



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING**



R.M.K.ENGINEERING COLLEGE

(An Autonomous Institution)

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**PROJECT BASED EXPERIENTIAL LEARNING PROGRAM
(NALAIYA**

THIRAN)

Global sales data analytics

A PROJECT REPORT

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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	2019	Big data applications in e-commerce analytics (BDA) -	Merits: Used to understand complex datasets in a matter of time with beautiful visual representations.

Agrahari, Sandip and Dhakal, Rabin.			
			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 smallscale 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 ecommerce	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

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

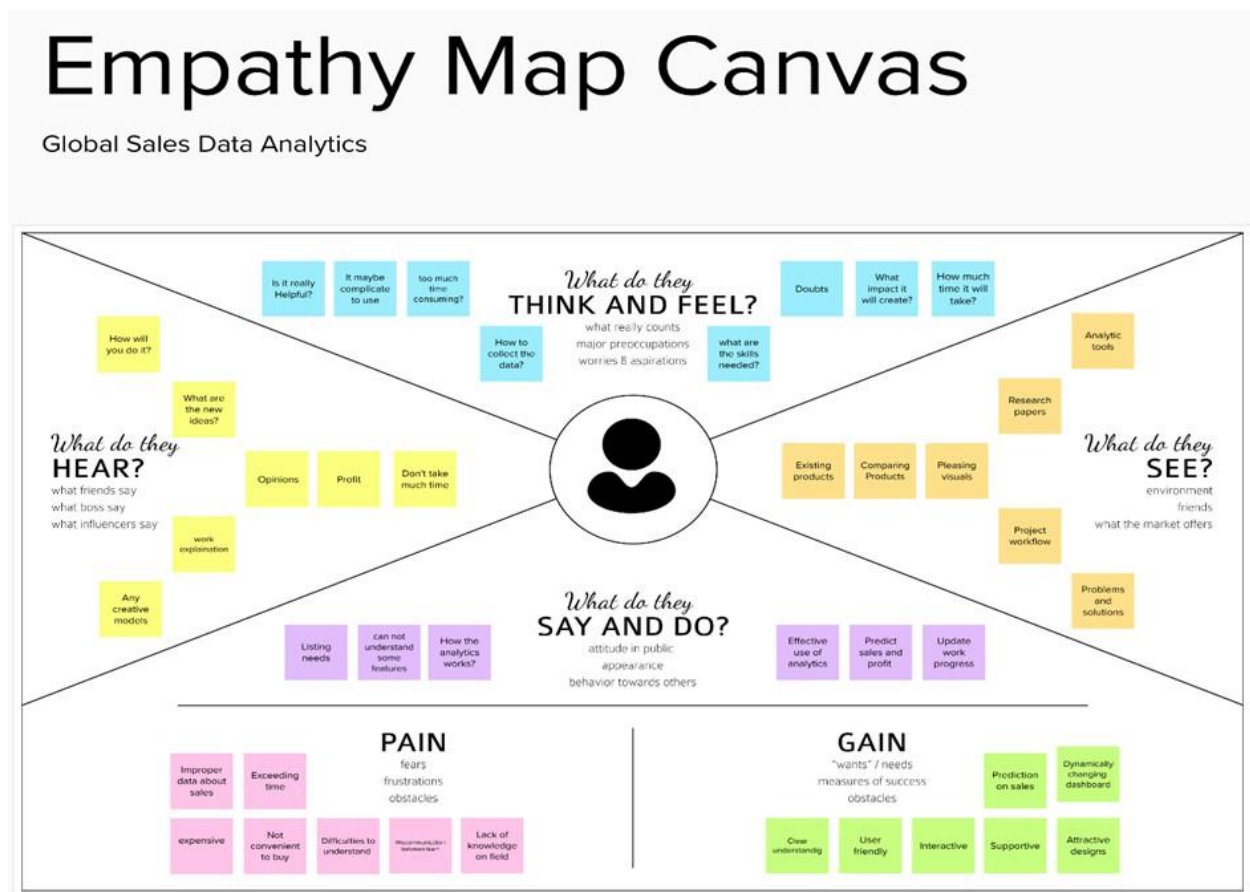
1. Structured data focuses on demographic data including name, age, gender, date of birth, address, and preferences, unstructured data includes clicks, likes, links, tweets, voices, etc.
2. The methodological innovations in studying big data analytics and. We provide insights on methods in descriptive/diagnostic, 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.

- 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.



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

- 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

How might we deliver the analytical results?

