Global Sales Data Analytics

A PROJECT REPORT

Submitted by

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TEAM ID:PNT2022TMID05278

S.NO	TITLE

1.INTRODUCTION

If you want to achieve your sales goals month after month, then guesswork and intuition aren't your best friends. You need to perform a strategic sales analysis and get cold, hard data.You will gain an understanding of the data ecosystem and the fundamentals of data analysis, such as data gathering or data mining.

1.1 Project Overview:

The automated, prospective analyses offered by data mining move beyond the analyses of past events provided by retrospective tools typical of decision support

1.2PURPOSE:

Regular sales data analysis provides an understanding of the products that your customers are buying and helps you dissect why they are behaving in a certain way. You can also find patterns in your lead conversions and drop offs.

Data mining tools predict future trends and behaviors, allowing businesses to make proactive, knowledge-driven decisions

Thousands of data points at your fingertips. Build, refine and analyse your audience in our intuitive platform. Monitor trends. Granular Global Analysis. 46 Countries. 17 Million Panelists. 40,000 Data Points. Create Bespoke Segments.

Sales analytics refers to the technology and processes used to gather sales data and gauge sales performance. Sales leaders use these metrics to set goals, improve internal processes, and forecast future sales and revenue more accurately.

2.LITERATURE SURVEY
2.1 Existing Problem:

1. Global sales process is way too long and don't have enough leads.

2. Leads are unqualified and wasting your effort on bad fit prospects.

3. Spending too much time on low-value task

4. The statement may include workflow bottlenecks,resources challenges or fundamental difficulties such as understanding a customer base

5. Identify the key sales metrics you need, such as win rate and average deal size

6. Use a tool (such as Pipe drive's CRM) to track this data as leads travel through your pipeline. Record this data in visual dashboards

2.2 REFERANCES:

1.Han Jiawei, Micheline Kamber and Jian Pei, "Data Mining Concepts and

Techniques" in , MK Publications, 2009.

https://scholar.google.com/scholar?as_q=Data+Mining+Concepts+and+Techniques

2.M. Tennekes and E. de Jonge, "Top-down Data Analysis with Tree maps",

Proceedings of the International Conference on Information Visualization

Theory and Applications (IVAPP' 11), pp. 236-241, March 2011.

https://scholar.google.com/scholar?as_q=Top-down+Data+Analysis+with+TreemapsHYPERLINK "https://scholar.google.com/scholar?as_q=Top-down+Data+Analysis+with+Treemaps&as_occt=title&hl=en&as_sdt=0%2C31" HYPERLINK

3.P. Hoek, "Parallel Arc Diagrams: Visualizing Temporal Interactions", Journal of

Social Structure, vol. 12, 2011.

https://scholar.google.com/scholar?as_q=Parallel+Arc+Diagrams%3A+Visualizing+Temporal+InteractionsHYPERLINK "https://scholar.google.com/scholar?as_q=Parallel+Arc+Diagrams%3A+Visu

2.3 Problem Statement definition:

Problem statements are important to businesses, individuals and other entities to develop projects that states the challenges faced by your client.

You need to **analyze** the right kind of **sales** data for generating meaningful insights that positively affect your bottom line.

Sales analysis is vital for finding **weak spots and bottlenecks** in sales processes to collect and use sales data to achieve more sales goals.

3.IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas
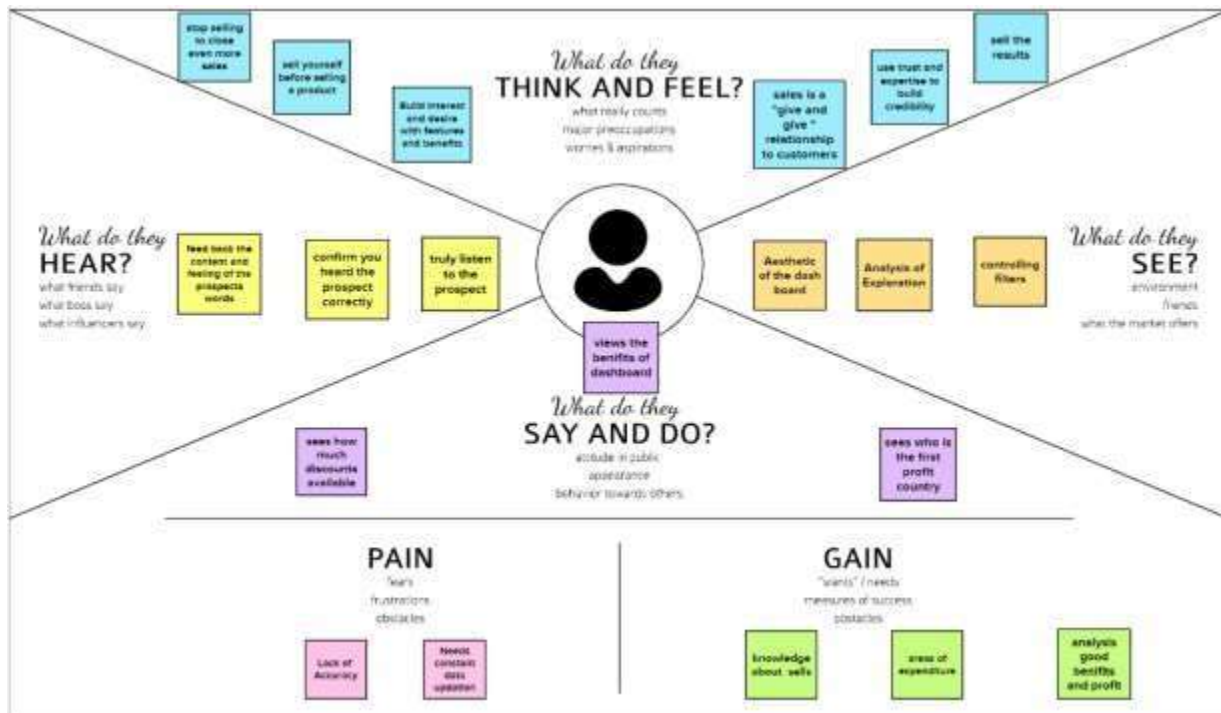
3.2 Ideation & Brainstorming
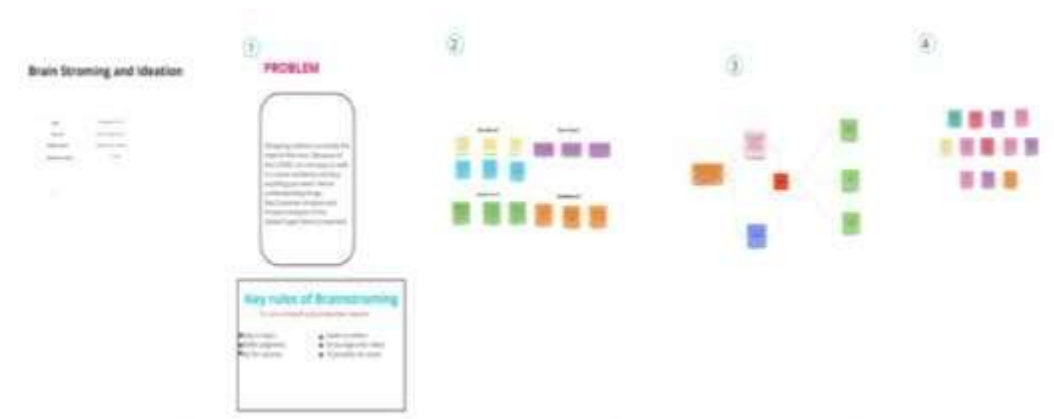
3.3 Proposed Solution:

S.No	Parameter	Description
1.	Problem Statement (Problem to be solved)	● Decision makers of E-commerce companies(User) need a way to comprehend raw data, analyse and make more informed business decisions. ● E- commerce companies(User) need a way to understand the shift in preferences of customers and the current trend, so that they can satisfy the customers.
2.	Idea / Solution Description	A powerful and easy-to-use sales analytics tool that automates and visualizes sales trends to optimize business outcomes

3.	Novelty / Uniqueness	● Interactive Dashboard and simple UI ● Dynamic and real time analytics ● AI based predictions and forecasting
4.	Social Impact / Customer Satisfaction	● Visible profits driven by informed decisions ● Optimize sales and marketing ● Ability to react to competitor′s strategies
5.	Business Model(Revenue Model)	Three tier pricing- Basic, Standard, Enterprise ● Basic: Limited features targeting startups and individuals. ● Standard: Limited premium features. Target customers- Medium Scale businesses. ● Enterprise with all premium features targeted at Large corporations
6.	Scalability of the Solution	● More B2B customer services can be provided alongside ● Usable by all customer facing companies and startups of all scale

3.4 Problem solution fit:

4.Requirement analysis:

4.1 Functional requirement :

Sl.No	Functional Requirements(Epic)	Sub Requirements(Sub Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through Linked IN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Data Entry	User should be able to enter sales data
FR-4	Data Generated	Sales reports should be generated 24 hours
FR- 5	Exploring Data	API interface to invoice system

4.2 Non Functional requirement:

FR No	Non Functional Requirement	Description
NFR 1	Usability	The web application usability now user friendly.so easily understand user.

NFR 2	Security	End to end encryption technique will be used our product
NFR 3	Reliability	The web application must have a 99.9%uptime
NFR4	Performance	The home page should load within 1.5 seconds
NFR 5	Availability	The web application must have a 99.9% uptime
NFR 6	Scalability	The web application will be compatible for both windows&mac machines

5.Project Design:

5.1.Data Flow Diagram:
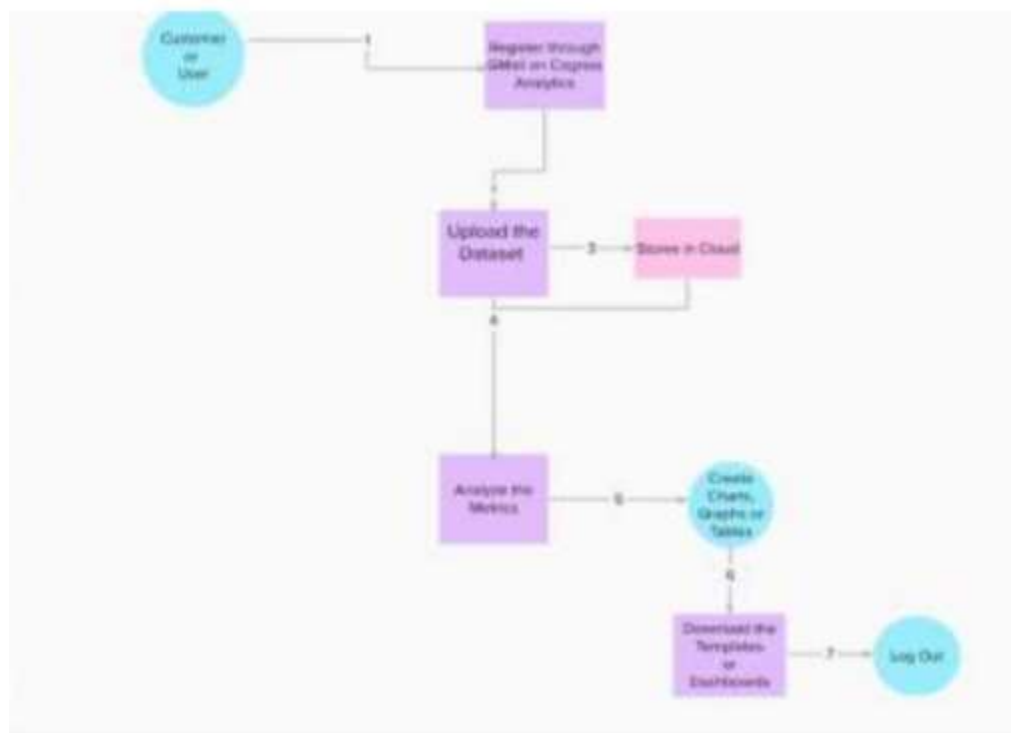
5.2 Solution and Technical Architecture:
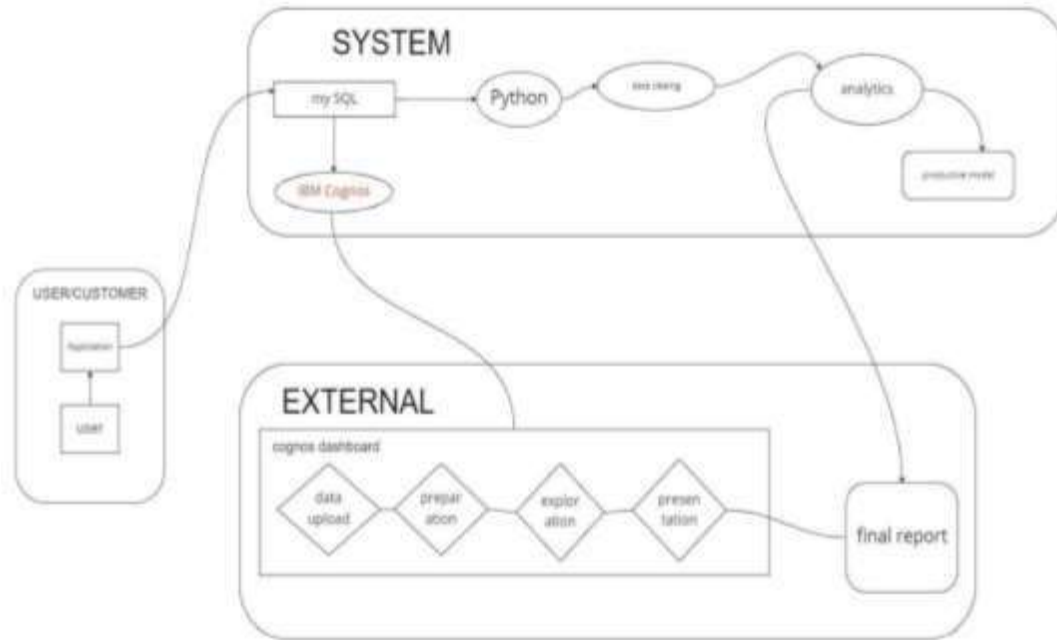
6.Project Planning & Scheduling:

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.	2	High	Pavithra R,Poorvish a J,Mogul Pranav P,Manibala n B.
Sprint-1	Login	USN-2	As a user, I need valid credentials to log in to my application.	1	High	Pavithra R,Poorvish a J,Mogul Pranav P,Manibala n B.
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	2	High	Pavithra R,Poorvish a J,Mogul Pranav P,Manibal an B.
Sprint-2	Upload dataset	USN-4	As a user, I can view the data of the products	1	Low	Pavithra R,Poorvisha J,Mogul Pranav
Sprint-2	Data Preparation	USN-5	As a user, I need to filter it for Data visualization.	3	High	Pavithra R,Poorvisha J,Mogul Pranav
Sprint-2	Data visualization	USN-6	As a user, I can easily visualize the data in the form of charts.	4	Medium	Pavithra R,Poorvish a J,Mogul Pranav
Sprint-3	Dashboard	USN-7	As a user, I can view the summary of the product sales by the help dashboard.	2	Medium	Pavithra R,Poorvi sha J,Manib alan B

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

Velocity:

We have a 24-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story

points per day)

AV = Sprint Duration / Velocity = 20 / 10 = 2

Burndown Chart :

