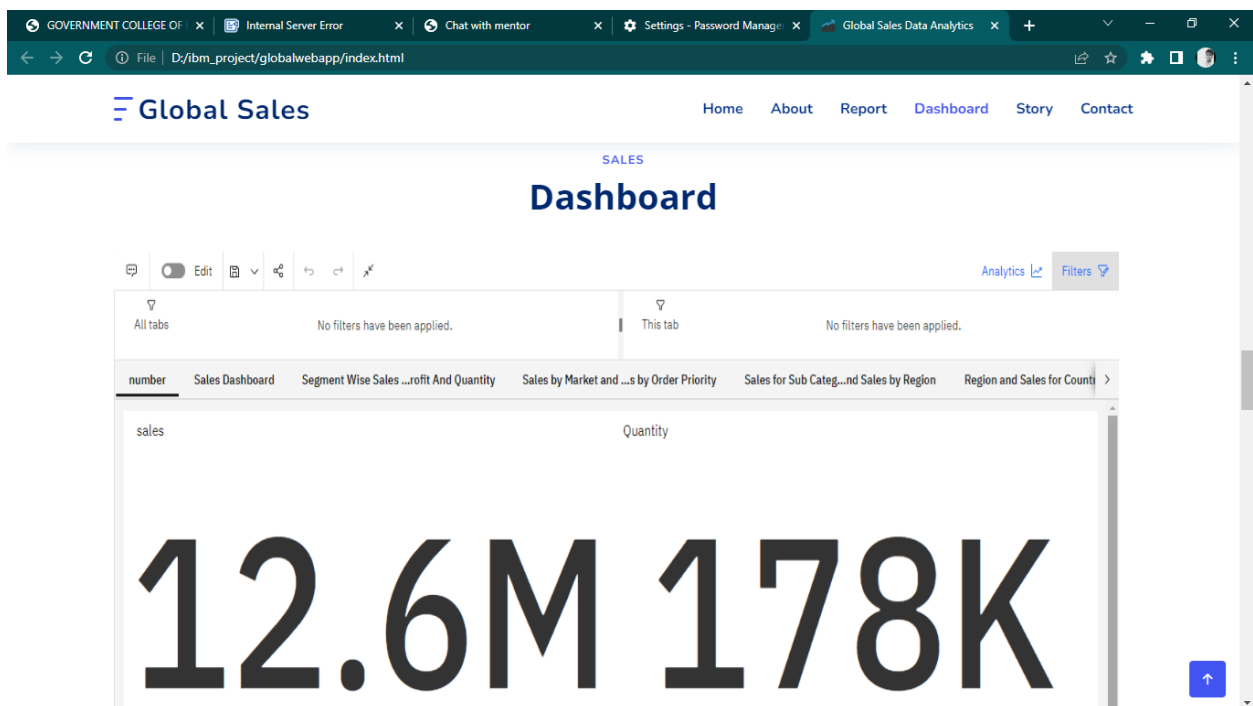
```

```
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>
```



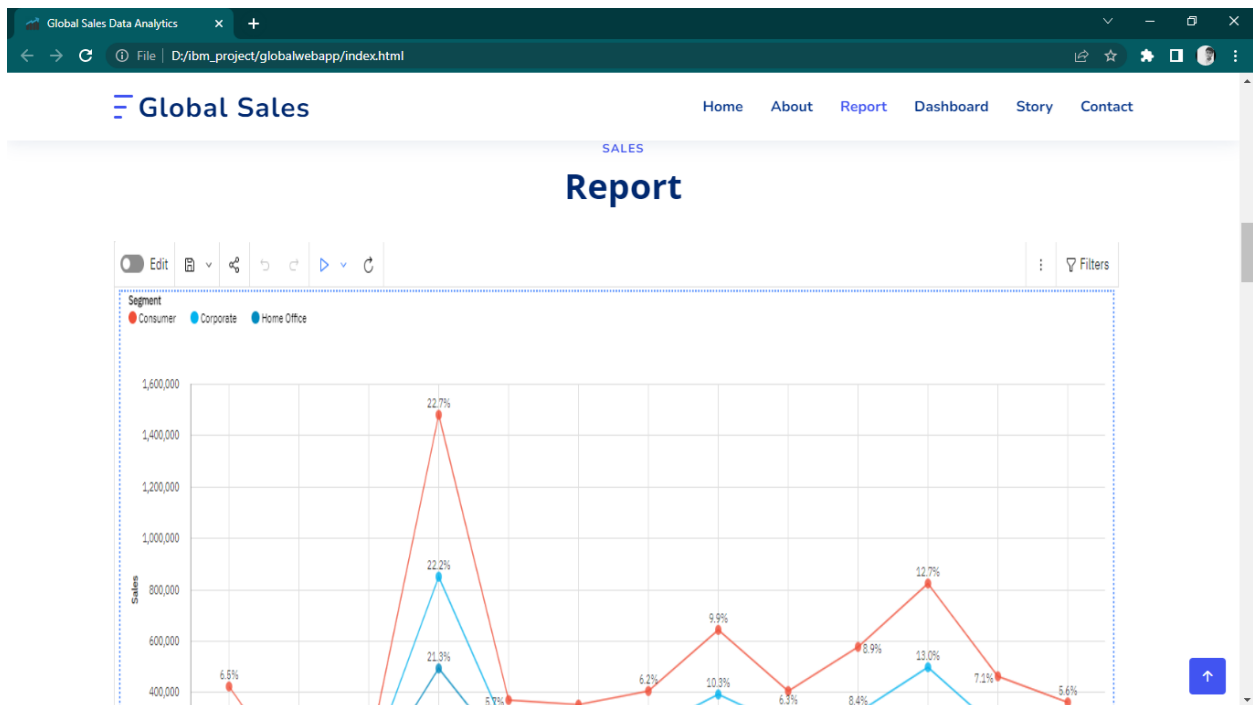
Feature 2 - Embedding dashboard to web app:

```
1 <iframe
  src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashb
  oard&pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Das
  hboard&closeWindowOnLastView=true&ui_appbar=false&
  mp;ui_navbar=false&shareMode=embedded&action=view&
  mp;mode=dashboard&subView=model000001847746ca80_0000000