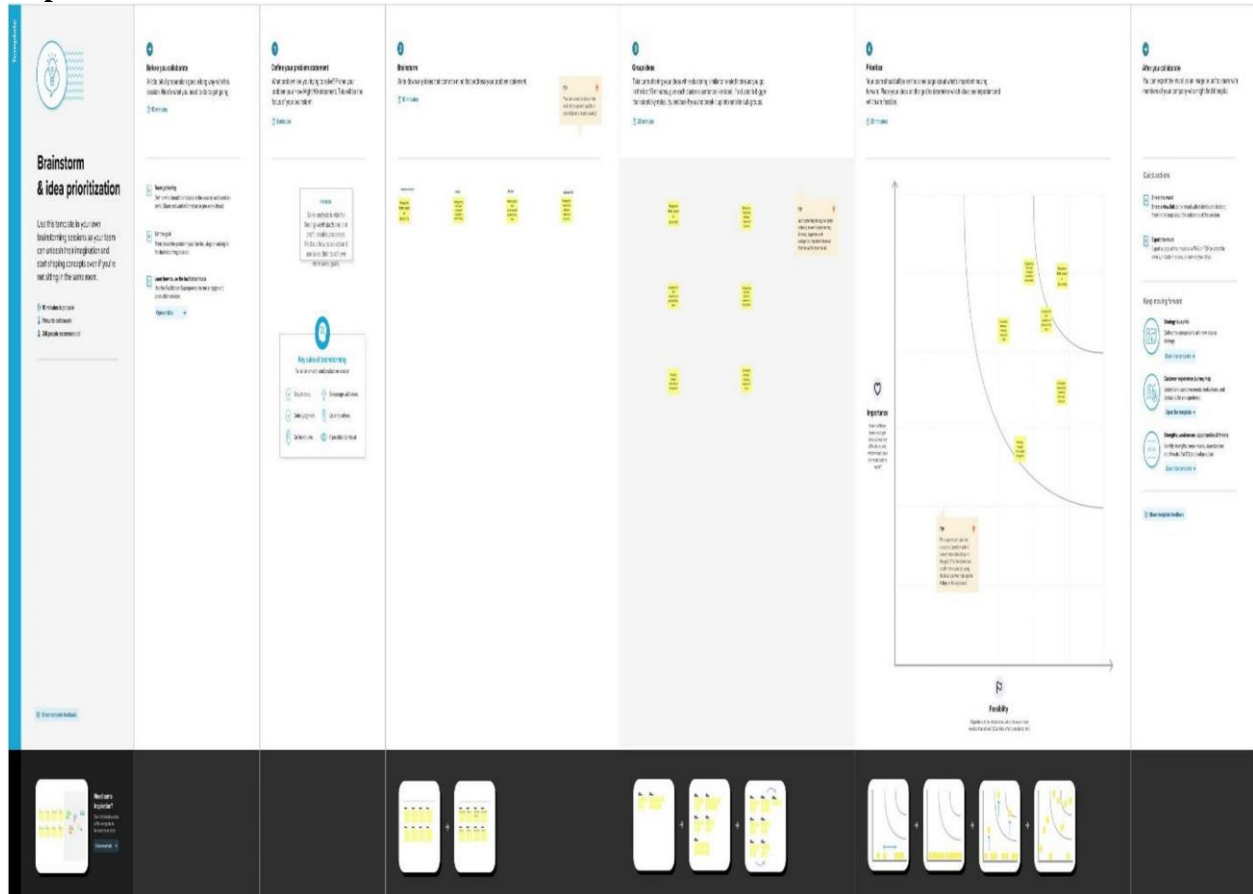
Key rules of brainstorming

To run a smooth and productive session

- Stay in topic.
- Defier judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, no virtual.

Step-2: Brainstorm, Idea Listing and Grouping

Step-3: Idea Prioritization



3.3 Proposed Solution

S.No.	Parameter	Description
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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
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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 TR 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 / AFTE 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.

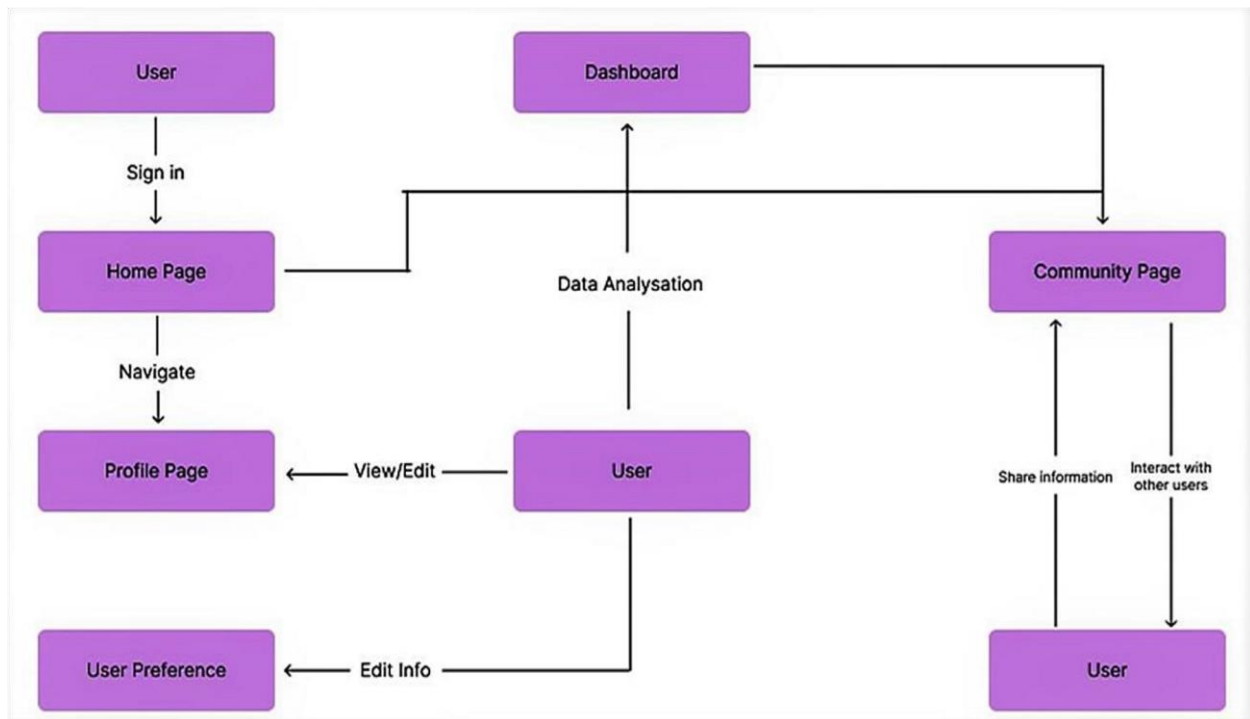
NFR-4	Performance	A good internet speed while browsing the product it had high performance with efficiency.
NFR-5	Availability	It will be available 24 hours a day and seven days a week. User access anywhere at any time .
NFR-6	Scalability	A Many users can access the website simultaneously.