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.
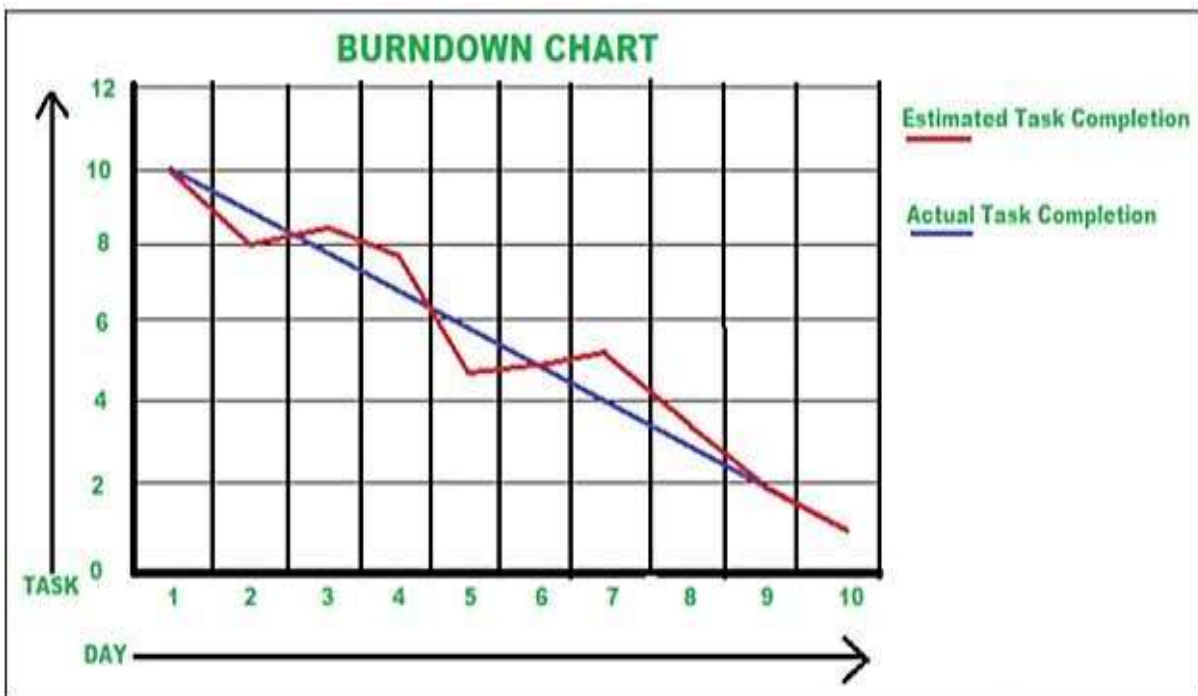
6.3 Reports from JIRA :

Burndown chart :

Road Map:

Sprints	T	NOV	DEC	J
	GSD Sprint 1 GSD Sp... GSD... GSD...			
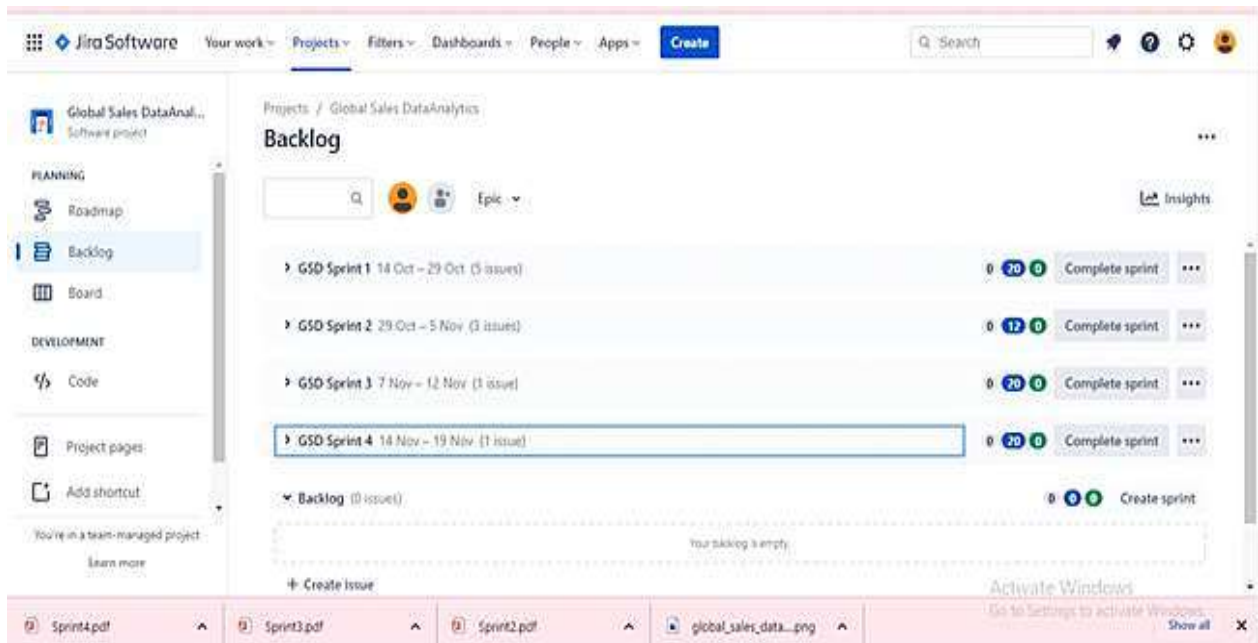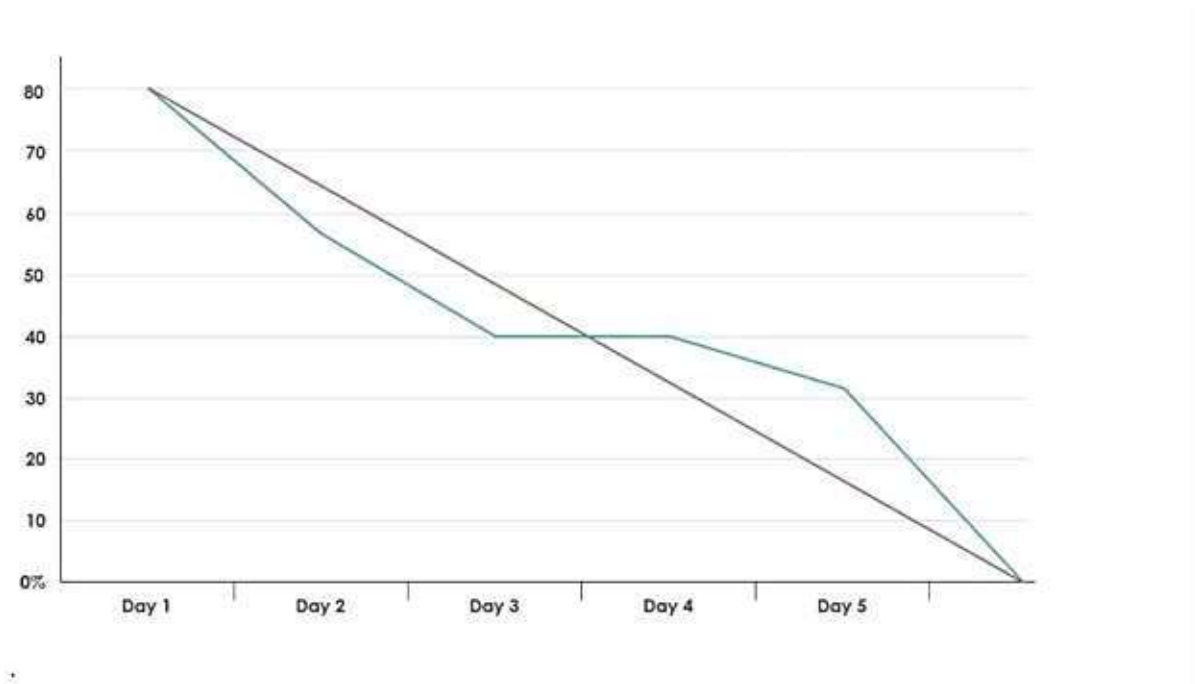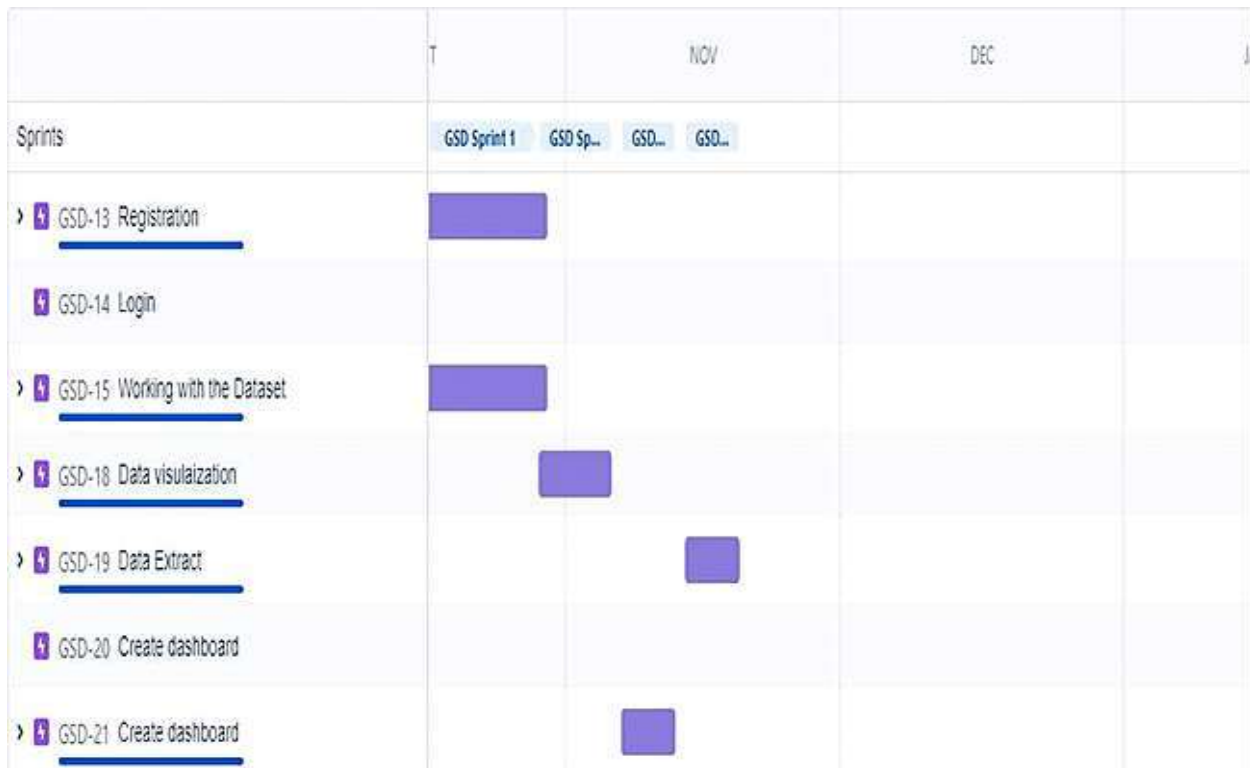
7.Coding & Solution:

7.1 Feature 1

Sales – Analysis:

This is an analysis of the sales data with particular focus given to how promotions and advertising translate into sales, in terms of both units sold and sales dollars.

Different types of Sales Analysis

● Furniture company sales analysis HTML file

● Cereal Company Sales Analysis HTML file

● Financial Statement Analysis PDF file

Analysis using R Shiny Dashboard

● Furniture company sales Dashboard R Shiny app

Steps for Cereal Company Sales Analysis

1. Download the Raw Data

2. Analysis code R file

3. Final Analysis R file

Steps for Furniture company sales analysis

1. Download the Raw Data

2. Analysis code R file

3. Dashboard Code HTML file

4. Final Dashboard PDF file

5. Final Analysis HTML file

fearture-1:

Step 1: Understand the Business

Step 2: Get Your Data

Step 3: Explore and Clean Your Data

Step 4: Enrich Your Datasets

Customer Analysis Report

8. Testing :   8.1 Test cases:

	Date	03/Nov/22								
	Team ID	PNT2022TMID05278								
	Project Name	Global Sales Data Analytics								
	Maximum Marks	4 marks								

| Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
Verify user is able to see the Login/Signup popup when user clicked on My account button	NI	1.Enter URL and click go. 2.Click on My Account dropdown button 3.Verify login/Singap popup displayed or not	https://shopezzer.com/	Login/Signup popup should display	Working as expected	Pass				
Verify the UI elements in Login/Signup popup	NI	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Singap popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link	https://shopezzer.com/	Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.New customer? Create account link e.Last password? Recovery password link	Working as expected	Fail	Steps are not clear to follow		BUG-1234	
Verify user is able to log into application with Valid credentials	NI	1.Enter URL(https://shopezzer.com/) and click go 2.Click on My Account dropdown button 1.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username: chalam@gmail.com password: Testing123	User should navigate to user account homepage						
Verify user is able to log into application with InValid credentials	NI	1.Enter URL(https://shopezzer.com/) and click go 2.Click on My Account dropdown button 1.Enter InValid username/email in Email text box	Username: chalam@gmail password: Testing123	Application should show 'Incorrect email or password ' validation message.						

TESTING

Testing the End Report

Pros

• Ensure report is setup correctly

Cons

• Licensing

• Reports not yet setup

• Validate all requests are sent / captured

8.2 USER ACCEPTANCE TESTING

Copying and pasting screenshots of test results into Word or Excel is
very time-consuming and prone to human error. Optimize your UAT testing
with automated documentation, workflow and defect management. The
right tool will help you with exploratory testing and be able to document
tests using a recorder for playback as needed, accelerating the process and
reducing the back-and-forth between the software development and testing teams.

Acceptance Ĩesting
UAĨ Execution & Repoĩt Submission

Date	03 Novembeĩ 2022
Ĩeam ID	PNĨ2022ĨMID05278
Píoject Name	Píoject - Global Sales Data Analytics

Maximum Maíks	4 Maíks

1. Purpose of Document

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

2. Defect Analysis

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

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	9	3	2	3	18
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	10	2	4	18	36
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	4	2	1	7
Totals	22	12	13	24	74

3. Test Case Analysis

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

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	1	0	6
Client Application	49	2	1	46
Security	2	0	0	2
Outsource Shipping	2	0	0	2
Exception Reporting	7	0	0	7

Final Report Output	6	0	0	6
Version Control	2	0	0	2

Outsource Shipping	2	0	0	2
Exception Reporting	7	0	0	7
Final Report Output	6	0	0	6
Version Control	2	0	0	2

9. RESULTS

9.1 PERFORMANCE Metrics:

The analysis covered the period from 2012 to 2015, with conversion to the Brazilian currency Real BRL (R$). Some results:

• The US was the country with the highest profit.

• The country that presented the biggest loss in sales was Turkey.

• There was greater demand for Superstore products to be shipped via the standard mode.

• The Technology Category presented better results in Profit and Sales.

• The Retail segment performed better for all the years evaluated.

10. ADVANTAGES

1. Cost efficiency

2. Receive full-scale services

3. Maximize presentation

4. Save time

DISADVANTAGES

1. Risk of choosing the wrong provider

2. Lack of on-site support

3. Less control

4. Data security

11. CONCLUSION

By implementing this analytics solution, the company brought their competitive and sales data reporting in-house, cut costs and increased the accuracy of their reporting and analysis. As the company moves forward with this new solution, their sales reporting costs will most likely be reduced by 50 to 70%. They are now able to analyze raw data themselves, respond more quickly to changes in market trends and perform root cause analysis to determine those shifts in the market. By securing quicker access to their data with the new solution, the company was also able to reduce the risk associated with delayed responses to changes in their markets.With the new solution, the company can now process sales reports faster than the outsourced solution, reducing turnaround time between 50% to 60%. The reporting needs of the company have been streamlined, consolidating over 10reports into the centralized dashboard solution. The company's competitive analysis group is also able to more quickly respond to internal data requests given they have the ability to pull the information themselves. With this quicker response, the company is better able to react to changes in the market and predict opportunities for its sales force.The business also experienced an increase in the overall understanding of their sales data throughout the organization. The company now has great flexibility in the presentation of their sales and competitive data, while also being able to integrate sales data with other key data points for the organization.

12. FUTURE SCOPE

Sales analytics refers to the use of technology to collect and use sales data to derive actionable insights. It is used to identify, optimize, and forecast sales. It uses different metrics and KPIs to plan an efficient sales model that generates higher revenue for the business.

