

PROJECT REPORT

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|--------------|-----------------------------|
| Team ID | PNT2022TMID41225 |
| Project Name | Global Sales Data Analytics |

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1. INTRODUCTION

1.1 Project Overview

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

1.2 Purpose

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

2. LITERATURE SURVEY

| Title & Author(s) | Year | Technique | Findings |
|--|-------------|--|--|
| Big Data Analytics and Deep Learning Based Sentiment Analysis System for Sales Prediction - Khatiwada, Aamod and Kadariya, Pradeep and Agrahari, Sandip and Dhakal, Rabin. | 2019 | Big data analytics (BDA) applications in e-commerce. | Merits: Used to understand complex datasets in a matter of time with beautiful visual representations. Demerits: Lack of security since large data processed simultaneously |
| COVID-19 pandemic in the new era of big data analytics: 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 and case implementation of an innovative framework-Iftikhar, Rehan and Khan, Mohammad Saud | 2020 | Definitional aspects of big data analytics (BDA) in e-commerce | Merits: Captured linearity and non linearity better than ARIMA and ARNN gave the best result of 565 RMSE. Demerits: Hybrid Technique can fail if nonlinear model fails to capture residue patterns |

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

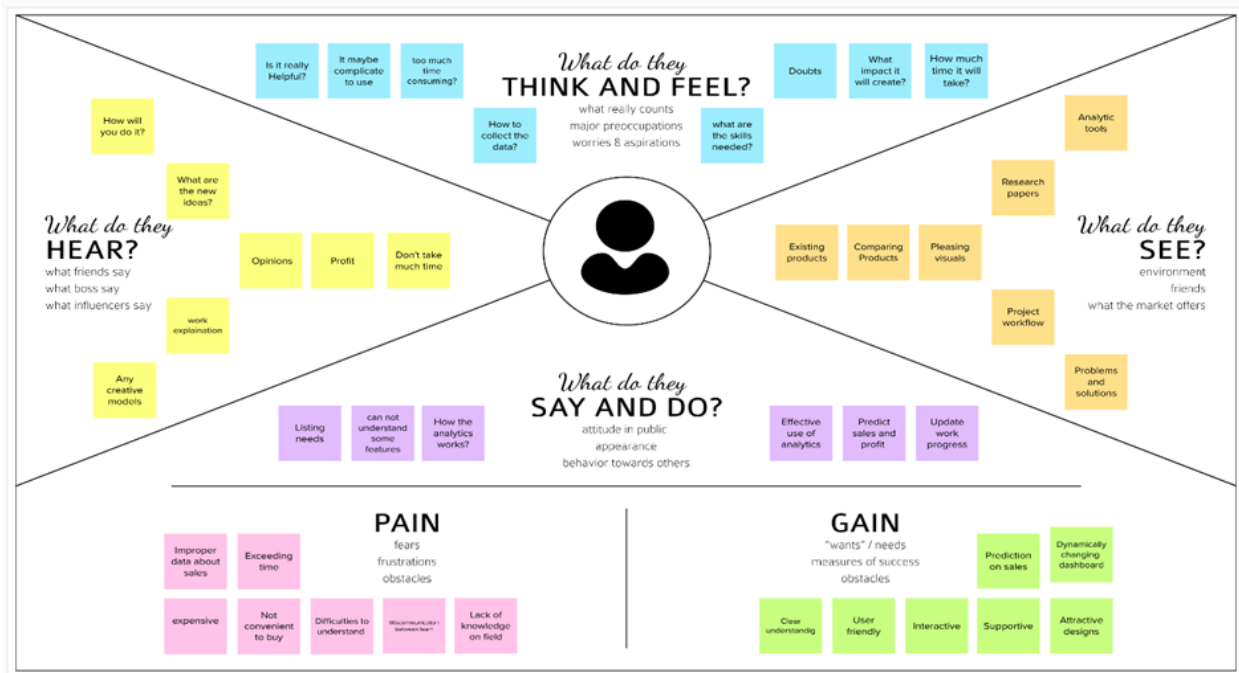
3. IDEATION & PROPOSED SOLUTION

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

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.
- 💡 Encourage wild ideas.
- 🚫 Defer judgment.
- 👂 Listen to others.
- 🗣️ Go for volume.
- 🖼️ If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2 Brainstorm

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

⌚ 10 minutes

Dharmeshprasad R

- Duration: User need
- Navigation
- Clear user interface
- Related information
- Easy accessible
- Reading books
- Market understand
- Customize
- Software specified solutions
- Help and support
- Acquisition
- Understand what customer needs

Aravindhnan P

- Concept idea
- Service idea
- Portfolio idea
- Easy accessible and personal idea
- Understand customer needs
- Easy to use
- Easy to use
- Easy to use
- Easy to use
- Easy to use
- Easy to use
- Easy to use

3 Group ideas

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

⌚ 20 minutes

Tamilvanan N

- To know price of the product
- View price and to user understanding
- Choose what they need
- Notification
- Comfortable for users
- Easy to track your product
- Others
- Given to go to new products

Suriyaprakash

- Track customer interest
- Use social media
- Make it easy
- Related information

Muthamiselvan

- Related information
- User-friendly
- Related information
- Users to the customer

Step-3: Idea Prioritization

4 Prioritize

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

⌚ 20 minutes

Importance
If you're not sure, think about what your customer would find most important.

Feasibility
Dependence on their importance, which factor are more feasible than others? (Cost, time, effort, complexity, etc.)

3.3 Proposed Solution

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

| | | |
|----|-----------------------------------|--|
| 05 | Business Model (Revenue Model) | Global sales analytics can use the sales data and provide actionable insights for selling a product or service to a consumer or business. Improve the decision-making process oriented at analyzing scales trends, reducing costs and increasing business revenue. |
| 06 | Scalability of the Solution | This solution can be used from small stores to multinational companies. This solution can be processed with less memory and quickly. The solution can be used as user specified so it is easy to customer. |

3.4 Problem Solution Fit

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



Purpose:

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

Solution fit:

