Retail Store Stock Inventory Analysis

Team ID: PNT2022TMID29780

Bachelor of Engineering

Computer Science and Engineering

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Salem – 636 309

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Industry Mentor : Shivani Kapoor, Rakesh Miskin

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610519104055 – Krishnan V

INTRODUCTION

1.1.PROJECT OVERVIEW:

In recent times, the employment of analytics in all kinds of business sectors, especially the retail sector has proven to increase success in their daily operations. This project aims to prove that, in addition, will identify what factors are actually contributing to this roaring success in the retail sector. Of course, the use of analytics in the business processes has its own pros and cons, but majority of the organizations feel that the introduction of analytics in their business processes has made things easier for them.Some of the drawbacks of using big data analytics in the retail sector has risen concerns among the customers as well the retailers. Privacy concerns are one of them. Customers feel that their privacy is being snatched away when retailers track their location or store their purchase information for targeting them with personalized advertisements. Although big data analytics help employees to fasten up their work, it also poses a high cost for managing such a huge amount of data. Software needed to sort and analyze this data is very expensive. On the other hand, it requires skilled people to work with them. Data quality decreases because of automation of data gathering, sorting and analyzing them.

1.2.PURPOSE:

The use of analytics decreases the use of man force as it automates all the processes but on the other hand. It helps in product development as analytics can carry out sentiment analysis of a lot of actual and potential customers through social media and find out their preferred types of products, developing their future products accordingly. The use of analytics lets the retailers predict future demands while analyzing their stocks. Micro targeting the customers can be easy when the location of customers can be easily known to the retailers by the use of analytics. Although there are many cons of adapting big data analytics in the business or retail sector, the pros are more and outweighs all the cons. This aims to prove that.

LITERATURE SURVEY:

Analysis of Different Inventory Control Techniques

Authors : C. L. Karmaker, Ariful Islam, Nazmul Hossain, Shamim Ahmed published in 2010

A small saving in the inventory will mirror a crucial edge in benefit of the organisation. In Bangladesh, the retail shops generally face two types of inventory related problems which are either stock-out or overstock. As a result, most of the shops fail to maintain their product availability with lowest possible inventory cost. Through proper inventory control techniques, probability of stock-out as well as overstock situations in the retail shops can be minimised.

Mathematical Models of Retailer Inventory Systems

Authors : Steven Nahmias & Stephen A. Smith published in 1993

Retail inventory management must deal with Unique problems and complexities. By the nature of their business, majorretailers hold stock at many geographically dispersed locations atanywhere from several hundred to thousands of stores for the typical retailing chain.

Retail surveying and inventory using visual and textual analysis

Author : Mirco Sturari

Published in 2017

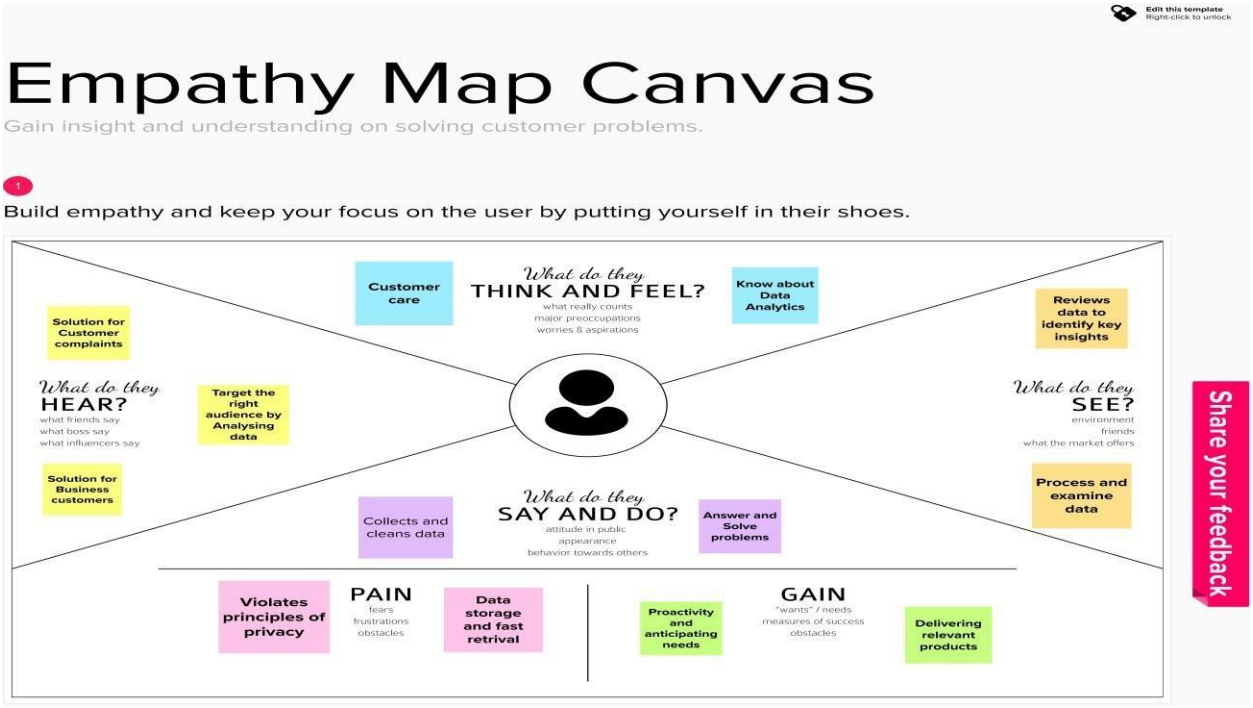
The manpower cost for surveying and monitoring the shelves in retail stores are high, because of which these activities are not repeated frequently causing reduced customer satisfaction and loss of revenue. Further, the accuracy of data collected may be improved by avoiding human related factors. Hence managing retail stock is very useful.