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

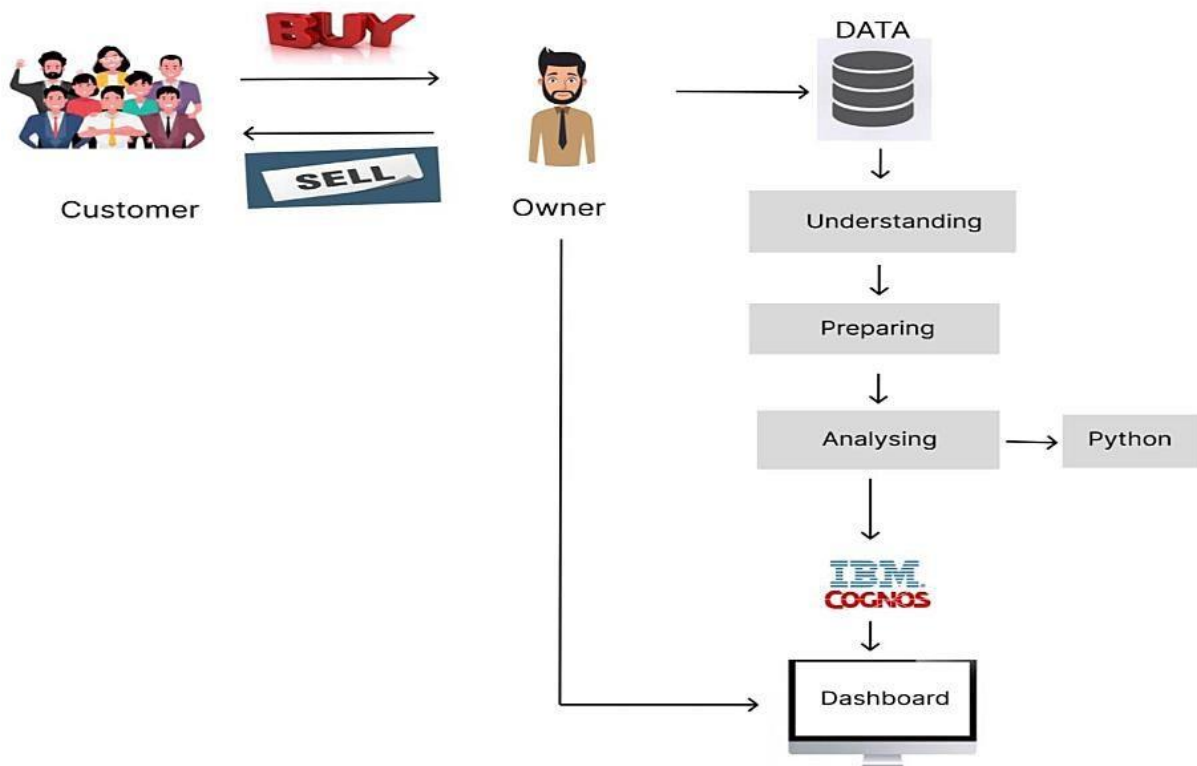


5.2 Solution & Technical Architecture

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

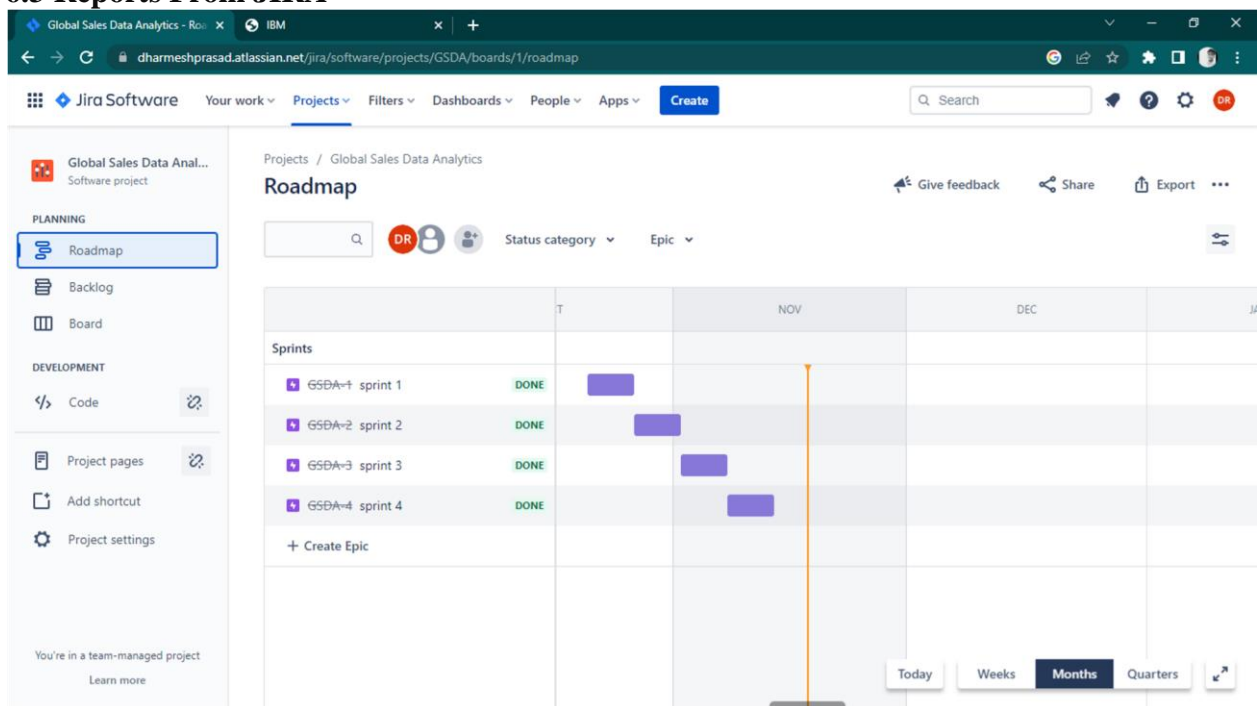
Sprint -2	Data preparation	USN-5	As a user, I need to filter it for Data visualization.	5	High	Dharmeshprasad R, Tamilvanan N
Sprint -2	Data visualization	USN-6	As a user, I need to filter it for Data visualization.	5		Yeshwanth L Chandu K Yeshwanth K Dinesh N
Sprint -2	Dashboard	USN-7	As a user, I need 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

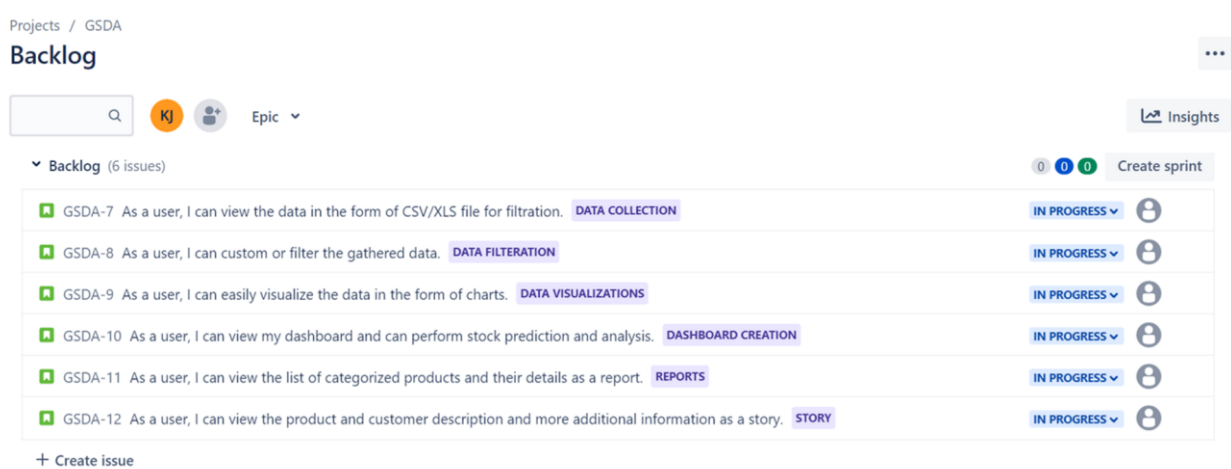
6.2 Sprint Delivery Schedule

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



		T	NOV	DEC	JAN
Sprints					
GSDA-1 sprint 1	DONE				
GSDA-2 sprint 2	DONE				
GSDA-3 sprint 3	DONE				
GSDA-4 sprint 4	DONE				