13. APPENDIX

SOURCE CODE :

```
from flask import Flask, render_template, request, redirect, url_for, session

import ibm_db

import re


app = Flask(_name_)


hostname = '2f3279a5-73d1-4859-88f0-a6c3e6b4b907.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud'

uid = 'hmf80902'

pwd = 'oHzpnV88erkd09'

driver = "{IBM DB2 ODBC DRIVER}"

db_name = 'bludb'

port = '30756'

protocol = 'TCPIP'

cert = "C:/Users/Prithiarun/Desktop/IBM/TEST/certi.crt"

dsn = (
   "DATABASE ={0};"

   "HOSTNAME ={1};"
```

```python
    "PORT ={2};"

    "UID ={3};"

    "SECURITY=SSL;"

    "PROTOCOL={4};"

    "PWD ={6};"
).format(db_name, hostname, port, uid, protocol, cert, pwd)
connection = ibm_db.connect(dsn, "", "")
print(dsn)
# query = "SELECT username FROM USER1 WHERE username=?"
# stmt = ibm_db.prepare(connection, query)
# ibm_db.bind_param(stmt, 1, username)
# ibm_db.execute(stmt)
# username = ibm_db.fetch_assoc(stmt)
# print(username)
try:
    conn = ibm_db.connect(dsn,"", "")
    print("connected to database")
except:
    print("unable to connect")
server = ibm_db.server_info(conn)
print("DBSNAME: ", server.DBMS_NAME)
print("DBMS_VER: ", server.DBMS_VER)
print("DBNAME: ", server.DB_NAME)
```

```python
app.secret_key = 'a'


@app.route('/', methods=['GET', 'POST'])
@app.route('/register', methods=['GET', 'POST'])
def register():
    msg = " "
    if request.method == 'POST':
        username = request.form['username']
        email_id = request.form['email_id']
        phone_no = request.form['phone_no']
        password = request.form['password']
        query = "SELECT * FROM USER1 WHERE username=?;"
        stmt = ibm_db.prepare(connection, query)
        ibm_db.bind_param(stmt, 1, username)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        if (account):

            msg = "Account already exists!"
            return render_template('register.html', msg=msg)
        # elif not re.match(r'[^@]+@[^@]+\.[^@]+', email_id):
        #     msg = "Invalid email addres"
```

```python
        # elif not re.match(r'[A-Za-z0-9+', username):
        #     msg = "Name must contain only characters and numbers"
        else:
            query = "INSERT INTO USER1 values(?,?,?,?)"
            stmt = ibm_db.prepare(connection, query)
            ibm_db.bind_param(stmt, 1, username)
            ibm_db.bind_param(stmt, 2, email_id)
            ibm_db.bind_param(stmt, 3, phone_no)
            ibm_db.bind_param(stmt, 4, password)
            ibm_db.execute(stmt)
            msg = 'You have successfully Logged In!!'
            return render_template('login.html', msg=msg)
    else:
        msg = 'PLEASE FILL OUT OF THE FORM'
        return render_template('register.html', msg=msg)


@app.route('/login', methods=['GET', 'POST'])
def login():
    global userid
    msg = ' '
    if request.method == "POST":
        username = request.form['username']
        password = request.form['password']
```

```python
        query = "select * from user1 where username=? and password=?"

        stmt = ibm_db.prepare(connection, query)

        ibm_db.bind_param(stmt, 1, username)

        ibm_db.bind_param(stmt, 2, password)

        ibm_db.execute(stmt)

        account = ibm_db.fetch_assoc(stmt)

        print(account)

        if account:

            session['Loggedin'] = True

            session['id'] = account['USERNAME']

            session['username'] = account['USERNAME']

            msg = 'Logged in Successfully'

            return render_template('welcome.html', msg=msg,
username=str.upper(username))

        else:

            msg = 'Incorrect Username or Password'

            return render_template('login.html', msg=msg)

    else:

        msg = 'PLEASE FILL OUT OF THE FORM'

        return render_template('login.html', msg=msg)


@app.route('/welcome', methods=['GET', 'POST'])

def welcome():
```

```python
    if request.method == 'POST':

        username = request.form['username']

        print(username)

        return render_template('welcome.html', username=username)

    else:

        return render_template('welcome.html', username=username)



if "main" == _name_:

        app.run()
```

LOGIN PAGE:

```html
  <!DOCTYPE html>

<html>

<head>

<meta name="viewport" content="width=device-width, initial-scale=1">

<title> Login Page </title>

<style>

Body {

  font-family: Calibri, Helvetica, sans-serif;

  background-color:white;
```

```css
   background-image: url('https://2h2fxj2oochv47z6ig3v0sve-wpengine.netdna-ssl.com/wp-content/uploads/2021/07/man-in-a-suit-standing-behind-a-hologram-of-data-analytics-1030x579.jpg');"
}
button {

    background-color:#c3e3dc;

    width: 100%;

     color: purple;

     padding: 15px;

     margin: 10px 0px;

     border: none;

     cursor: pointer;

      }
form {

    border: 3px solid #f156189;

   }
input[type=text], input[type=password] {

    width: 100%;

    margin: 8px 0;

    padding: 12px 20px;

    display: inline-block;

    border: 2px white;

    box-sizing: border-box;

   }
```

```css
button:hover {

    opacity: 0.7;

  }

  .cancelbtn {

    width: auto;

    padding: 10px 18px;

    margin: 20px;

    background-color: skyblue;

    border-radius: 5px;

    font-weight: bold;

    color: black;

  }


.content {

  margin: 0px 20%;

  color: white;

}

.container {

    padding: 25px;

  }

.loginbtn {

    background-color: skyblue;

    text-decoration: none;
```

```css
        color: black;

        margin-left: 30%;

        padding: 10px 20px;

        font-weight: bold;

        border-radius: 5px;

        margin-right: 20px;

    }
.forgotbtn {

        background-color: skyblue;

        text-decoration: none;

        color: black;

        padding: 10px 20px;

        font-weight: bold;

        border-radius: 5px;

    }
.aboutbtn {

        background-color: skyblue;

        text-decoration: none;

        color: black;

        padding: 10px 20px;

        font-weight: bold;

        border-radius: 5px;

        margin-right: 20px;
```

```css
        }
.dashboardbtn {

        background-color: skyblue;

        text-decoration: none;

        color: black;

        padding: 10px 20px;

        font-weight: bold;

        border-radius: 5px;

    }
.Datasetbtn{

  background-color:skyblue;

  color:black;

  padding:10px 20px;

  font-weight:bold;

  border-radius:5px;

  }
</style>
</head>
<body>
  <center> <h1 style="background-color:white">Login Form</h1> </center>
  <form>
    <div class="container content">
      <label style="color: white; font-weight: bold;">Username : </label>
```

```html
<input type="text" placeholder="Enter Username" name="username">

<label style="color: white; font-weight: bold; ">Password : </label>

<input type="password" placeholder="Enter Password" name="password"><br><br>

<a href="https://www.ibm.com/in-en/products/cognos-analytics" class="loginbtn">Login</a>

<a href="about.html" class="aboutbtn">About</a>

<a href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.public_folders%2FDatavisulaization%2FData%2Bvisulaization&action=view&mode=dashboard&subView=model000001846c063c4b_00000000" class="dashboardbtn">Dashboard</a> <a href="https://www.kaggle.com/datasets/apoorvaappz/global-super-store-dataset" class="Datasetbtn">Dataset</a><br><br><br>

<input type="checkbox" checked="checked" style="margin-left: 25%;">Remember me

<a href="#" class="cancelbtn">Cancel</a>

<a href="#" class="forgotbtn">Forgot password?</a>

</div>
</form>
</body>
</html>


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