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

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

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

4. REQUIREMENT ANALYSIS

4.1 Functional Requirements

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

4.2 Non-functional Requirements

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

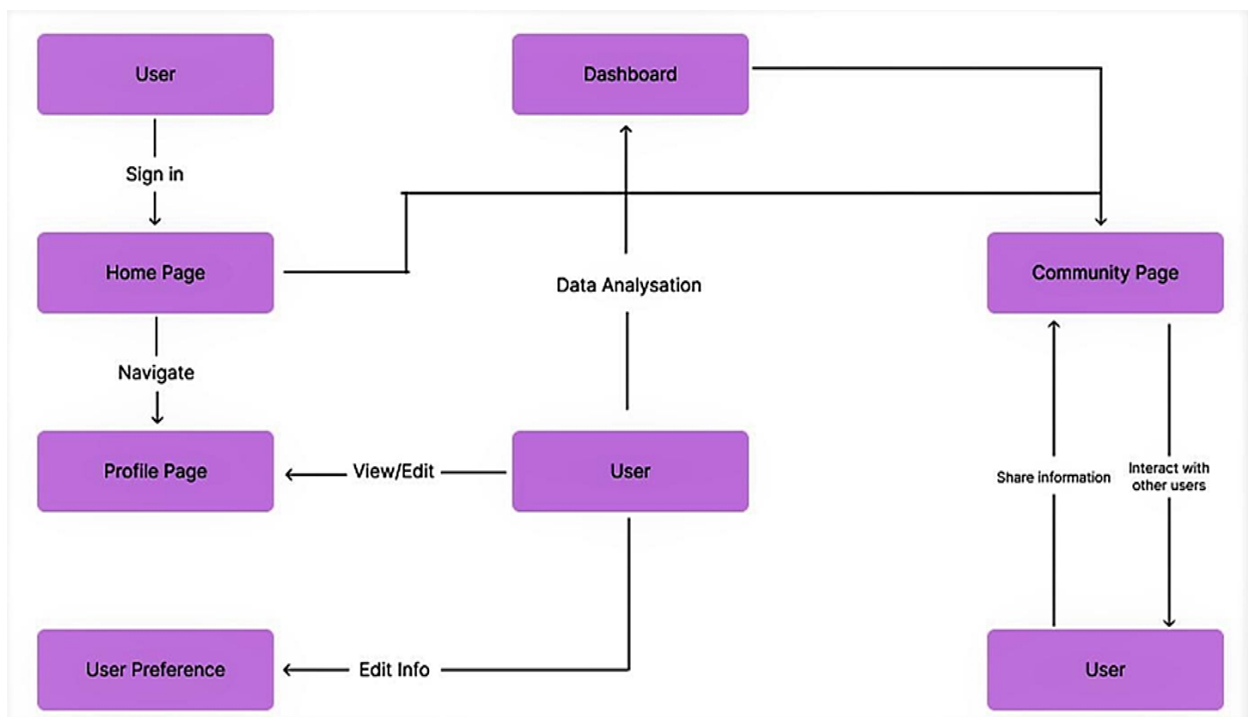
| | | |
|-------|--------------|---|
| NFR-4 | Performance | A good internet speed while browsing the product it had high performance with efficiency. |
| NFR-5 | Availability | It will be available 24 hours a day and seven days a week. User access anywhere at any time . |
| NFR-6 | Scalability | A Many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

5. PROJECT DESIGN

5.1 Data Flow Diagrams

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

DFD level 0

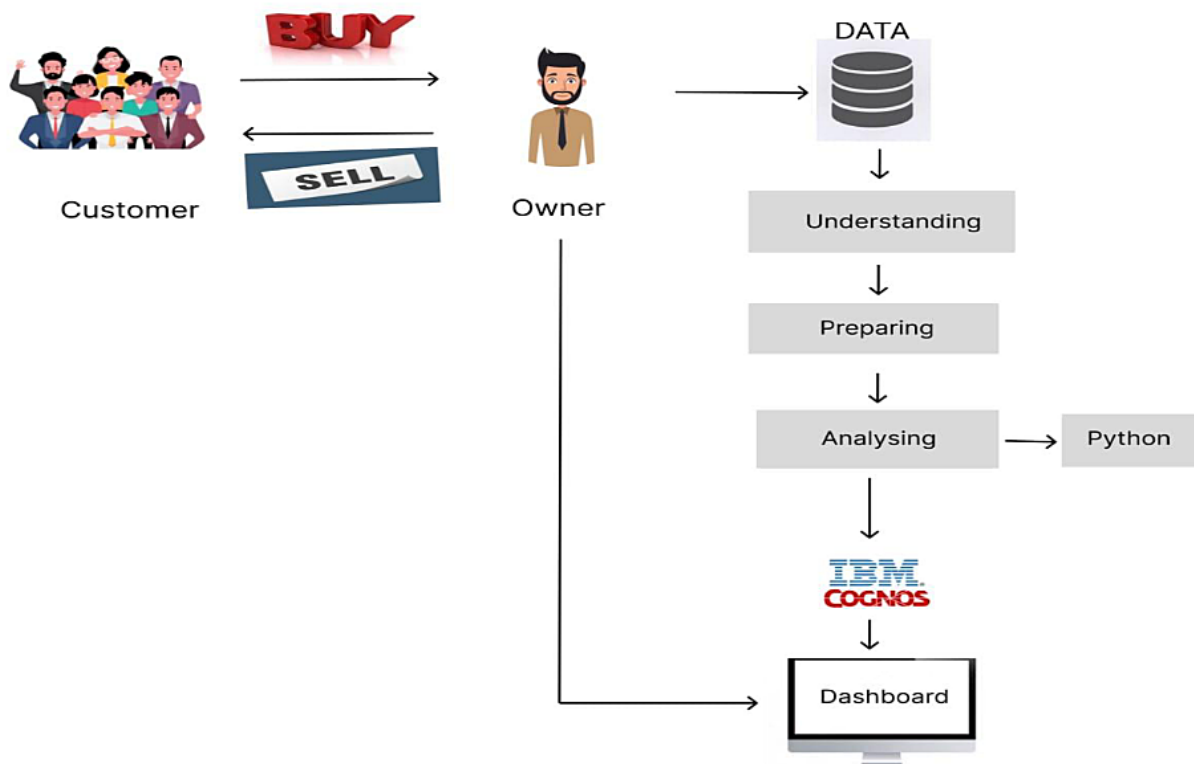


5.2 Solution & Technical Architecture

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

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

Solution Architecture Diagram:



5.3 User Stories

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|---------------------|-------------------------------|-------------------|---|---|----------|----------|
| | Collecting dataset | USN-1 | As a user, I need to gather the data in the form of CSV/XLS and clean the data. | | low | Sprint-1 |
| | Data preparation | USN-2 | As a user, I need to filter it for Data visualization. | | Medium | Sprint-1 |
| | Data visualization | USN-3 | As a user, I need to filter it for Data visualization. | | Medium | Sprint-1 |
| | Dashboard | USN-4 | Access dashboard in website | Dashboard | medium | Sprint-2 |
| | Report and story | USN-5 | As a user, I can view the list of categorized products and their details as a report and story. | Report and Story | | Sprint-2 |
| Customer (web user) | Registration | USN-6 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account / dashboard | High | Sprint-3 |
| | Login | USN-7 | As a user, I need valid credentials to log to my application. | I can receive confirmation email and 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 |
| Administ rator | | USN-10 | It can be easily accessible and responsible. | I can access it easily through application. | High | Sprint-4 |

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|-----------|-------------------------------|-------------------|---|--------------|----------|--|
| Sprint -1 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | 5 | High | Dharmeshprasad R, Surya Prakash G, Tamilvanan N, Mutamilselvan S, Aravindhan |
| Sprint -1 | Login | USN-2 | As a user, I need valid credentials to log to my application. | 5 | High | Dharmeshprasad R, Surya Prakash G, Tamilvanan 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 | Dharmeshprasad R, Surya Prakash G, Tamilvanan N |
| Sprint -1 | Upload dataset | USN-4 | As a user, I can view the data of the products. | 5 | High | Muthamilselvan S Aravindhan |
| 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 | | Dharmeshprasad R, Surya Prakash G, Tamilvanan N |