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"
7      content="width=devicewidth,initial-scale=1" />
8      <title>Global Sales Data Analytics</title>
9      <link rel="stylesheet" type="text/css"
10     href="assets/css/my-login.css" />
11     </head>
12     <body class="my-login-page">
13     <section class="h-100">
14     <div class="container h-100">
15     <div class="row justify-content-md-center h-100">
16     <div class="card-wrapper">
17     <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"
22          novalidate="">
23          <div class="form-group">
24            <label for="email">E-Mail
25              Address</label>
26            <input
27              id="email"
28              type="email"
29              class="form-control"
30              name="email"
31              value=""
32              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="floatright">
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
```

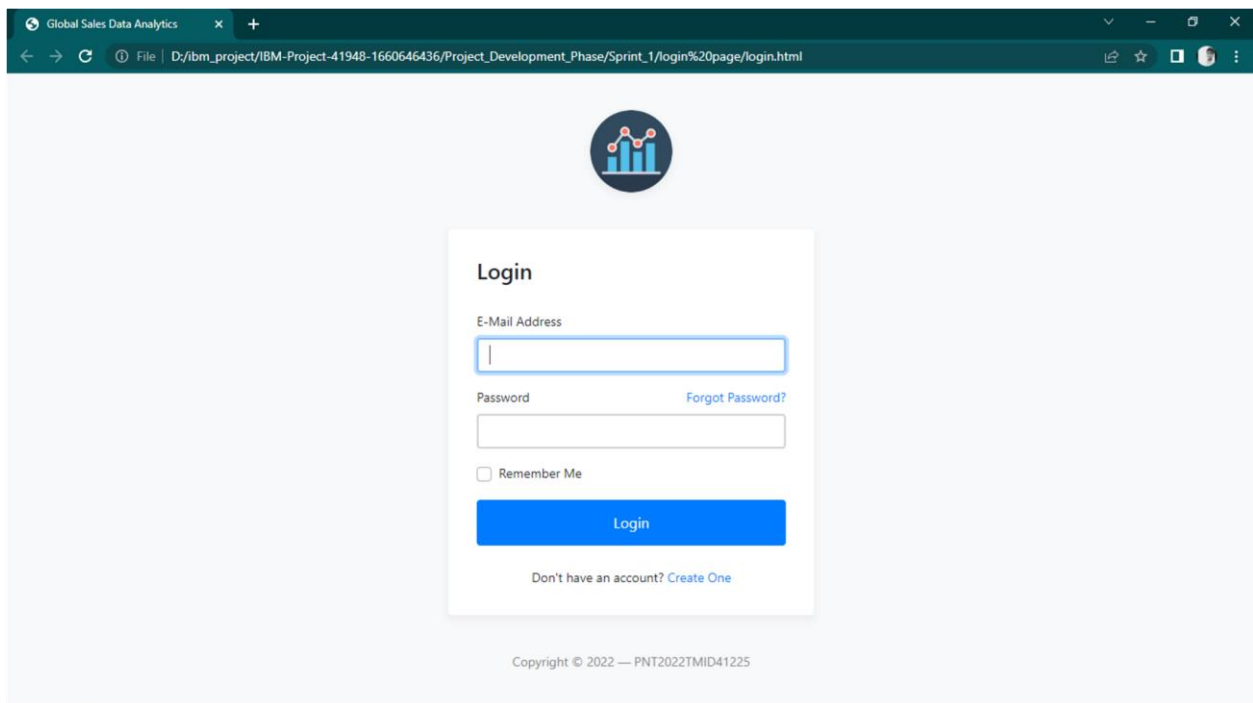
```

50     />
51     <div class="invalid-feedback">Password is
      required</div>
52 </div>
53
54     <div class="form-group">
55     <div class="custom-checkbox customcontrol">
56     <input
57     type="checkbox"
58     name="remember"
59     id="remember"
60     class="custom-control-input"
61     />
62     <label for="remember" class="customcontrol-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?

```

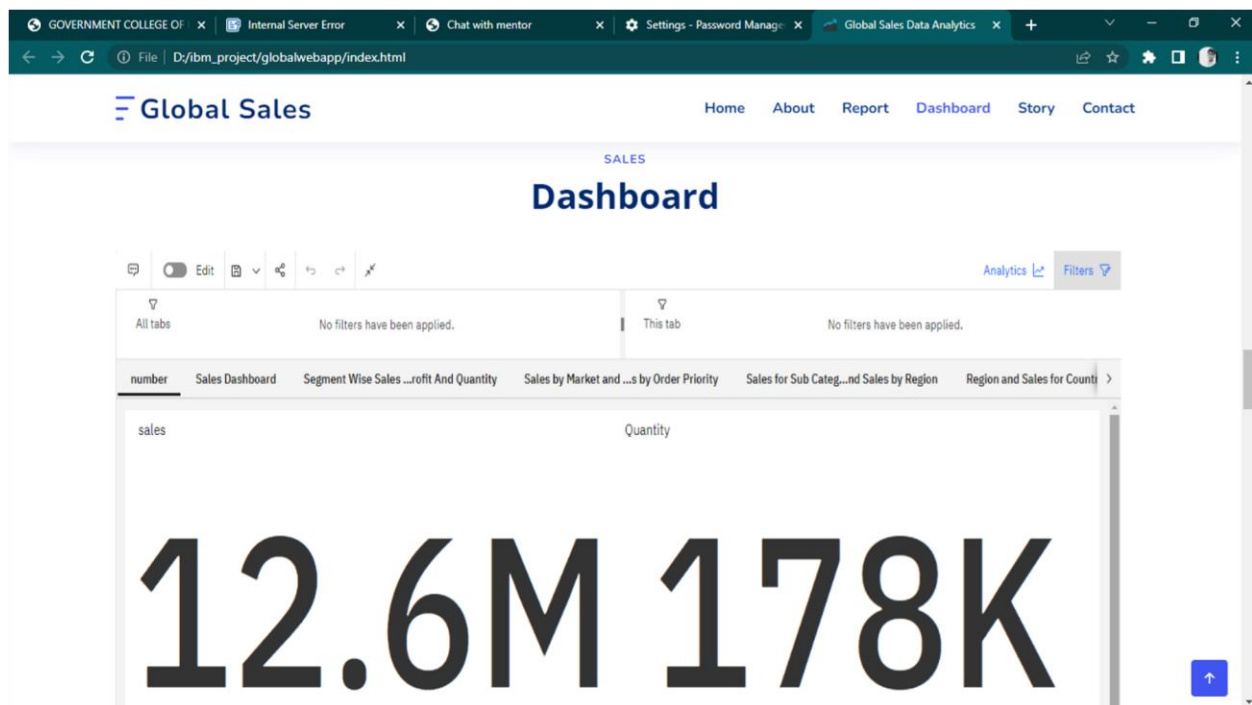
```
79         <a href="register.html">Create One</a>
80     </div>
81 </form>
82 </div>
83 </div>
84 <div class="footer">
85     Copyright &copy; 2022 &mdash; PNT2022TMID41225
86 </div>
87 </div>
88 </div>
89 </div>
90 </section>
91
92 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
    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 >
```



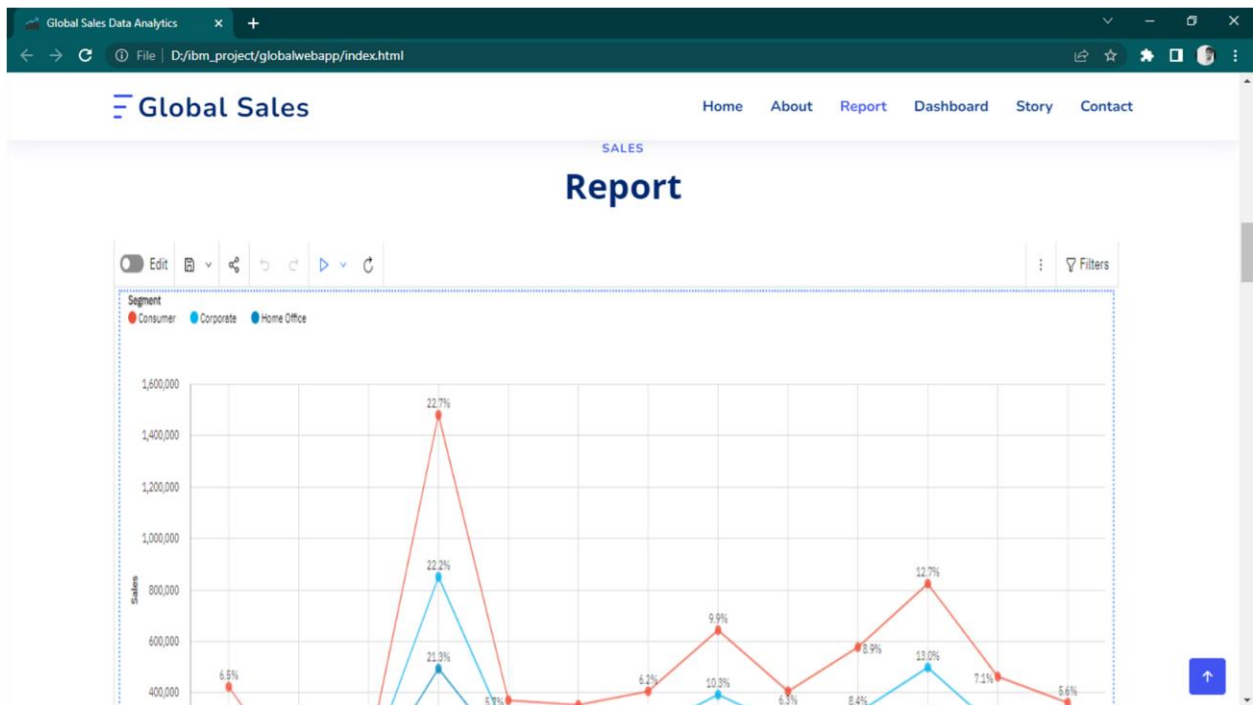
Feature 2 - Embedding dashboard to web app:

```
1 <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashbo
ard&pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Dashb
oard&closeWindowOnLastView=true&ui_appbar=false&
ui_navbar=false&shareMode=embedded&action=view&m
ode=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_folder
s%2Fglobalsale%2FGlobalsales_Report&closeWindowOnLastVie
w=true&ui_appbar=false&ui_navbar=false&shareMode
=embedded&action=edit" width="1300" height="1000"
frameborder="0" gesture="media" allow="encrypted" - media"
allowfullscreen=""></iframe>
```

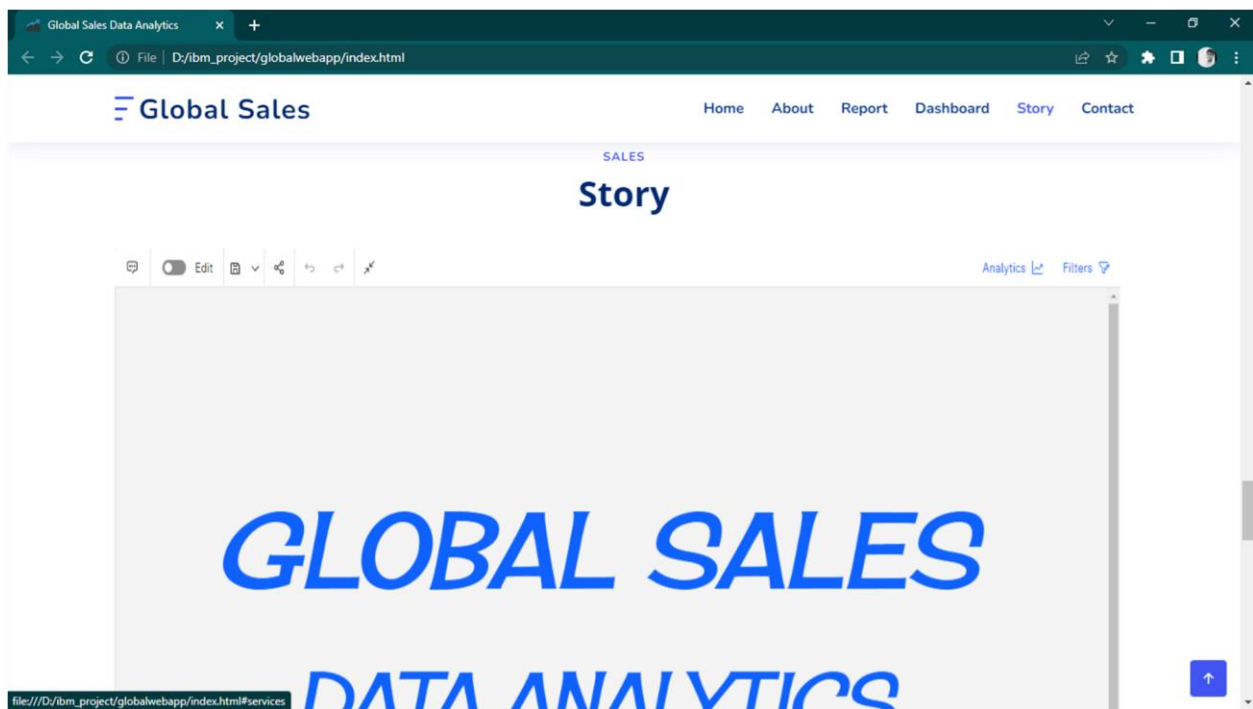


Feature 4 - Embedding story to web app: 1