  0" width="1200" height="1000" frameborder="0"
  gesture="media" allow="encrypted-media"
  allowfullscreen=""></iframe>
```



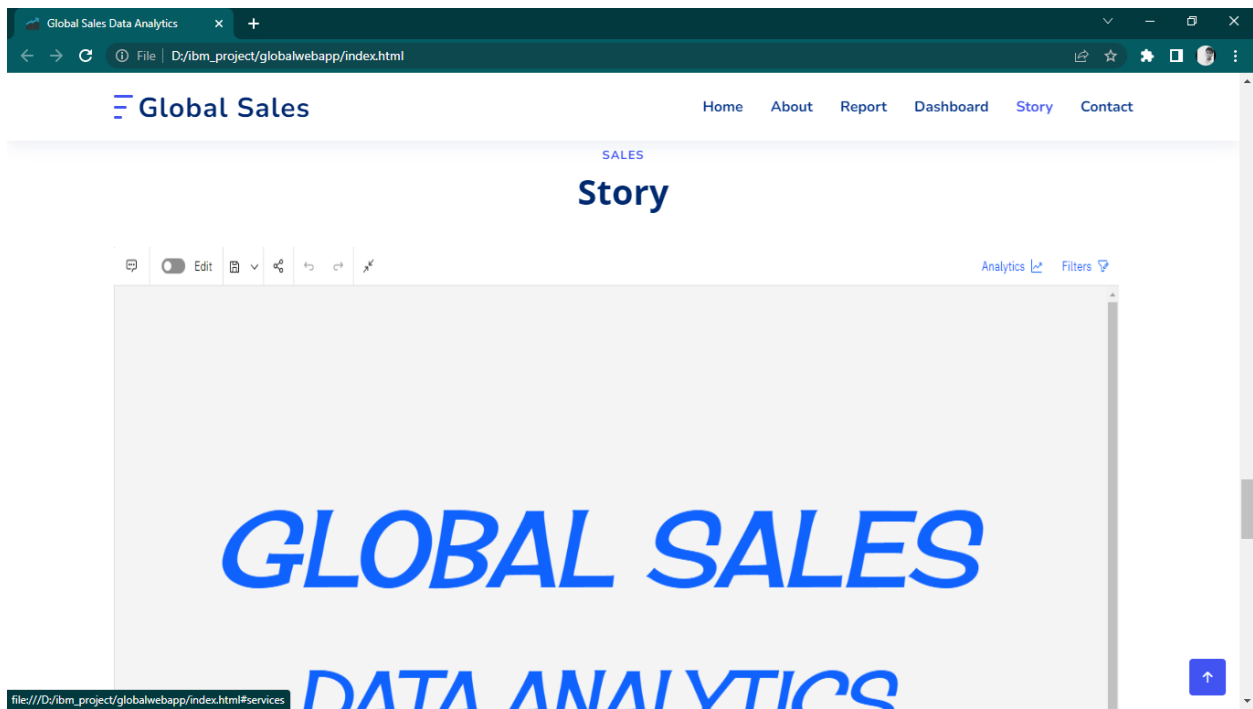
Feature 3 - Embedding report to web app:

```
1 <iframe
  src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Report&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=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