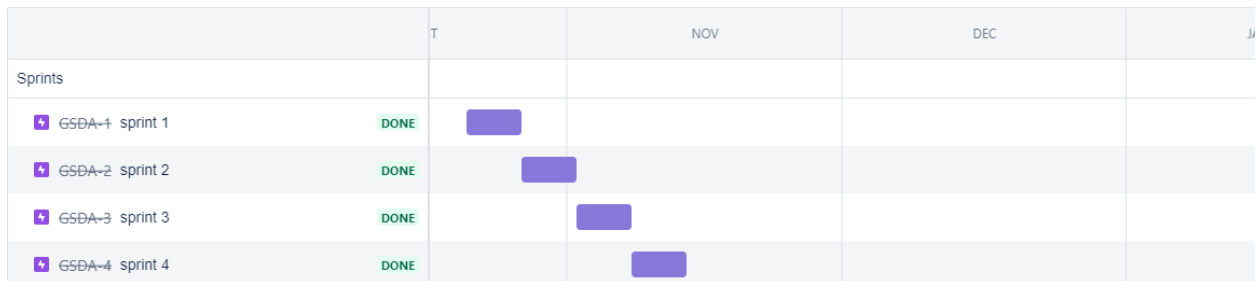
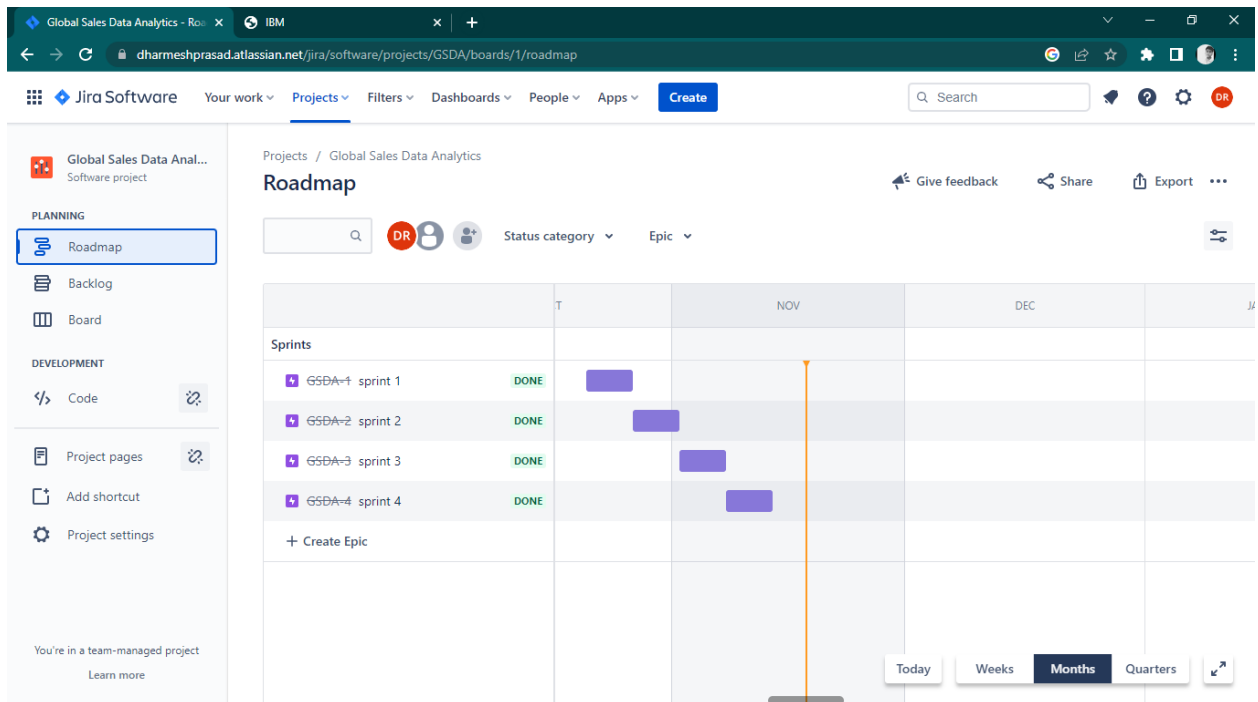
| | | | | | | |
|-----------|------------|--------|---|----|--------|---|
| Sprint -2 | Dashboard | USN-7 | As a user, I need to filter it for Data visualization. | 10 | High | Surya Prakash G, Tamilvanan N |
| Sprint -3 | Dashboard | USN-8 | As a user, I must plan visualizations in a way that I'm able to gain insights regarding the sales based upon the category of sales and the respective region. | 4 | High | Dharmeshprasad R, Surya Prakash G, Tamilvanan N , Muthamilselvan MS |
| 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 | Dharmeshprasad R, Surya Prakash G, Tamilvanan N |
| Sprint -4 | Prediction | USN-10 | As a user, I see the prediction of the specific product's future sales expectation. | 10 | Medium | Dharmeshprasad R, Surya Prakash G, Tamilvanan 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 | Surya Prakash G, Tamilvanan N, Dharmeshprasad R, Aravindhana |

| | | | | | | |
|-----------|-------|--------|--|----|------|---|
| 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 | Dharmeshprasad R, Surya Prakash G, Tamilvanan N |
|-----------|-------|--------|--|----|------|---|

6.2 Sprint Delivery Schedule

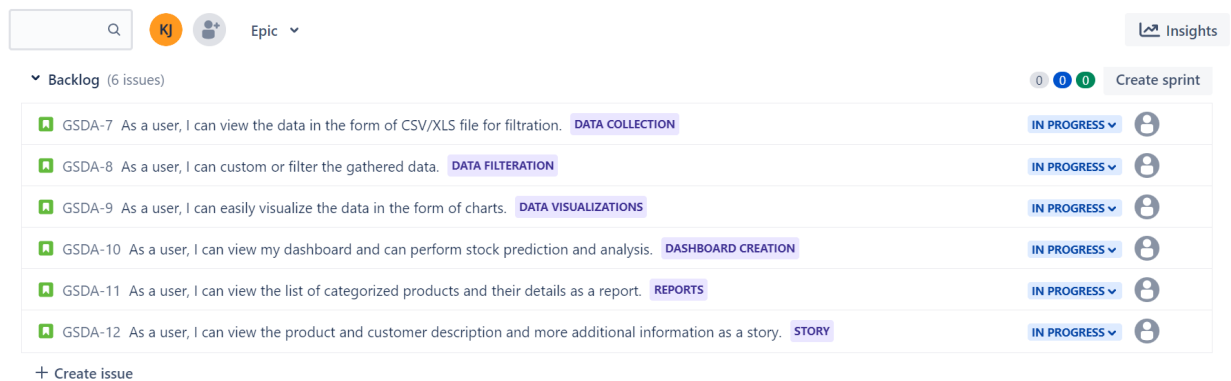
| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|---------------|---------------------------|-----------------|--------------------------|----------------------------------|--|-------------------------------------|
| 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