Inventory management in retail industry - Application of big data analytics

Author : Hien Vu Published in December 2018

The retail industry is becoming rigorously competitive and narrowly profitable that retailers find themselves in a dilemma of neither excessive in-stock nor depleted out-of- stock is negotiable. The report finds the prospects of integrating BDA in the conventional inventory management techniques and promoting the viability and appropriateness of these models in the big-data era.

EMPATHY MAP



TOP 3 IDEAS

1. Inventory management best practices call for the creation and monitoring of accurate stock counts on a regular basis. This is true for both distribution centers and physical stores, which traditionally count inventory on different timelines.

2. Advanced data science and machine learning can ingest data from many sources quickly and continually update models, clustering, and segmentation. This helps retailers be more accurate in their planning and predictions.

3. The key to good retail inventory management is breaking down those siloed systems and making the entire inventory system work together.

PROPOSED SOLUTION :

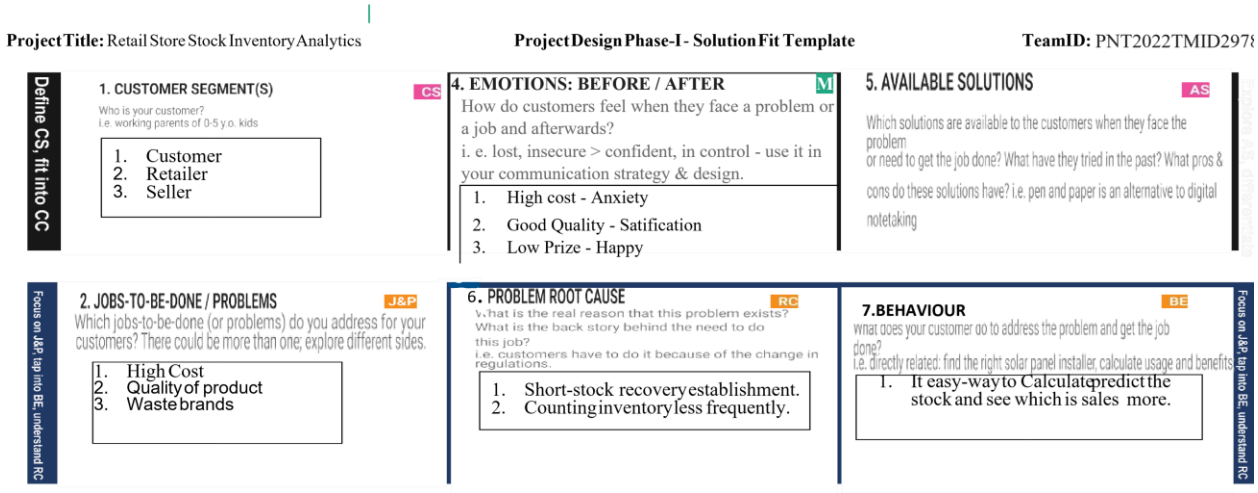
Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The problem faced by the company is they do not have any systematic system to record and keep their inventory data.
2.	Idea / Solution description	To create a dashboard to show all the inventory stock details.
3.	Novelty / Uniqueness	Dashboard showcases the whole analysis of the inventory stock details to maintain them without manual interpretation. Using this, the company will be more organised and tracking can be easily done.
4.	Social Impact / Customer Satisfaction	Using this software people can easily analyse , prepare and visualize the data and provide best solution.
5.	Business Model (Revenue Model)	Dashboard by data analysis, using IBM Cognos.