  &pathRef=.my_folders%2Fglobalsale%2FNew%2Bstory&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&sceneId=model000001847a103dc5_000000000&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:

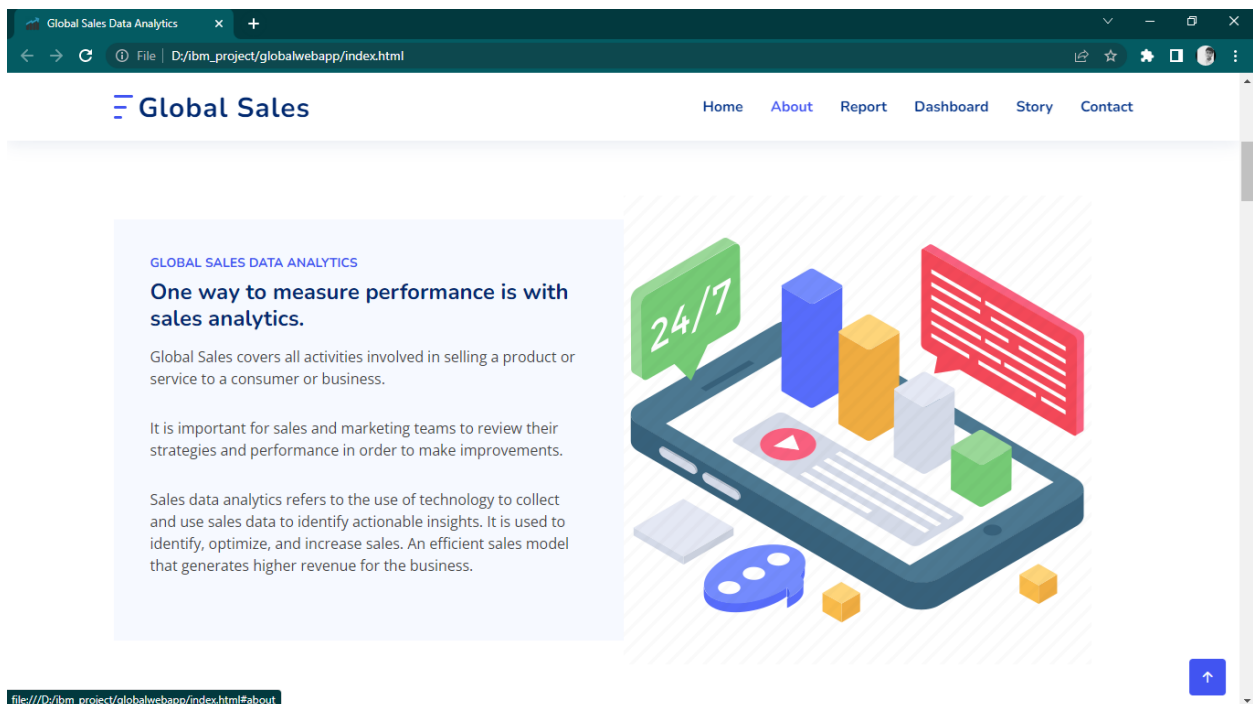
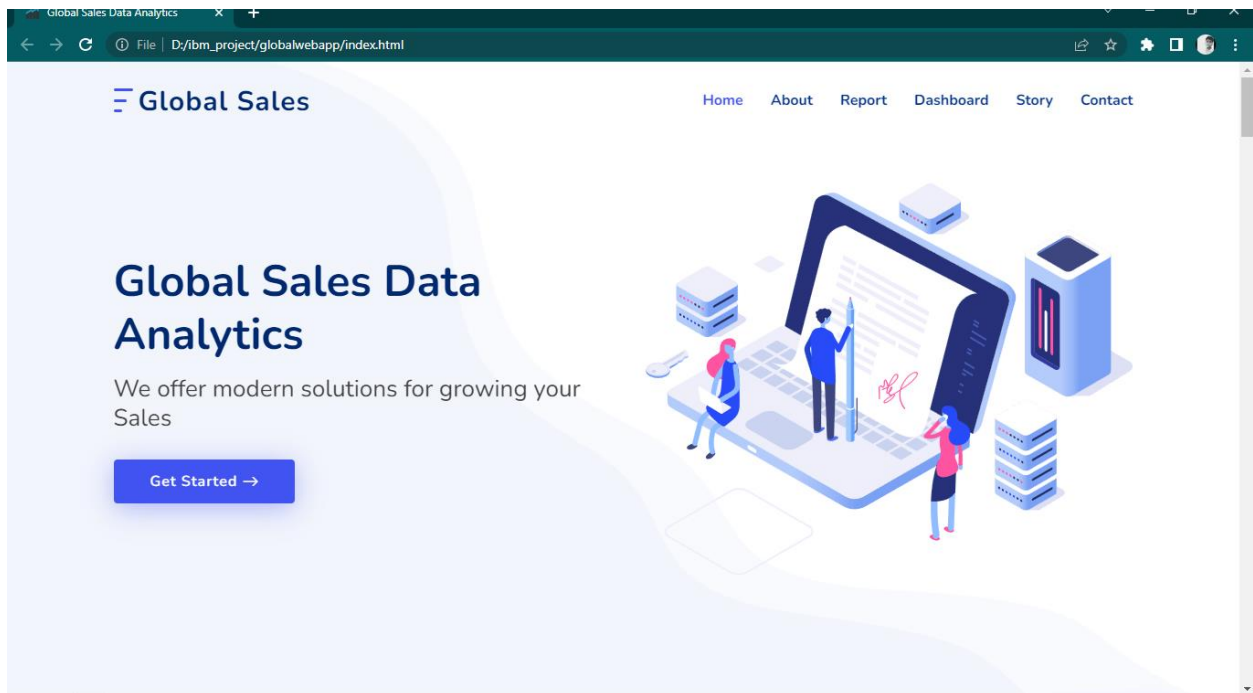
Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	5	2	1	1	9
Duplicate	0	0	0	0	0
External	2	3	0	1	6
Fixed	4	1	2	2	9
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	11	6	3	4	24

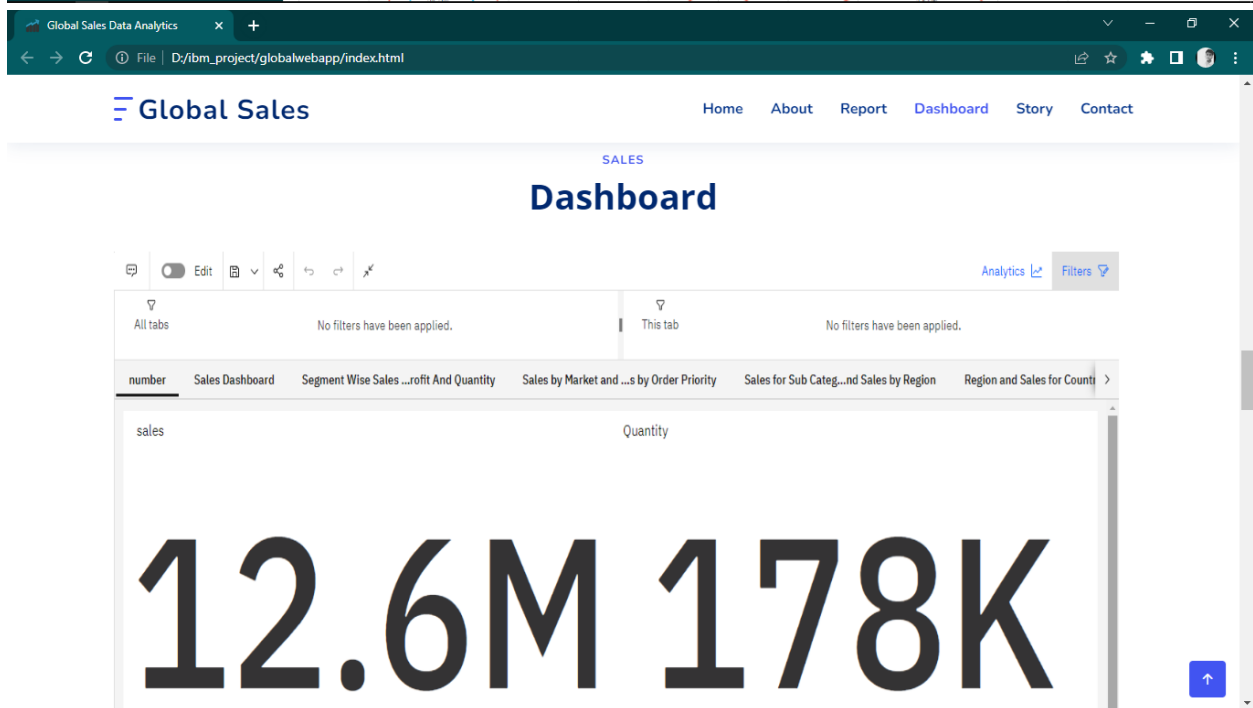
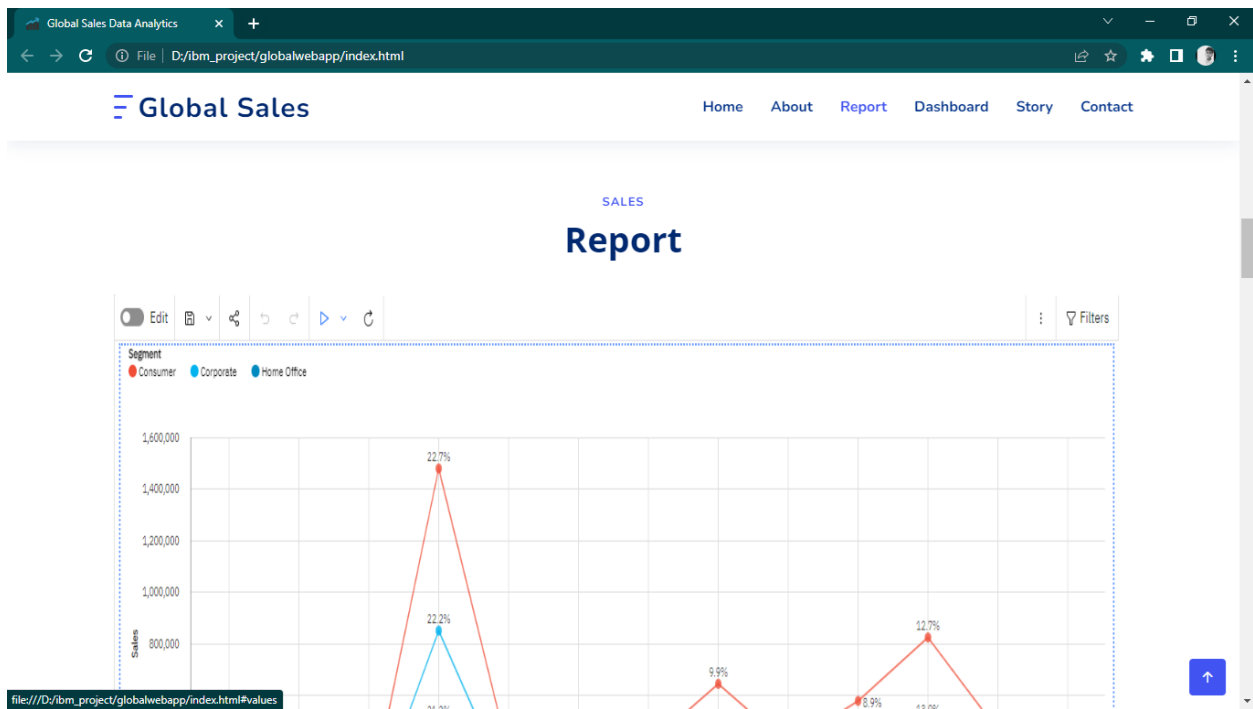