Projects / GSDA

Backlog



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"

```

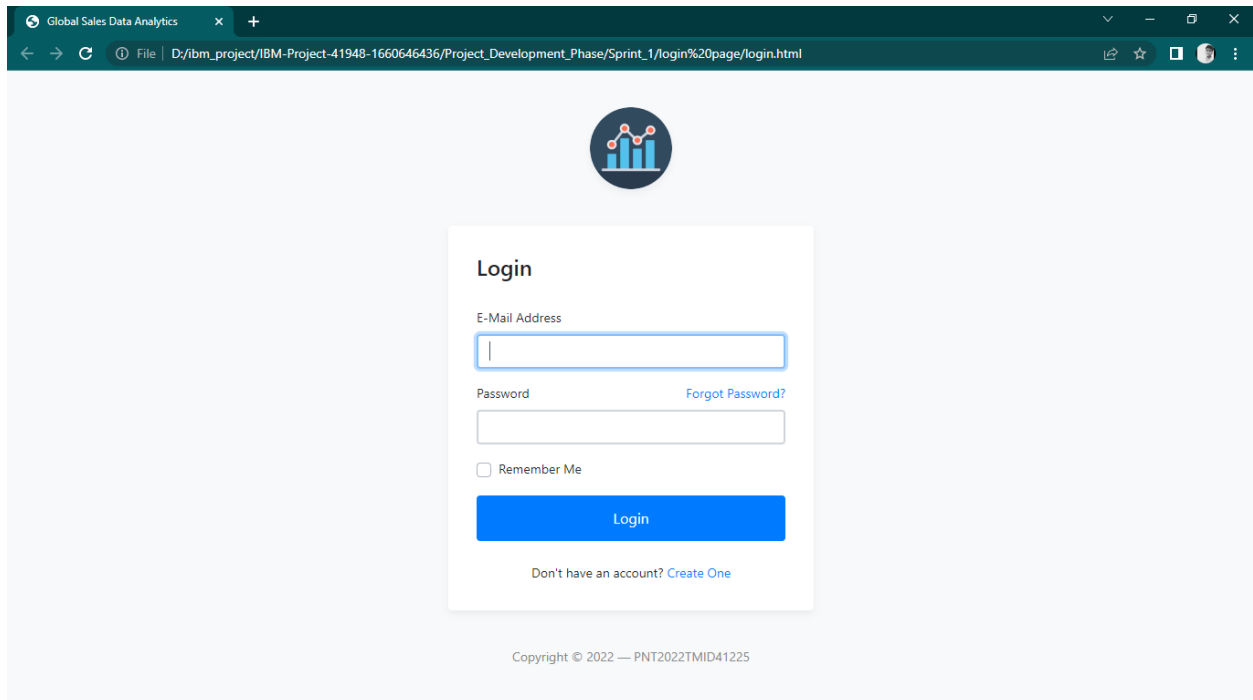


```

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-
UO2eT0CpHqdsJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W