6.	Scalability of the Solution	This project aims at small retail store owners for managing their sales and profit of the store. Through this methodology retail store owners can manage stocks effectively thereby reducing loss and increasing profit through proper management and provide customer satisfaction.

PROBLEM SOLUTION FIT :



3. TRIGGERS

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

1. Product personalisation can provide people with a level of personal service that is difficult to replicate online.

8. YOUR SOLUTION

If you are working on a new business proposition, then keep it blank until you fillin the canvas and come up with a solution that

1. We can sell the best quality brand product and get the profite.

solves a problem and matches customer behaviour.

9.CUSTOMER SA

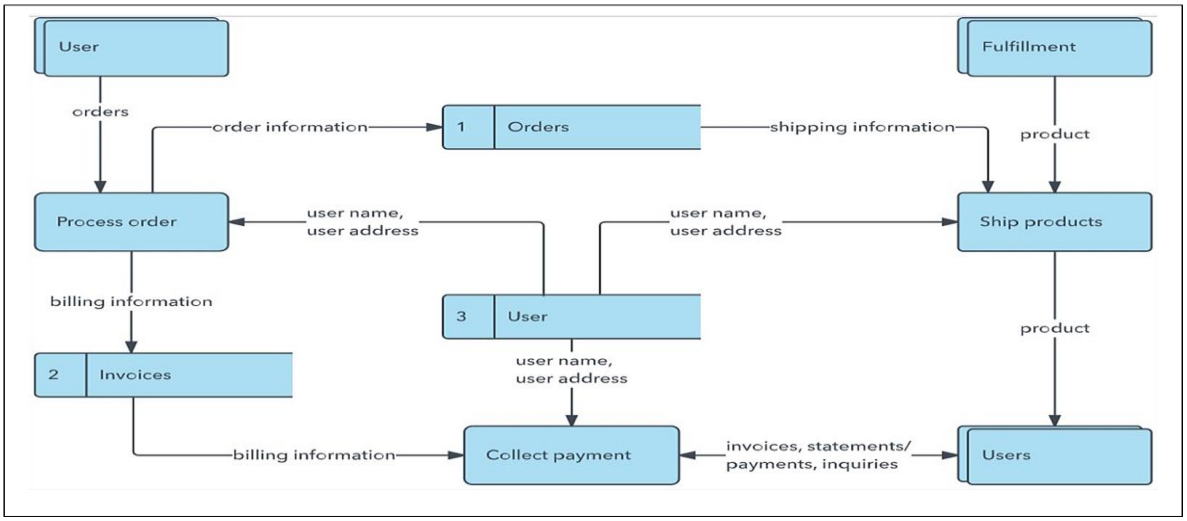
Using this softwar
analyse , prepare a
data and provide b

DATA FLOW DIAGRAMS AND USER STORIES :

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.

Example: DFD Level 0 (Industry Standard) **Example:**



User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	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-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2