Test Case Analysis:

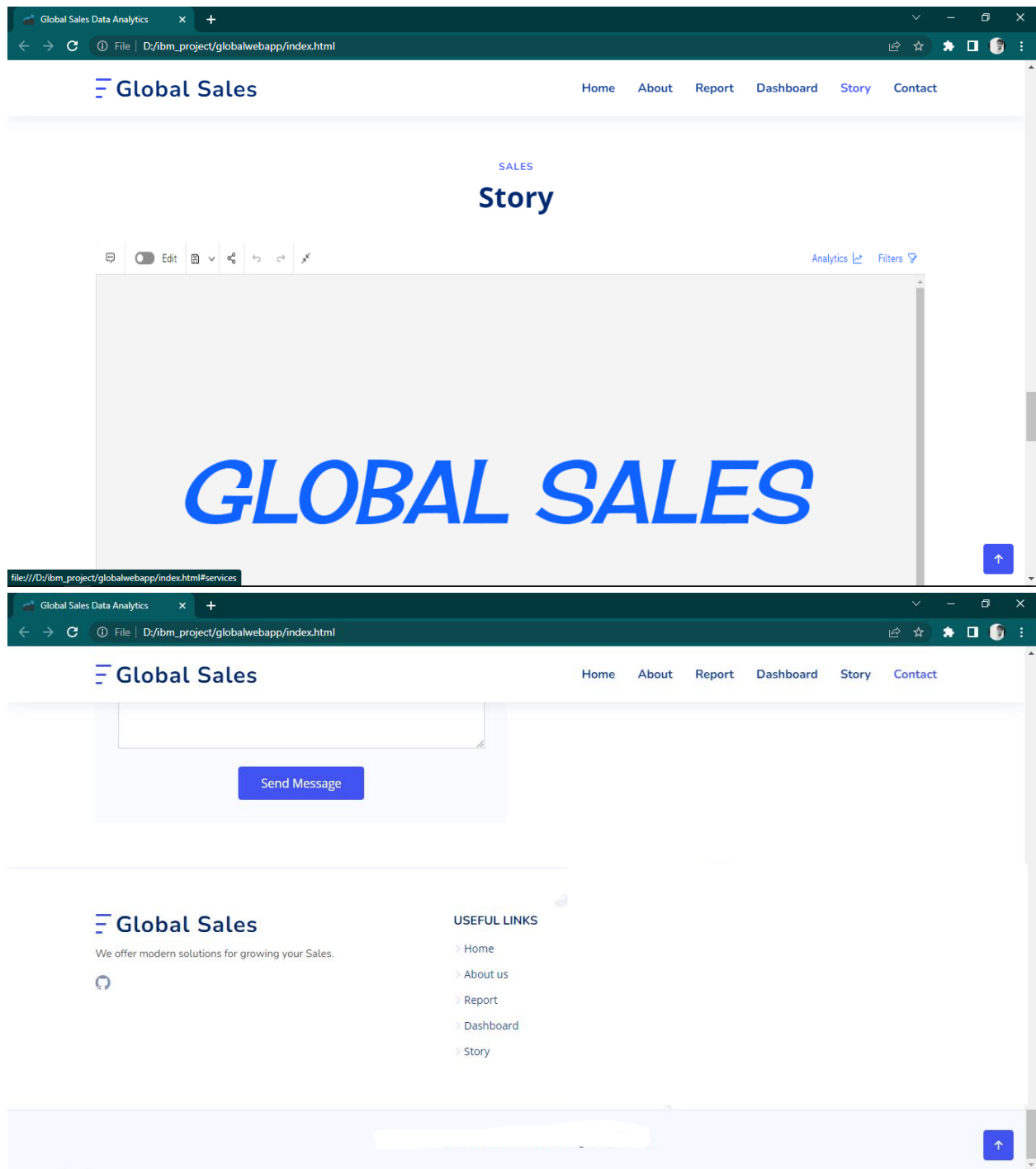
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	0	0	0	0
Client Application	6	0	0	6
Security	0	0	0	0
Outsource Shipping	0	0	0	0
Exception Reporting	7	0	0	7
Final ReportOutput	0	0	0	0
Version Control	0	0	0	0

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. CONCLUSION

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"
      name="viewport" />
6
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"
57 href="#hero">Home</a></li>
58             <li><a class="nav-link scrollto"
59 href="#about">About</a></li>
60             <li><a class="nav-link scrollto"
61 href="#values">Report</a></li>
62             <li><a class="nav-link scrollto"
63 href="#features">Dashboard</a></li>
64             <li><a class="nav-link scrollto"
65 href="#services">Story</a></li>
66             <li><a class="nav-link scrollto"
67 href="#contact">Contact</a></li>
68         </ul>
69         <i class="bi bi-list mobile-nav-toggle"></i>
70     </nav>
71     <!-- .navbar -->
72 </div>
73 </header>
74 <!-- End Header -->
75
76 <!-- ===== Hero Section ===== -->
77 <section id="hero" class="hero d-flex align-items-
78 center">
79     <div class="container">
80         <div class="row">
81             <div class="col-lg-6 d-flex flex-column justify-
82 content-center">
83                 <h1 data-aos="fade-up">Global Sales Data
84 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%2Fglobalsale%2Fglobalsales_Report&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=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             
267             <h3>Dashboard</h3>
268             <p>
269                 a tool used to multi-task, organize,
270                 visualize, analyze, and
271                 track data.View automatically updated
272                 data with interactive
273                 charts, graphs and tables.