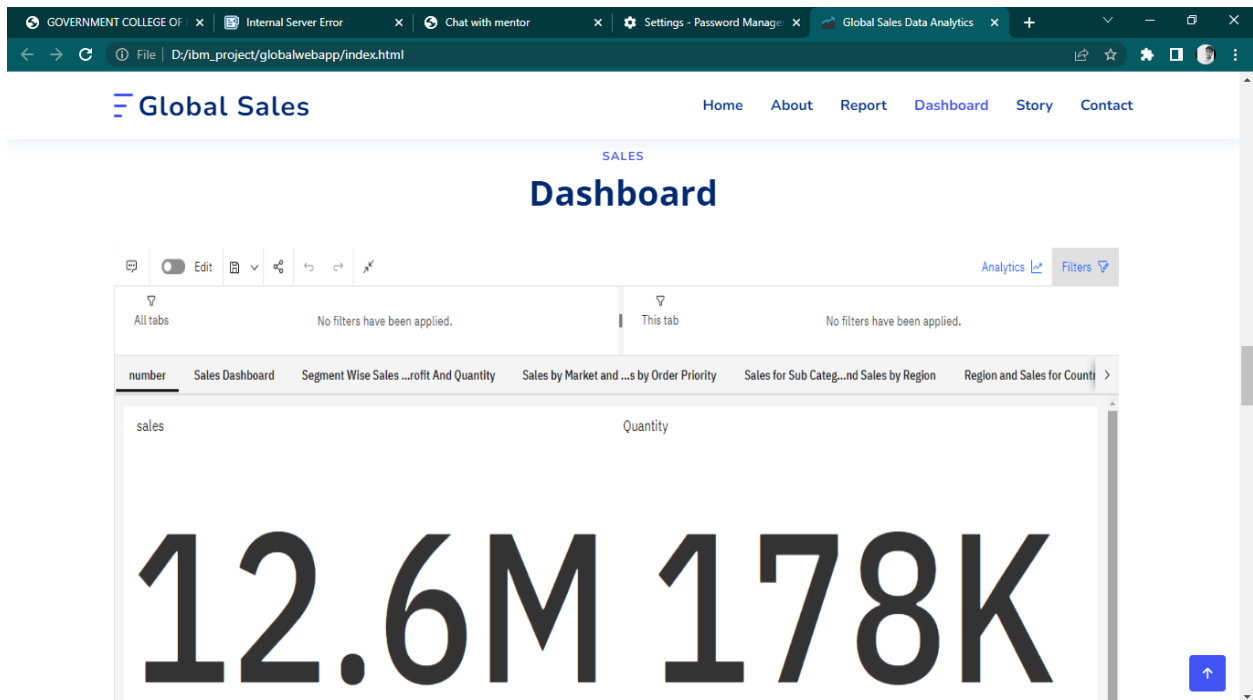
```

```
1" crossorigin="anonymous"></script>
93 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
    integrity="sha384-
    JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM"
    crossorigin="anonymous"></script> -->
94     <script src="assets/js/my-login.js"></script>
95 </body>
96 </html>
```



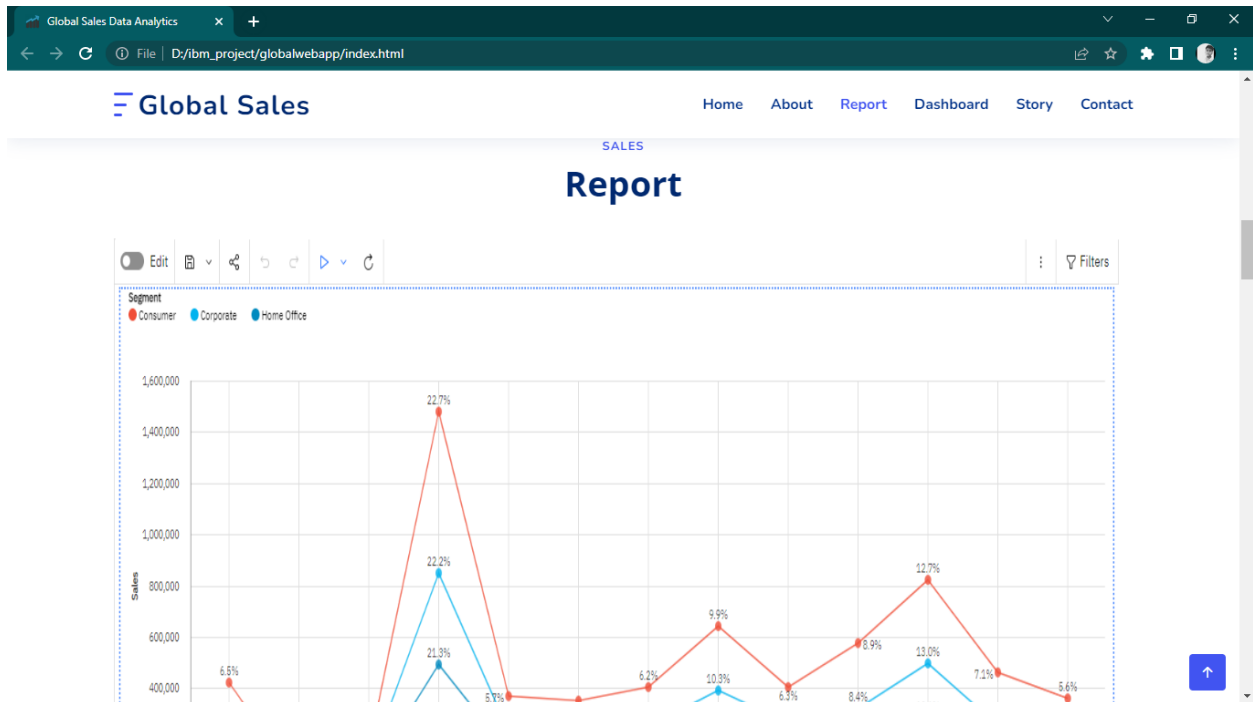
Feature 2 - Embedding dashboard to web app:

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



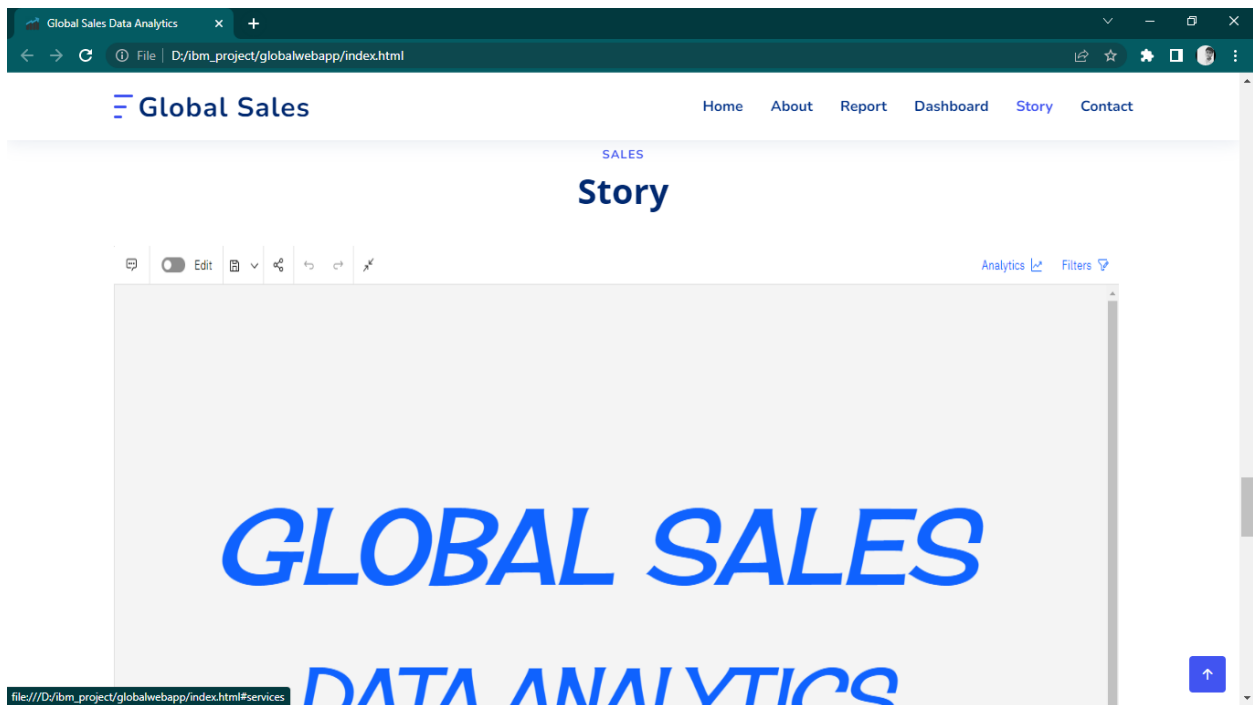
Feature 3 - Embedding report to web app:

```
1 <iframe
  src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%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:

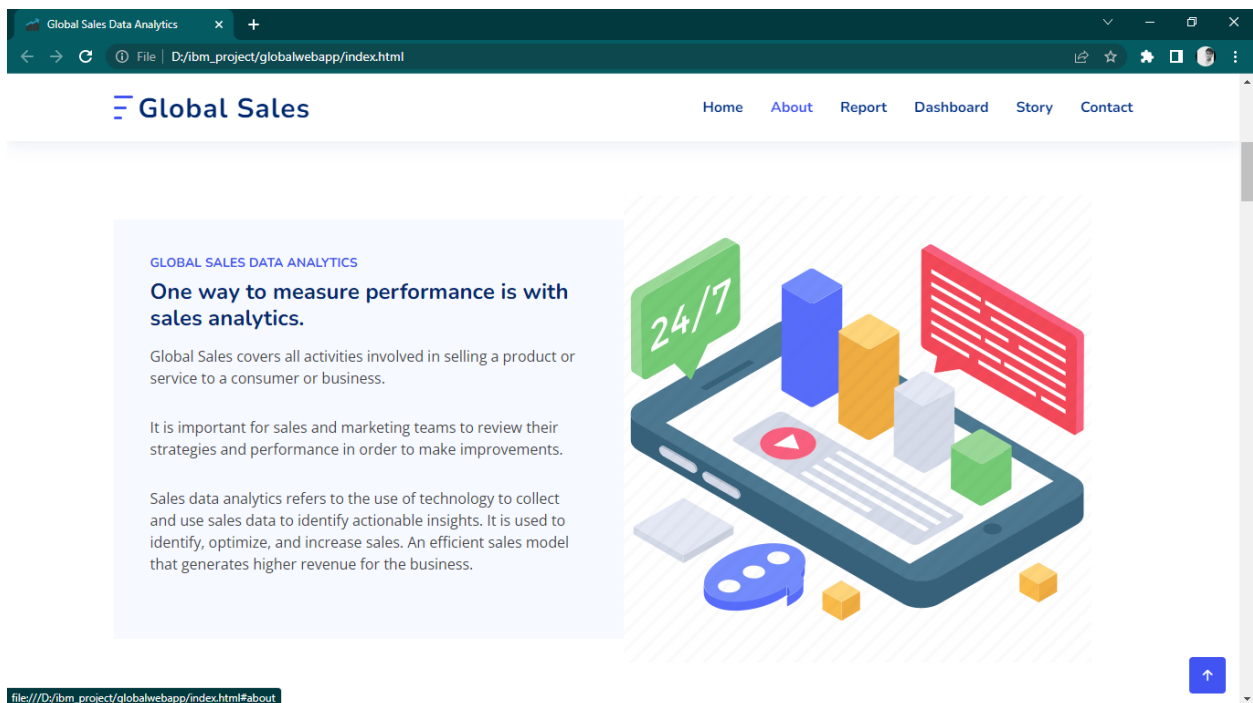
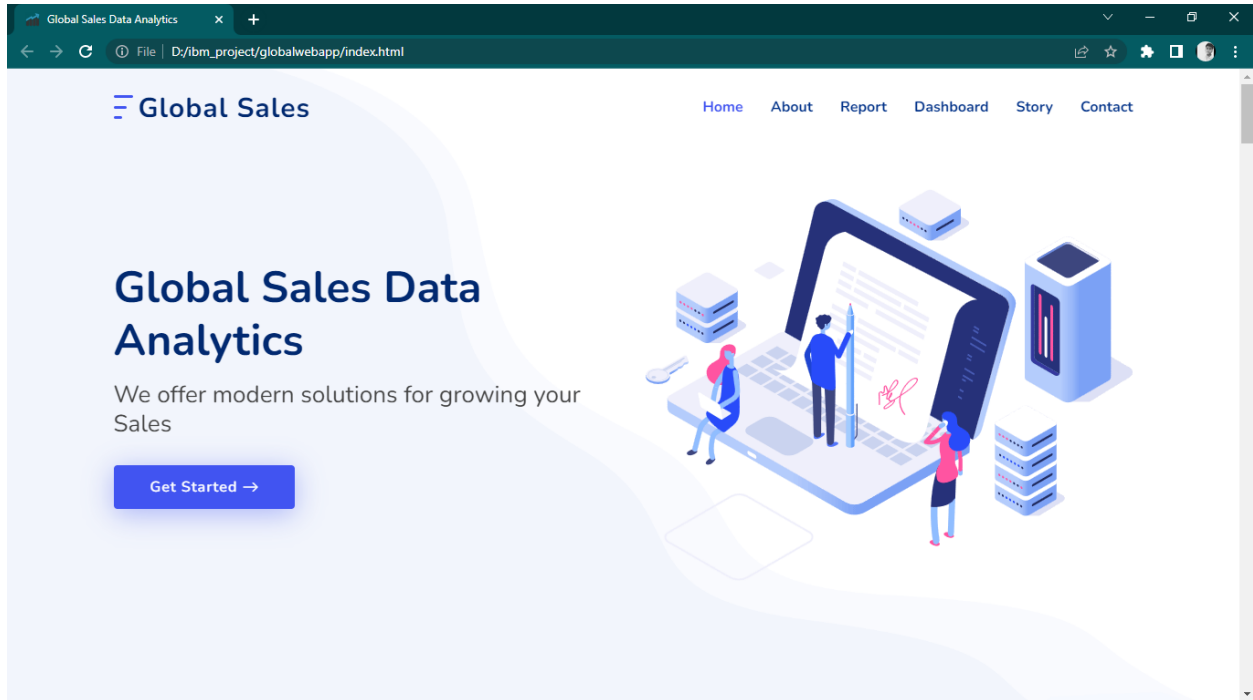
| Resolution | Severity 1 | Severity 2 | Severity 3 | Severity 4 | Subtotal |
|----------------|------------|------------|------------|------------|----------|
| By Design | 5 | 2 | 1 | 1 | 9 |
| Duplicate | 0 | 0 | 0 | 0 | 0 |
| External | 2 | 3 | 0 | 1 | 6 |
| Fixed | 4 | 1 | 2 | 2 | 9 |
| Not Reproduced | 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 |