```html
<head>

  <meta charset="UTF-8">

  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/css/bootstrap.min.css">

  <script
src="https://cdn.jsdelivr.net/npm/jquery@3.6.0/dist/jquery.slim.min.js"></script>

  <script
src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/dist/umd/popper.min.js"></script>

  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/js/bootstrap.bundle.min.js">
</script>

  <title>About</title>

  <style>

    *{

      margin:0px;

      box-sizing: border-box;

    }

    body{

      font-family: Arial, Helvetica, sans-serif;

      margin: 0;

      background: #8e9eab;  /* fallback for old browsers */

      background: -webkit-linear-gradient(to right, #eef2f3, #8e9eab); /* Chrome
10-25, Safari 5.1-6 */
```

```css
    background: linear-gradient(to right, #eef2f3, #8e9eab); /* W3C, IE 10+/ Edge,
Firefox 16+, Chrome 26+, Opera 12+, Safari 7+ */


}
#about{

  margin-top: 50px;

}
h1{

  font-size: 60px;

}
p{

  font-size: 20px;

}
#cards{

  padding: 30px

}
.column{

  padding: 30px;

}
.card{

  border: none;

  box-shadow: rgba(0, 0, 0, 0.24) 0px 3px 8px;

}
button{
```

```
      margin-left: 100px;

      margin-top: 50px;

    }

    #home-btn{

      margin-top: 50px;

      margin-left:  100px;

      padding:10px 30px;

      font-size: 30px;

    }

  </style>

</head>

<body>




  <a href="index.html" class="btn btn-dark stretched-link" id="home-
btn">Home</a>

<div class="container-fluid" id="about">

    <h1>ABOUT US </h1>

    <p>Who are we and what we do.</p>

    <p>Resize the browser window to see that this page is responsive by the
way.</p>

  </div>


  <h2 style="text-align:center">Our Team</h2>
```

```html
<div class="container-fluid" id="cards">
<div class="row">
  <div class="column">
    <div class="card" style="width:400px;">
      <img class="card-img-top" src="{{url_for('static', filename='avatar2.jpg')}}" alt="Card image" style="width:100%"/>


      <div class="card-body">
        <h4 class="card-title">R,Pavithra</h4>
        <h5 class="title">Team Leader</h5><br>
        <p class="card-text">ECE Engineer<br>Assigns tasks to members and manages the server.<br></p><br>
        <p>paviravi436@psnacet.edu.in</p><br>
        <a href="#" class="btn btn-primary stretched-link">See Profile</a>
      </div>
    </div>
  </div>
  <div class="column">
    <div class="card" style="width:400px">
      <img class="card-img-top" src="{{url_for('static', filename='avatar2.jpg')}}" alt="Card image" style="width:100%"/>
      <div class="card-body">
        <h4 class="card-title">J.Poorvisha</h4>
        <h5 class="title">Team Member 1</h5><br>
```

```html
        <p class="card-text">ECE Engineer<br>Does data
visulaizations.<br></p><br>

        <p>poorvishaj256@psnacet.edu.in </p><br>

        <a href="#" class="btn btn-primary stretched-link">See Profile</a>

      </div>

    </div>

  </div>




    <div class="column">

    <div class="card" style="width:400px">

      <img class="card-img-top" src="{{url_for('static', filename='avatar2.jpg')}}"
alt="Card image" style="width:100%">

      <div class="card-body">

        <h4 class="card-title">P.Mogul Pranav </h4>

        <h5 class="title">Team Member 2</h5><br>

        <p class="card-text">ECE Engineer.<br>Does back end
tasks.<br></p><br>

        <p>mogulluckyforever@psnacet.edu.in </p><br>

        <a href="#" class="btn btn-primary stretched-link">See Profile</a>

      </div>

    </div>

  </div>
```

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

     <div class="card" style="width:400px">

      <img class="card-img-top" src="{{url_for('static', filename='avatar2.jpg')}}"
alt="Card image" style="width:100%">

      <div class="card-body">

       <h4 class="card-title">B.Manibalan </h4>

       <h5 class="title">Team Member 3</h5><br>

       <p class="card-text">ECE Engineer.<br>Manages storage and data.</p><br>

       <p>balamani25@psnacet.edu.in </p><br>

       <a href="#" class="btn btn-primary stretched-link">See Profile</a>

      </div>

     </div>

    </div>


    </div>

    </body>

    </html>
```

GITHUB: https://github.com/IBM-EPBL/IBM-Project-8011-1658905974

PROJECT DEMO LINK:

https://drive.google.com/file/d/1vpuHJ8ADrn3hNv9zaTT4umQ5oBi1tdVo/view?usp=drivesdk