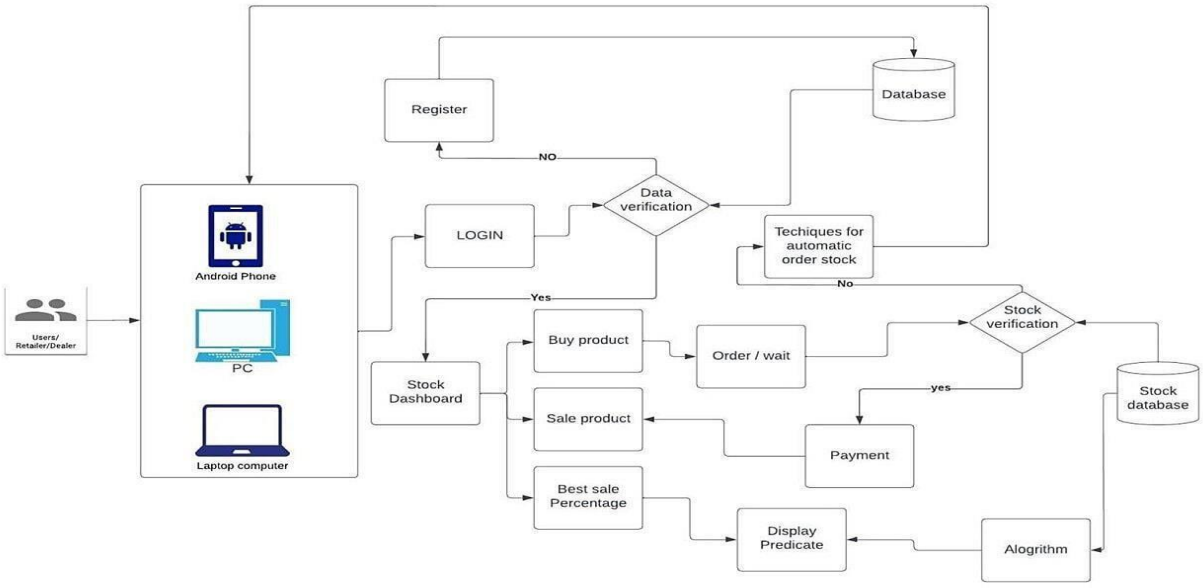
		USN-4	As a user, I can register for the application through Gmail	I can register & access the dashboard with Gmail login	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access the dashboard by login into the application	High	Sprint-1
	Dashboard	USN-6	As a user, I can view the charts and graphs representation of the dataset and the information shown in the dashboard.	I can analyse the stocks in my retail store.	High	Sprint-1
Customer (Web user)		USN-1	As a user, I can register for the web application entering my email, password and confirming my password.	I can access my account dashboard	High	Sprint-1
Customer Care Executive		USN-2	As a user, after completing the registration I will receive confirmation email once I have registered for the web application	I can register & access the dashboard with Facebook Login	Low	Sprint-2
Administrator		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Gmail login	Medium	Sprint-1
User Type	**Functional Requirement (Epic)**	**User Story Number**	**User Story / Task**	**Acceptance criteria**	**Priority**	**Release**
		USN-4	As a user, I can register for the application through Gmail	I can register & access the dashboard with Gmail login	High	Sprint-1
Customer care Executive		CCE-1	As a customer care executive, I will always be available for the interaction with the customer to clarify the queries.	An executive will analyse the customer complaints and rectify their problems.	High	Sprint-2

Administrator		ADMIN-1	As an administrator, I will manage backup and recovery, data modelling and design, distributed computing, database system, and a data security	Administrator can evaluate, design, review and implementing a data and they are also responsible for updating and maintaining the data	High	Sprint-2

Retail Store Stock Inventory Analytics

1. This data-set contains a lot of historical sales data of a Brazilian top retailer
2. The problem faced by the company is they do not have any systematic system to record and keep their inventory data.
3. Dashboard showcases the whole analysis of the inventory stock details to maintain them without manual interpretation. Using this, the company will be more organised and tracking can be easily done.

Architecture



MILESTONE & ACTIVITY LIST :

Milestones and Activities :

Milestones	Activities
Milestone - I	1. Gathering the data 2. Understanding the dataset. 3. Loading the dataset onto IBM Cognos Analytics.
Milestone - II	1. Preparing the data. 2. Exploring the data. 3. Visualizing the data.

Milestones	Activities
Milestone - III	1. Creating an interactive Dashboard. 2. Managing the Stock Inventory.
Milestone - IV	1. Stock Analysis Prediction on the most sold period or least sold period. 2. Ensuring clean and detailed visualization over a specific period of time. 3. Monitoring Stock prices using visualization charts.