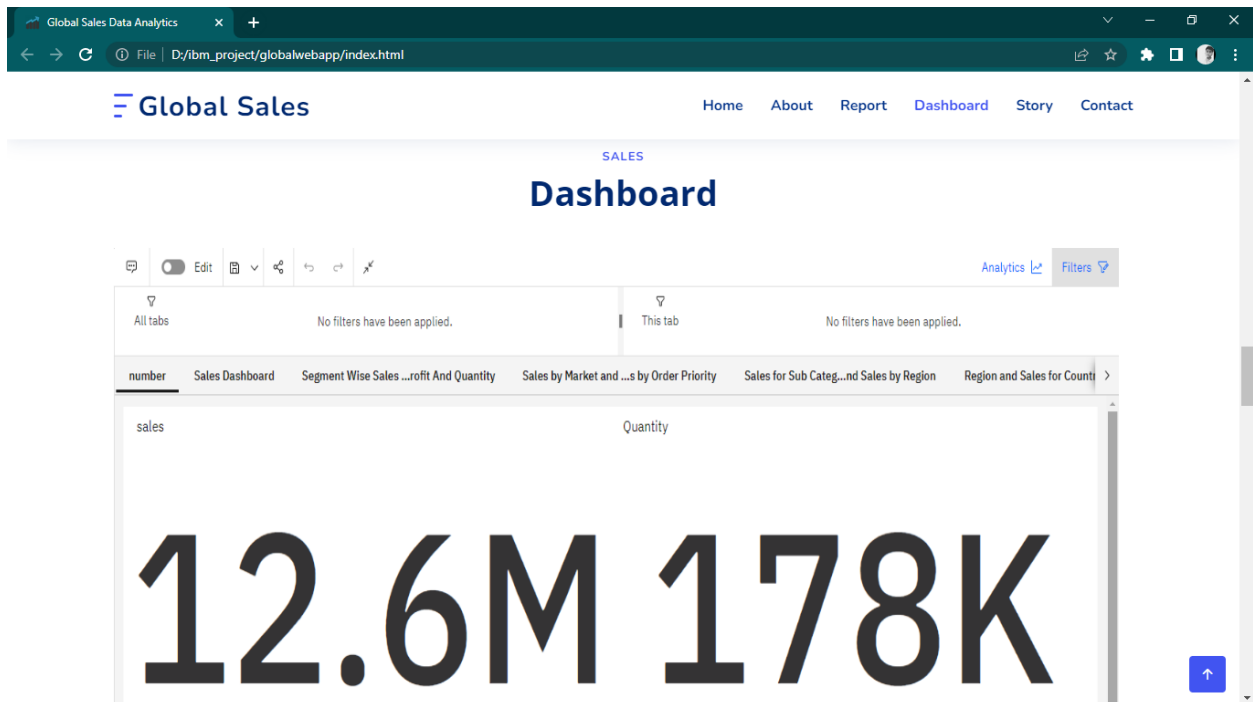
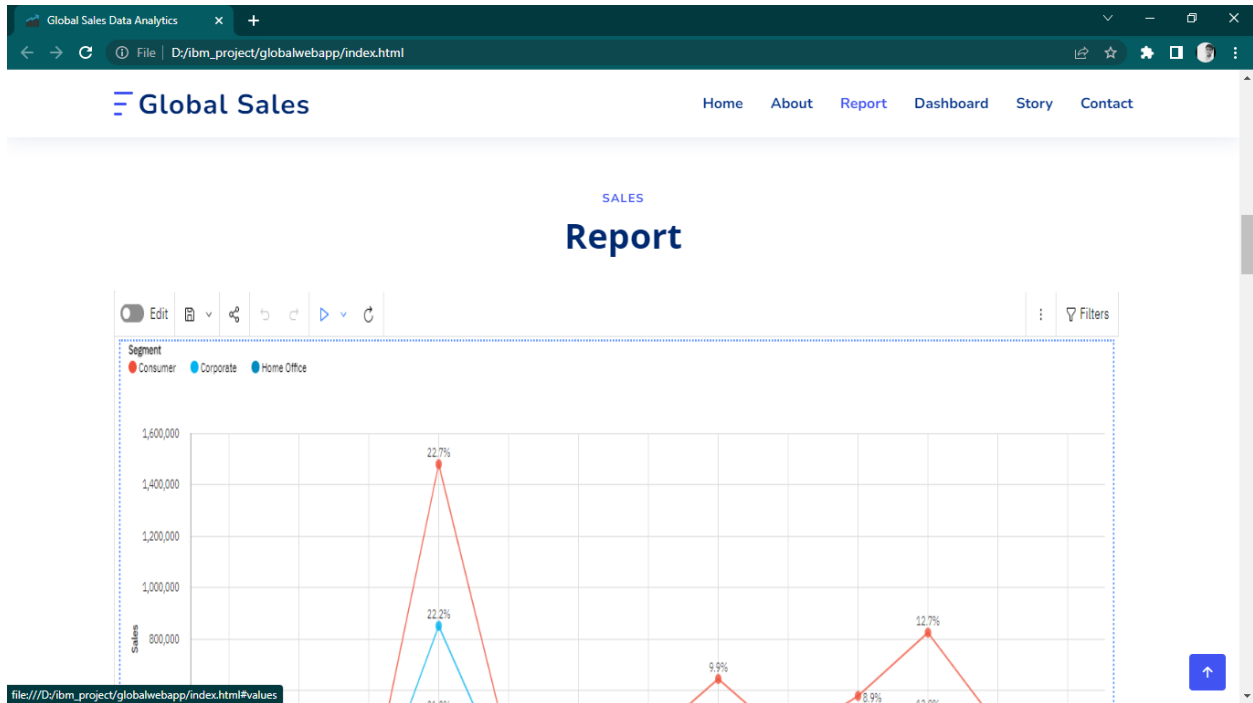
Test Case Analysis:

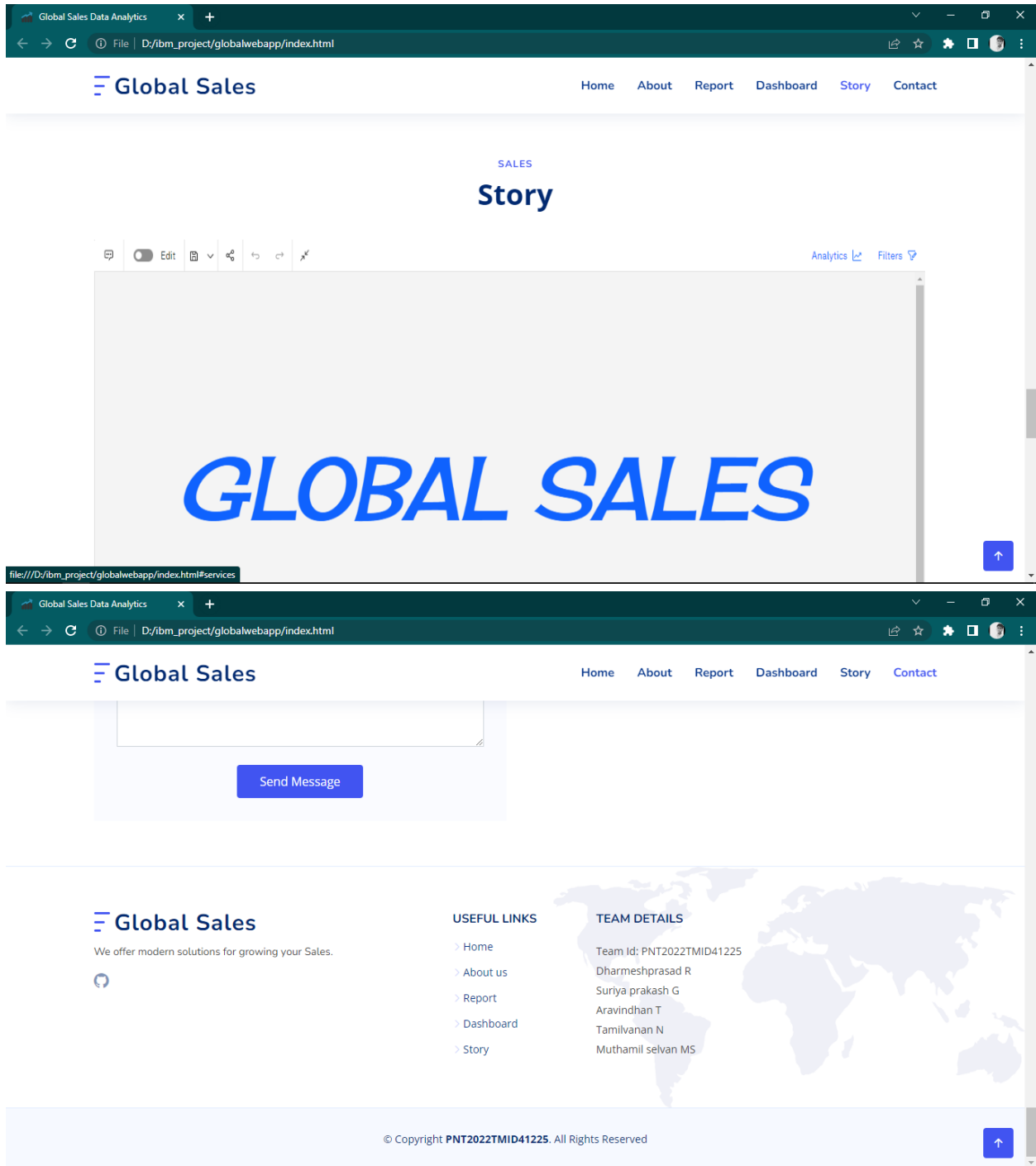
| Section | Total Cases | Not Tested | Fail | Pass |
|---------------------|--------------------|-------------------|-------------|-------------|
| Print Engine | 0 | 0 | 0 | 0 |
| Client Application | 6 | 0 | 0 | 6 |
| Security | 0 | 0 | 0 | 0 |
| Outsource Shipping | 0 | 0 | 0 | 0 |
| Exception Reporting | 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"
15        rel="apple-touch-icon" />
16
17    <!-- Google Fonts -->
18    <link
19      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" rel="stylesheet" />
```

```

        i,700,700i"
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     <link
30         href="assets/vendor/bootstrap-icons/bootstrap-
31         icons.css"
32         rel="stylesheet"
33     />
34     <link
35         href="assets/vendor/glightbox/css/glightbox.min.css"
36         rel="stylesheet"
37     />
38     <link href="assets/vendor/remixicon/remixicon.css"
39         rel="stylesheet" />
40     <link href="assets/vendor/swiper/swiper-bundle.min.css"
41         rel="stylesheet" />
42
43     <!-- Main CSS File -->
44     <link href="assets/css/style.css" rel="stylesheet" />
45 </head>
46
47 <body>
48     <!-- ===== Header ===== -->
49     <header id="header" class="header fixed-top">
50         <div
51             class="container-fluid container-xl d-flex align-
52             items-center justify-content-between"
53         >
54             <a href="index.html" class="logo d-flex align-

```

```

    items-center">
50         
51         <span>Global Sales</span>
52     </a>
53
54     <nav id="navbar" class="navbar">
55         <ul>
56             <li><a class="nav-link scrollto active"
href="#hero">Home</a></li>
57             <li><a class="nav-link scrollto"
href="#about">About</a></li>
58             <li><a class="nav-link scrollto"
href="#values">Report</a></li>
59             <li><a class="nav-link scrollto"
href="#features">Dashboard</a></li>
60             <li><a class="nav-link scrollto"
href="#services">Story</a></li>
61             <li><a class="nav-link scrollto"
href="#contact">Contact</a></li>
62         </ul>
63         <i class="bi bi-list mobile-nav-toggle"></i>
64     </nav>
65     <!-- .navbar -->
66 </div>
67 </header>
68 <!-- End Header -->
69
70 <!-- ===== Hero Section ===== -->
71 <section id="hero" class="hero d-flex align-items-
center">
72     <div class="container">
73         <div class="row">
74             <div class="col-lg-6 d-flex flex-column justify-
content-center">
75                 <h1 data-aos="fade-up">Global Sales Data
Analytics</h1>
76                 <h2 data-aos="fade-up" data-aos-delay="400">

```

```

77             We offer modern solutions for growing your
Sales
78         </h2>
79         <div data-aos="fade-up" data-aos-delay="600">
80             <div class="text-center text-lg-start">
81                 <a
82                     href="#about"
83                     class="btn-get-started scrollto d-inline-
flex align-items-center justify-content-center align-self-
center"
84                 >
85                     <span>Get Started</span>
86                     <i class="bi bi-arrow-right"></i>
87                 </a>
88             </div>
89         </div>
90     </div>
91     <div
92         class="col-lg-6 hero-img"
93         data-aos="zoom-out"
94         data-aos-delay="200"
95     >
96         
97     </div>
98 </div>
99 </div>
100 </section>
101 <!-- End Hero -->
102
103 <main id="main">
104     <!-- ===== About Section ===== -->
105     <section id="about" class="about">
106         <div class="container" data-aos="fade-up">
107             <div class="row gx-0">
108                 <div
109                     class="col-lg-6 d-flex flex-column justify-

```