274             </p>
275         </div>
276     </div>
277 </section>
278 <!-- End Values Section -->
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=dashb
288             oard&amp;pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Das
289             hboard&amp;closeWindowOnLastView=true&amp;ui_appbar=false&a
290             mp;ui_navbar=false&amp;shareMode=embedded&amp;action=view&a

```

```

mp;mode=dashboard&amp;subView=model000001847746ca80_0000000
0"
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"
300                     data-aos-delay="200">
301                     <div class="feature-box d-flex align-
302                         items-center">
303                         <i class="bi bi-check"></i>
304                         <h3>Segment Wise Sales , Profit And
305                         Quantity</h3>
306                     </div>
307                 </div>
308                 <div class="col-md-6" data-aos="zoom-out"
309                     data-aos-delay="300">
310                     <div class="feature-box d-flex align-
311                         items-center">
312                         <i class="bi bi-check"></i>
313                         <h3>Sales By Market</h3>
314                     </div>
315                 </div>
316             </div>
317         </div>
318     </div>
319
320     <div class="col-md-6" data-aos="zoom-out"
321         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
342                 Categories And
343                 Regions
344             </h3>
345         </div>
346     </div>
347     <div class="col-md-6" data-aos="zoom-out"
348         data-aos-delay="700">
349         <div class="feature-box d-flex align-
350             items-center">
351             <i class="bi bi-check"></i>
352             <h3>Sales Dashboard</h3>
353         </div>
354     </div>
355 </div>
356 <div class="col-lg-6 mt-5 mt-lg-0 d-flex">
357     <div class="row align-self-center gy-4">
358         <div class="col-md-6" data-aos="zoom-out"
359             data-aos-delay="200">
360             <div class="feature-box d-flex align-
361                 items-center">
362                 <i class="bi bi-check"></i>
363                 <h3>Regional Sales And Profit
364                 Forecast</h3>
365             </div>
366         </div>
367     </div>
368 </div>
369 <div class="col-md-6" data-aos="zoom-out"
370     data-aos-delay="300">
371     <div class="feature-box d-flex align-
372         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
      &pathRef=.my_folders%2Fglobalsale%2FNew%2Bstory&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&sceneId=model000001847a103dc5_000000000&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         data-bs-toggle="collapse"
451         data-bs-target="#faq-content-1"
452     >
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
463         changed since the
464         pandemic, with more emphasis on e-
465         commerce 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
500             problem?
501         </button>
502     </h2>
503     <div
504         id="faq-content-3"
505         class="accordion-collapse collapse"
506         data-bs-parent="#faqlist1"
507     >
508         <div class="accordion-body">
509             Data-driven sales organizations now
510             operate more like
511             scientists and strategists, and the
512             results speak for
513             themselves.
514         </div>
515     </div>
516 </div>

```

```

515         </div>
516
517         <div class="col-lg-6">
518             <!-- F.A.Q List 2-->
519             <div class="accordion accordion-flush"
id="faqlist2">
520                 <div class="accordion-item">
521                     <h2 class="accordion-header">
522                         <button
523                             class="accordion-button collapsed"
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
718         text-center text-md-start"
719     >
720         <h4>Team Details</h4>
721         <p>
722             Team Id: PNT2022TMID41225 <br />
723             Dharmeshprasad R<br />
724             Suriya prakash G<br />
725             Aravindhana T<br />
726             Tamilvanan N<br />
727             Muthamil selvan MS<br />
728         </p>
729     </div>
730 </div>
731 </div>
732
733     <div class="container">
734         <div class="copyright">
735             &copy; Copyright
736             <strong><span>PNT2022TMID41225</span></strong>
737             >. All Rights Reserved
738         </div>
739     </div>
740 <!-- End Footer -->
741
742     <a
743         href="#"
744         class="back-to-top d-flex align-items-center justify-
745         content-center"

```

```

745         ><i class="bi bi-arrow-up-short"></i
746     ></a>
747
748     <!-- Vendor JS Files -->
749     <script
        src="assets/vendor/purecounter/purecounter_vanilla.js"></sc
        ript>
750     <script src="assets/vendor/aos/aos.js"></script>
751     <script
        src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></
        script>
752     <script
        src="assets/vendor/glightbox/js/glightbox.min.js"></script>
753     <script                                src="assets/vendor/isotope-
        layout/isotope.pkgd.min.js"></script>
754     <script                                src="assets/vendor/swiper/swiper-
        bundle.min.js"></script>
755     <script                                src="assets/vendor/php-email-
        form/validate.js"></script>
756
757     <!-- Main JS File -->
758     <script src="assets/js/main.js"></script>
759 </body>
760 </html>
761

```

13.2 Github & Project Demo Link:

GitHub:

Link: [IBM-EPBL/IBM-Project-30492-1660147414: Global Sales Data Analytics \(github.com\)](https://github.com/IBM-EPBL/IBM-Project-30492-1660147414)

Demo link: [IBM-EPBL/IBM-Project-30492-1660147414: Global Sales Data Analytics \(github.com\)](https://github.com/IBM-EPBL/IBM-Project-30492-1660147414)