Milestone - V	1. Maintaining a threshold to report the system on understock or overstock. 2. Creating story

SPRINT DELIVERY PLAN :

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Loading	USN-1	As a user, I can load the dataset into IBM Cognos Analytics Watson.	7	High	Gopalakrishnan T, Gokul D, Gokul Raj S, Krishnan V
Sprint-1	Loading	USN-2	As a user, I can prepare and clean the data in data module and save it	5	Medium	Gopalakrishnan T, Gokul D, Gokul Raj S
Sprint-1	Preparing	USN-3	As a user, I can create data modules and use them for creating exploration, dashboard, report, etc.	7	High	Gopalakrishnan T, Gokul D, Gokul Raj S, Krishnan V
Sprint-2	Exploration	USN-4	As a user I can load the prepared data module and create explorations in Cognos Analytics	3	Low	Gopalakrishnan T, Gokul Raj S
Sprint-2	Visualization	USN-5	As a user, I can create different visualization charts using the dataset	7	Medium	Gopalakrishnan T, Gokul D, Gokul Raj S
Sprint-2	Visualization	USN-6	As a user, I can create stock, sales and price summary in Cognos Analytics	8	High	Gopalakrishnan T, Gokul D, Gokul Raj S, Krishnan V

Sprint-3	Dashboard	USN-7	As a user, I can create dashboard using data modules in Cognos Analytics	4	Low	Gokul D, Krishnan V
Sprint-3	Dashboard	USN-8	As a user, I can create Visualization in the dashboard and show various analysis	5	Medium	Gokul D, Gokul Raj S, Krishnan V
Sprint-3	Dashboard	USN-9	As a user, I can embedd the dashboard in web application	7	High	Gopalakrishnan T, Gokul D, Gokul Raj S, Krishnan V
Sprint	**Functional Requirement (Epic)**	**User Story Number**	**User Story / Task**	**Story Points**	**Priority**	**Team Members**
Sprint-4	Report	USN-10	As a user, I can create a report based on the visualization of the dataset and generate a report	4	Low	Gopalakrishnan T, Gokul Raj S
Sprint-4	Story	USN-11	As a user, I can create a story based on the dataset and create Mp4 format video of visualization	8	High	Gopalakrishnan T, Gokul D, Gokul Raj S, Krishnan V
Sprint-4	Web Application	USN-12	As a user, I can embedd my dashboard, story and report to my Web Application	5	Medium	Gopalakrishnan T, Gokul D, Gokul Raj S

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Velocity:

Imagine we have a 10-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)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as o Planned End Da
Sprint-1	13	6 Days	24 Oct 2022	29 Oct 2022	19
Sprint-2	16	6 Days	31 Oct 2022	05 Nov 2022	18
Sprint-3	14	6 Days	07 Nov 2022	12 Nov 2022	16
Sprint-4	16	6 Days	14 Nov 2022	19 Nov 2022	17