```

    content-center"
110         data-aos="fade-up"
111         data-aos-delay="200"
112     >
113         <div class="content">
114             <h3>Global Sales Data Analytics</h3>
115             <h2>One way to measure performance is with
    sales analytics.</h2>
116             <p>
117                 Global Sales covers all activities
    involved in selling a
118                 product or service to a consumer or
    business.
119             </p>
120             <p>
121                 It is important for sales and marketing
    teams to review their
122                 strategies and performance in order to
    make improvements.
123             </p>
124             <p>
125                 Sales data analytics refers to the use
    of technology to
126                 collect and use sales data to identify
    actionable insights. It
127                 is used to identify, optimize, and
    increase sales. An
128                 efficient sales model that generates
    higher revenue for the
129                 business.
130             </p>
131         </div>
132     </div>
133
134     <div
135         class="col-lg-6 d-flex align-items-center"
136         data-aos="zoom-out"

```



```

137         data-aos-delay="200"
138     >
139         
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                     
236                     <h3>Report</h3>
237                     <p>
                        sorting and organization of data, while
                        analytics derive

```

```

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

```

```

269             track data.View automatically updated
data with interactive
270             charts, graphs and tables.
271         </p>
272     </div>
273 </div>
274 </div>
275 </div>
276 </section>
277 <!-- End Values Section -->
278
279 <!-- ===== Features Section ===== -->
280 <section id="features" class="features">
281     <div class="container" data-aos="fade-up">
282         <header class="section-header">
283             <h2>Sales</h2>
284             <p>Dashboard</p>
285         </header>
286         <iframe
287
src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashb
oard&pathRef=.my_folders%2Fglobalsale%2FGlobalsales_Das
hboard&closeWindowOnLastView=true&ui_appbar=false&a
mp;ui_navbar=false&shareMode=embedded&action=view&a
mp;mode=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 align-
items-center">
301                     <i class="bi bi-check"></i>
302                     <h3>Segment Wise Sales , Profit And
Quantity</h3>
303                 </div>
304             </div>
305
306             <div class="col-md-6" data-aos="zoom-out"
data-aos-delay="300">
307                 <div class="feature-box d-flex align-
items-center">
308                     <i class="bi bi-check"></i>
309                     <h3>Sales By Market</h3>
310                 </div>
311             </div>
312
313             <div class="col-md-6" data-aos="zoom-out"
data-aos-delay="400">
314                 <div class="feature-box d-flex align-
items-center">
315                     <i class="bi bi-check"></i>
316                     <h3>Sales By Sub Category And Sales By
Region</h3>
317                 </div>
318             </div>
319
320             <div class="col-md-6" data-aos="zoom-out"
data-aos-delay="500">
321                 <div class="feature-box d-flex align-
items-center">
322                     <i class="bi bi-check"></i>
323                     <h3>Country Wise Sales Using Map
Points</h3>

```

```

324             </div>
325         </div>
326
327         <div class="col-md-6" data-aos="zoom-out"
328             data-aos-delay="600">
329             <div class="feature-box d-flex align-
330                 items-center">
331                 <i class="bi bi-check"></i>
332                 <h3>
333                     Sub Category Wise Sales And Profits
334                     Using Line And Bar
335                     Chart
336                     </h3>
337                 </div>
338             </div>
339
340             <div class="col-md-6" data-aos="zoom-out"
341                 data-aos-delay="700">
342                 <div class="feature-box d-flex align-
343                     items-center">
344                     <i class="bi bi-check"></i>
345                     <h3>
346                         Sales Vs Profit Scatter Plot With
347                         Sub Categories And
348                         Regions
349                     </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"
358 data-aos-delay="200">
359                 <div class="feature-box d-flex align-
360 items-center">
361                     <i class="bi bi-check"></i>
362                     <h3>Regional Sales And Profit
363 Forecast</h3>
364                 </div>
365             </div>
366             <div class="col-md-6" data-aos="zoom-out"
367 data-aos-delay="300">
368                 <div class="feature-box d-flex align-
369 items-center">
370                     <i class="bi bi-check"></i>
371                     <h3>Sales Forecast By Order
372 Priority</h3>
373                 </div>
374             </div>
375             <div class="col-md-6" data-aos="zoom-out"
376 data-aos-delay="400">
377                 <div class="feature-box d-flex align-
378 items-center">
379                     <i class="bi bi-check"></i>
380                     <h3>Sales By Sub Category
381 Analytics</h3>
382                 </div>
383             </div>
384             <div class="col-md-6" data-aos="zoom-out"
385 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
&amp;pathRef=.my_folders%2Fglobalsale%2FNew%2Bstory&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=view&amp;sceneId=model0000001847a103dc5_000000000&amp;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"
id="faqlist1">
445                 <div class="accordion-item">
446                     <h2 class="accordion-header">
447                         <button
448                             class="accordion-button collapsed"
449                             type="button"
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>
470         </div>
471     </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
            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
509             operate more like
510             scientists and strategists, and the
511             results speak for
512             themselves.
513         </div>
514     </div>
515 </div>
516
517 <div class="col-lg-6">
518     <!-- F.A.Q List 2-->
519     <div class="accordion accordion-flush"
520         id="faqlist2">
521         <div class="accordion-item">
522             <h2 class="accordion-header">
523                 <button
524                     class="accordion-button collapsed"
525                     type="button"
526                     data-bs-toggle="collapse"
527                     data-bs-target="#faq2-content-1"
528                 >
529                     Who does the problem affect??
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
551             problem?
552         </button>
553     </h2>
554     <div
555         id="faq2-content-2"
556         class="accordion-collapse collapse"
557         data-bs-parent="#faqlist2"
558     >
559         <div class="accordion-body">
560             Low data proficiency among sales
561             will greatly limits the
562             value of analytical insights and
563             inhibits data-driven
564             decision making.
565         </div>
566     </div>
567 </div>
568
569 <div class="accordion-item">
570     <h2 class="accordion-header">
571         <button
572             class="accordion-button collapsed"
573             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
584         products and the ones that
585         aren't moving, most profitable
586         customers, and potential
587         sales opportunities.
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
657                 you!
658             </div>
659             <button type="submit">Send
660                 Message</button>
661         </div>
662     </form>
663 </div>
664 </div>
665 </div>
666 </section>
667 <!-- End Contact Section -->
668 </main>
669 <!-- End #main -->
670
671 <!-- ===== Footer ===== -->
672 <footer id="footer" class="footer">
673     <div class="footer-top">
674         <div class="container">

```

```

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

```

```

707         <a href="#features">Dashboard</a>
708     </li>
709     <li>
710         <i class="bi bi-chevron-right"></i>
711         <a href="#services">Story</a>
712     </li>
713 </ul>
714 </div>
715
716     <div
717         class="col-lg-3 col-md-12 footer-contact
text-center text-md-start"
718     >
719         <h4>Team Details</h4>
720         <p>
721             Team Id: 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 <!-- End Footer -->

```

```

741
742     <a
743         href="#"
744         class="back-to-top d-flex align-items-center
       justify-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: <https://github.com/IBM-EPBL/IBM-Project-41948-1660646436>

Demo link: <https://github.com/IBM-EPBL/IBM-Project-41948-1660646436>