```
src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&
amp;pathRef=.my_folders%2Fglobalsale%2FNew%2Bstory&close
WindowOnLastView=true&ui_appbar=false&ui_navbar=fals
e&shareMode=embedded&action=view&scenelId=model00
```

<iframe

0001847a103dc5_00000000&sceneTime=600" width="1300" height="1000"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe>



<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

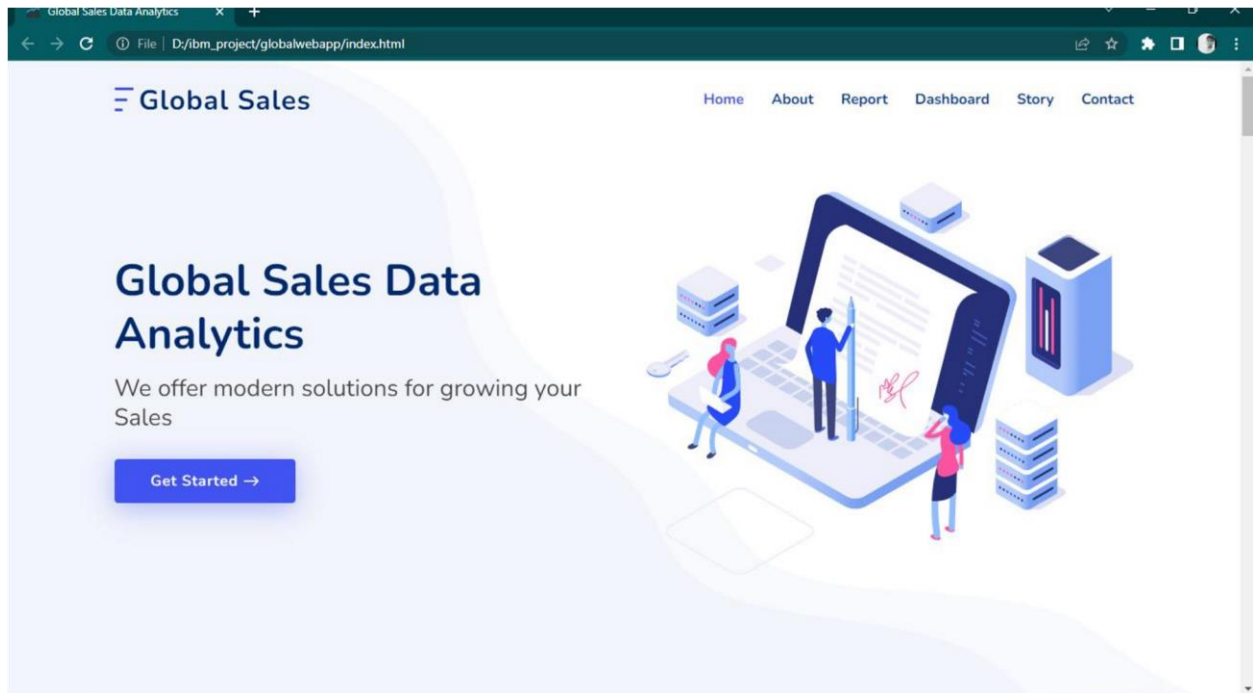
8.2 User Acceptance Testing

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

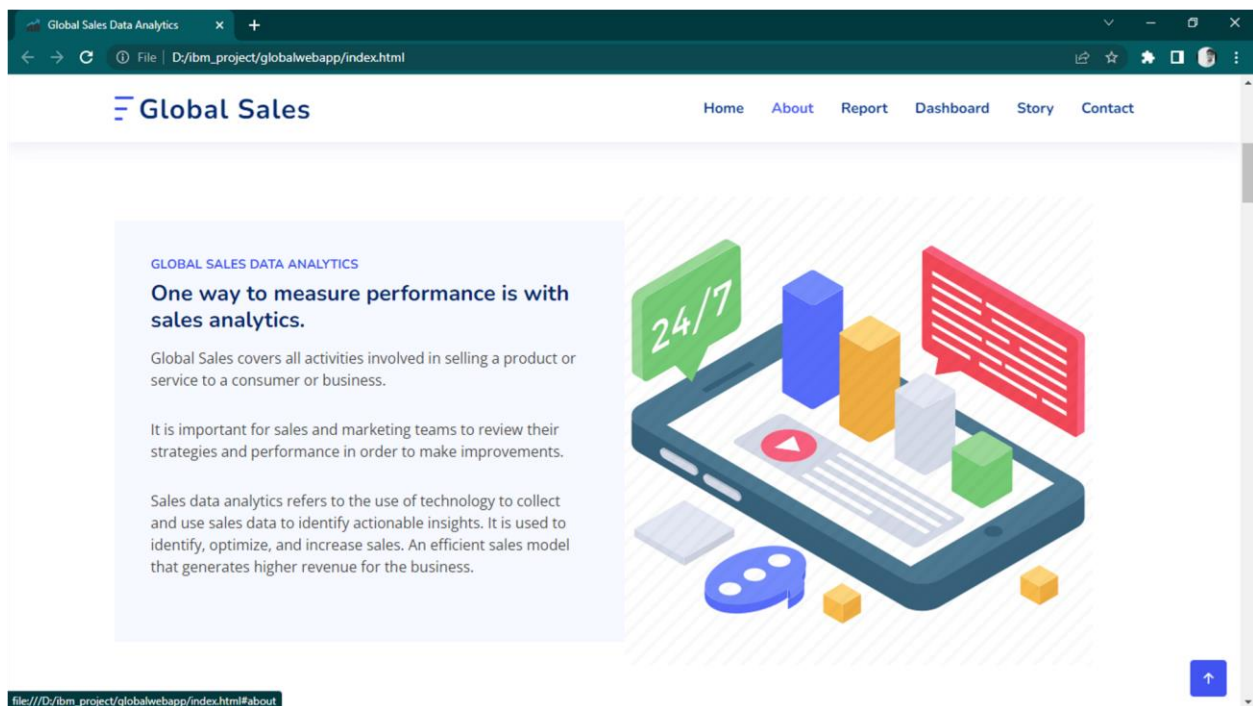
Test Case Analysis:

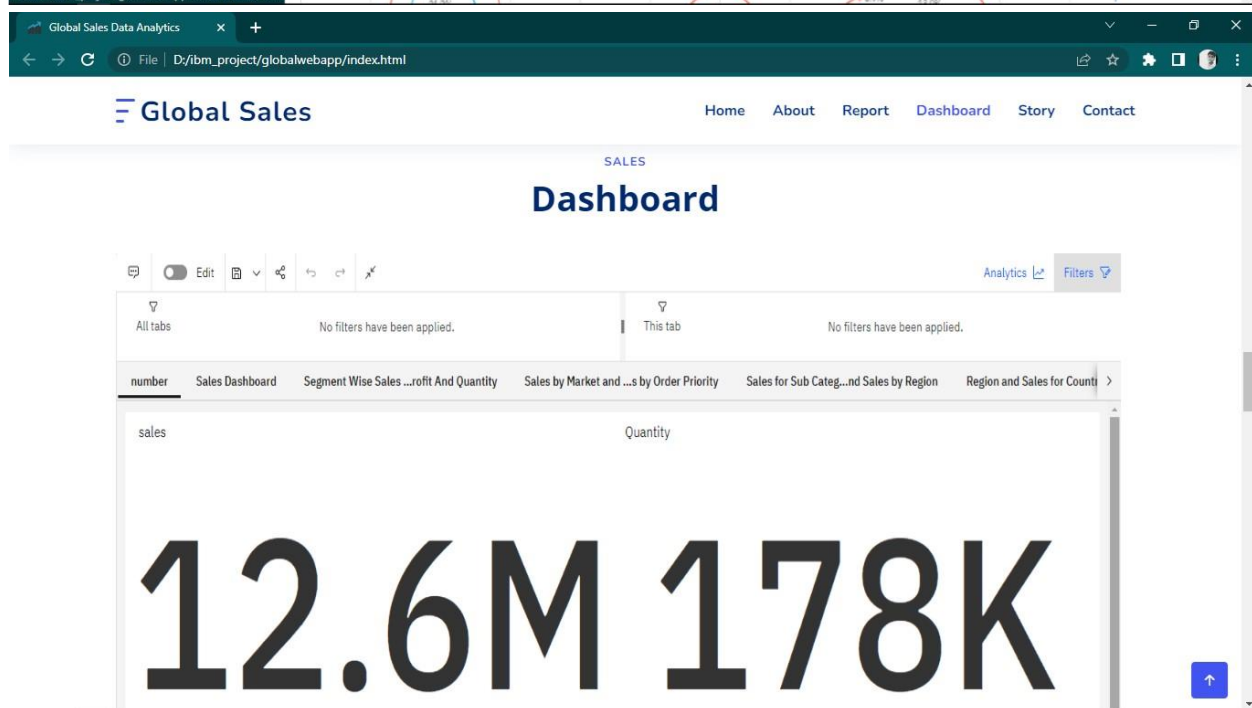
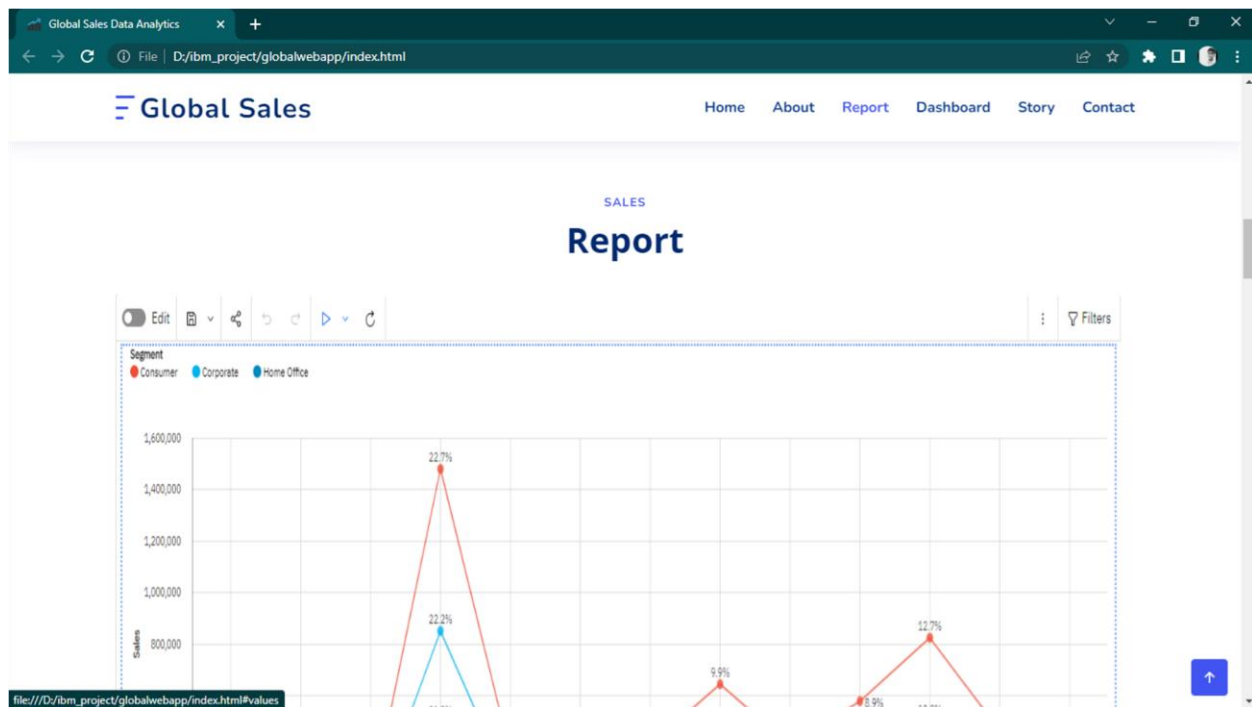
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	0	0	0	0
Client Application	6	0	0	6
Security	0	0	0	0
Outsource Shipping	0	0	0	0
Exception Reporting	7	0	0	7
Final ReportOutput	0	0	0	0
Version Control	0	0	0	0

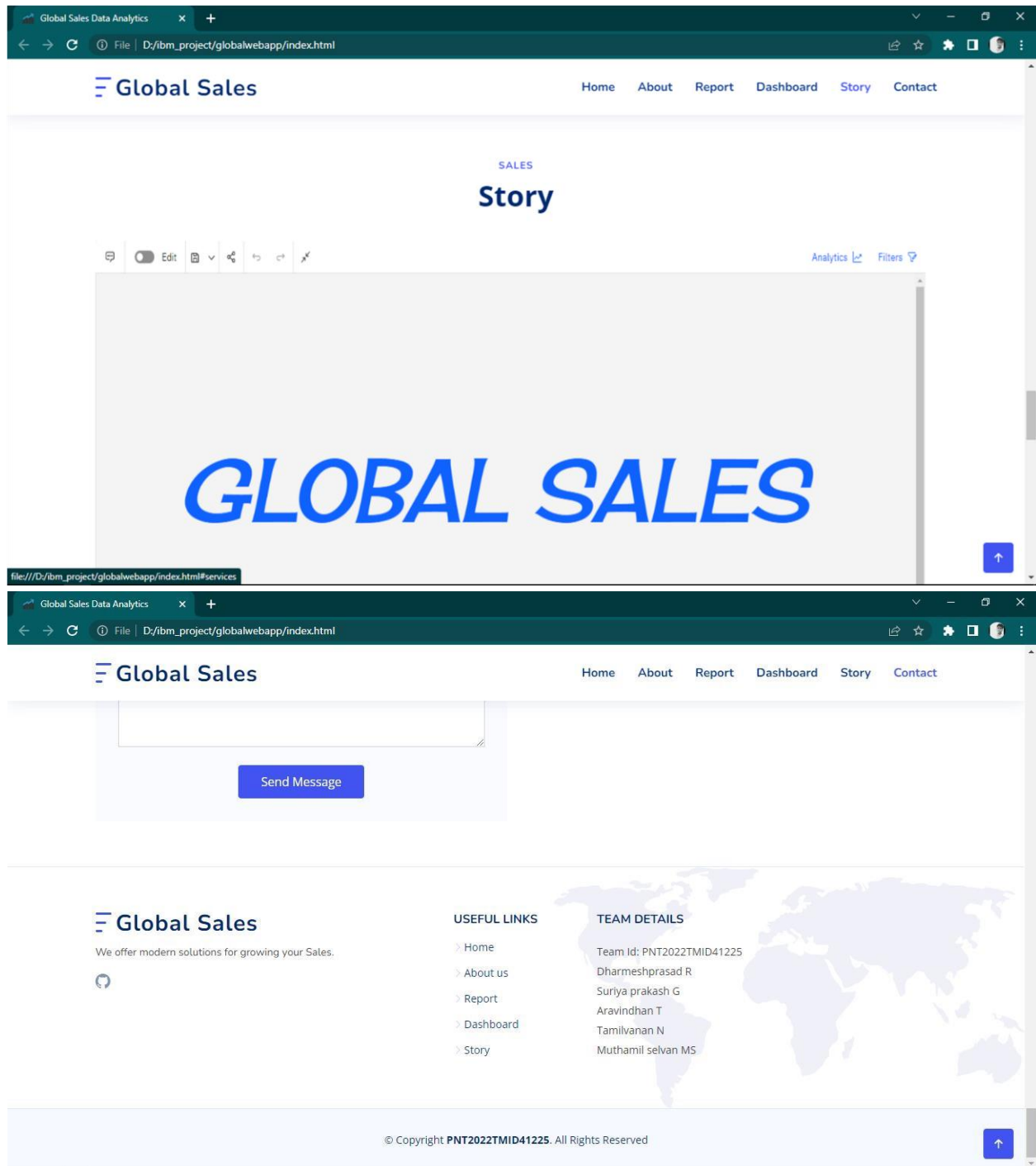


9. RESULTS

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"
      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"
      rel="stylesheet">
```

```

19         rel="stylesheet"
20     />
21
22     <!-- Vendor CSS Files -->
23     <link href="assets/vendor/aos/aos.css" rel="stylesheet" />
24
25     <link
26     href="assets/vendor/bootstrap/css/bootstrap.min.css"
27     rel="stylesheet"
28     />
29
30     <link
31     href="assets/vendor/bootstrap-icons/bootstrapicons.css"
32     rel="stylesheet"
33     />
34
35     <link
36     href="assets/vendor/glightbox/css/glightbox.min.css"
37     rel="stylesheet"
38     />
39
40     <link href="assets/vendor/remixicon/remixicon.css" rel="stylesheet" />
41
42     <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet" />
43
44     <!-- Main CSS File -->
45     <link href="assets/css/style.css" rel="stylesheet" />
46 </head>
47
48     <body>
49
50         <!-- ===== Header ===== -->
51
52         <header id="header" class="header fixed-top">
53
54             <div
55             class="container-fluid container-xl d-flex alignitems-center justify-
56             content-between"
57
58             >

```

```

49         <a href="index.html" class="logo d-flex align-itemscenter">
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 href="#about">About</a></li>          scrollTo"
58     <li><a      class="nav-link href="#values">Report</a></li>          scrollTo"
59     <li><a      class="nav-link href="#features">Dashboard</a></li>    scrollTo"
60     <li><a      class="nav-link href="#services">Story</a></li>        scrollTo"
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-itemscenter">
72             <div class="container">
73                 <div class="row">
74                     <div class="col-lg-6 d-flex flex-column justifycontent-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-inlineflex align-items-center
      justify-content-center align-selfcenter"
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 justifycontent-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_folder

```

s%2Fglobalsale%2FGlobalsales_Report&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode

=embedded&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     
252     <h3>Stroy</h3>
253     <p>
254     a methodology for communicating information,
255     tailored to a
256     specific audience, with a compelling narrative.
257     </p>
258     </div>
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
268     <h3>Dashboard</h3>
269     <p>
270         a tool used to multi-task, organize, visualize, analyze, and
271         track data.View automatically updated data with interactive
272         charts, graphs and tables.
273     </p>
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=dashbo
ard&amp;pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Dashb
oard&amp;closeWindowOnLastView=true&amp;ui_appbar=false&a

```

mp;

ui_navbar=false&shareMode=embedded&action=view&a
mp;m
ode=dashboard&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" data-aos-
delay="200">

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

```



```
326
327 <div class="col-md-6" data-aos="zoom-out" data-aos-
    delay="600">
328 <div class="feature-box d-flex alignitems-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 alignitems-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 alignitems-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 alignitems-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 alignitems-center">

```

```

366      <i class="bi bi-check"></i>
367      <h3>Sales      Forecast      By      Order
      Priority</h3>
368
369    </div>
370
371    <div class="col-md-6" data-aos="zoom-out" data-aos-
      delay="400">
372
373      <i class="bi bi-check"></i>
374      <h3>Sales By Sub Category
      Analytics</h3>
375
376    </div>
377
378    <div class="col-md-6" data-aos="zoom-out" data-aos-
      delay="500">
379
380      <i class="bi bi-check"></i>
381      <h3>Regional Quantity using Radar Chart</h3>
382
383    </div>
384
385    <div class="col-md-6" data-aos="zoom-out" data-aos-
      delay="500">
386
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-
393             delay="600">
394             <div class="feature-box d-flex alignitems-center">
395                 <i class="bi bi-check"></i>
396                 <h3>Sales Vs Profit By Countries</h3>
397             </div>
398         </div>
399
400         <div class="col-md-6" data-aos="zoom-out" data-aos-
401             delay="700">
402             <div class="feature-box d-flex alignitems-center">
403                 <i class="bi bi-check"></i>
404                 <h3>Country Wise Sales Vs Profit Using Word
405                 Cloud</h3>
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	<code><h2>Sales</h2></code>
418	<code><p>Story</p></code>
419	<code></header></code>
420	<code><iframe</code>

```

421 src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&

amp;pathRef=.my_folders%2Fglobalsale%2FNew%2Bstory&close
WindowOnLastView=true&ui_appbar=false&ui_navbar=false
&shareMode=embedded&action=view&sceneId=model00
0001847a103dc5_00000000&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 >
454 When does the issue occur?
455 </button>
456 </h2>
457 <div
458 id="faq-content-1"
459 class="accordion-collapse collapse"
460 data-bs-parent="#faqlist1"
461 >
462 <div class="accordion-body">

```

```
462 Consumers shopping patterns have changed since the
463 pandemic, with more emphasis on ecommerce and
464 contactless
465 payments.
466 </div>
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 more
509 like
510 scientists and strategists, and the results speak for
511 themselves.
512 </div>
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"
    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 products and the ones that identify most profitable
584             aren't moving, most profitable
585             customers, and potential 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
697      </li>
698      <li>
699      <i class="bi bi-chevron-right"></i>
700      <a href="#about">About us</a>
701      </li>
702      <li>
703      <i class="bi bi-chevron-right"></i>
704      <a href="#values">Report</a>
705      </li>
706      <li>
707      <i class="bi bi-chevron-right"></i>
708      <a href="#features">Dashboard</a>
709      </li>
710      <li>
711      <i class="bi bi-chevron-right"></i>
712      <a href="#services">Story</a>
713      </li>
714      </ul>
715      </div>
716
717      <div
        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: PNT2022TMID41225 <br />
722      Dharmeshprasad R<br />

```

```

723             Suriya prakash G<br />
724             Aravindhan T<br />
725             Tamilvanan N<br />
726             Muthamil selvan MS<br />
727             </p>
728             </div>
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             </footer>
741             <!-- End Footer -->
742
743             <a
744             href="#"
745             class="back-to-top d-flex align-items-center justifycontent-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"></scr
        ipt>
750     <script src="assets/vendor/aos/aos.js"></script>
751     <script
        src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></s
        cript>
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
        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)