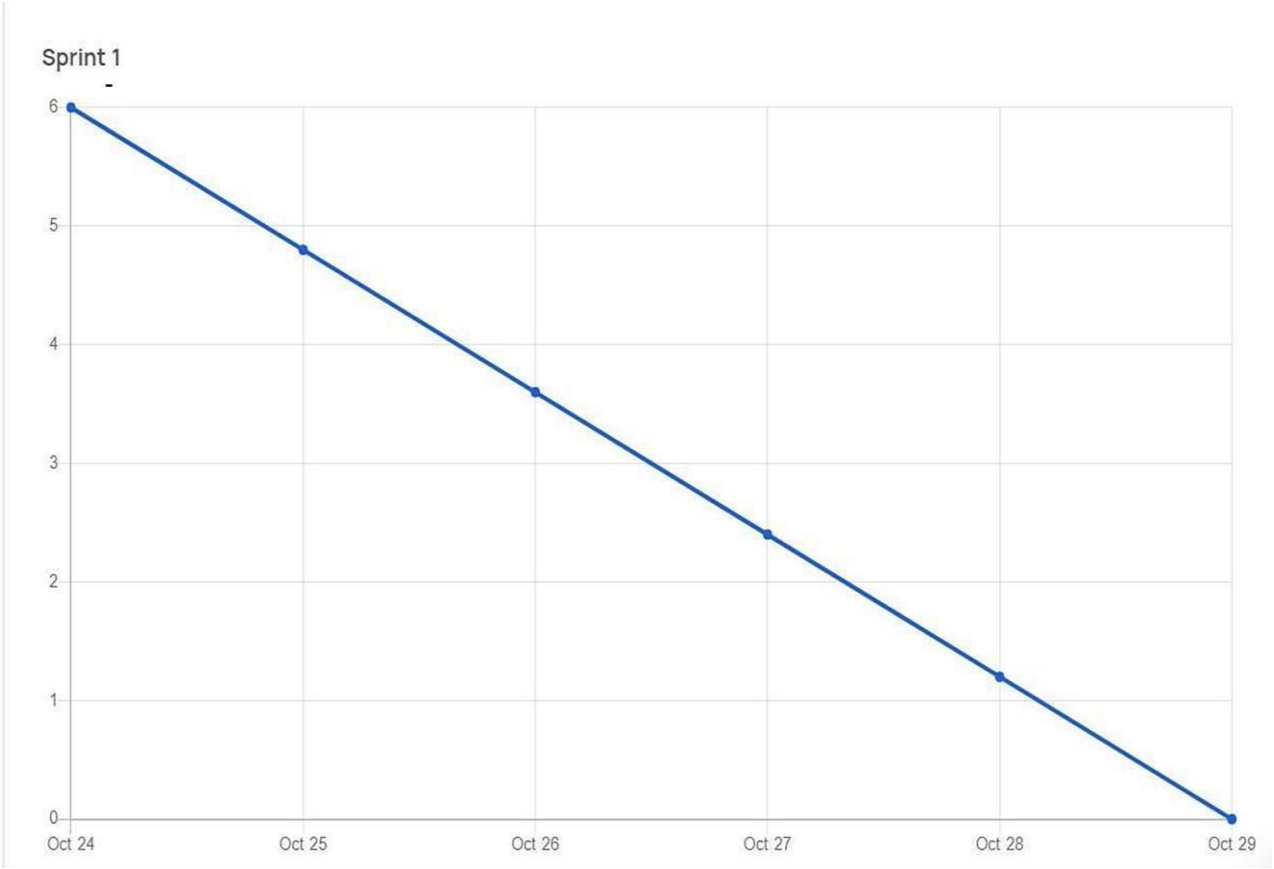
Sprint	Total Story Points	Duration	Average velocity
Sprint-1	19	6 Days	3.16
Sprint-2	18	6 Days	3

Sprint-3	16	6 Days	2.66
Sprint-4	17	6 Days	2.83
Total	70	24	2.91

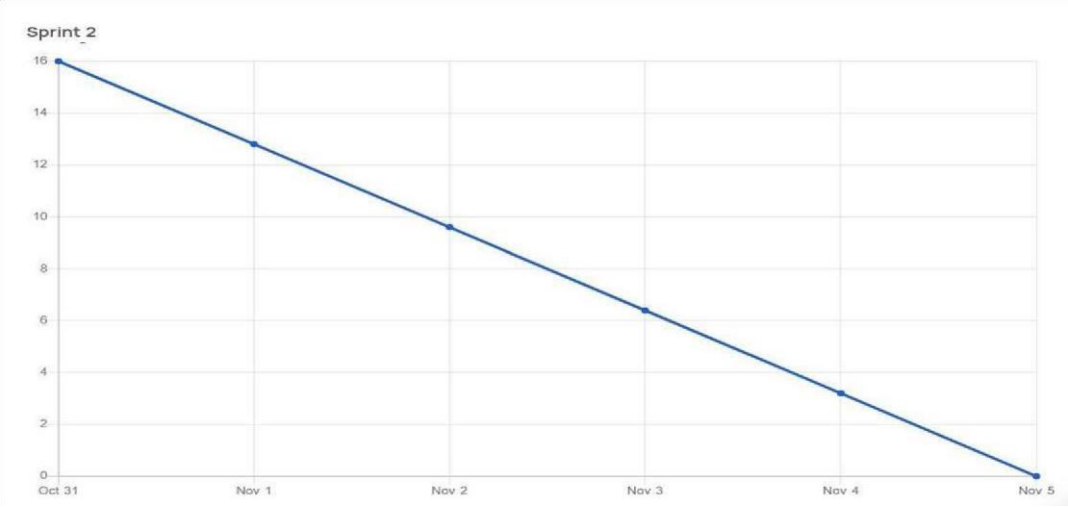
Burndown Chart:

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.

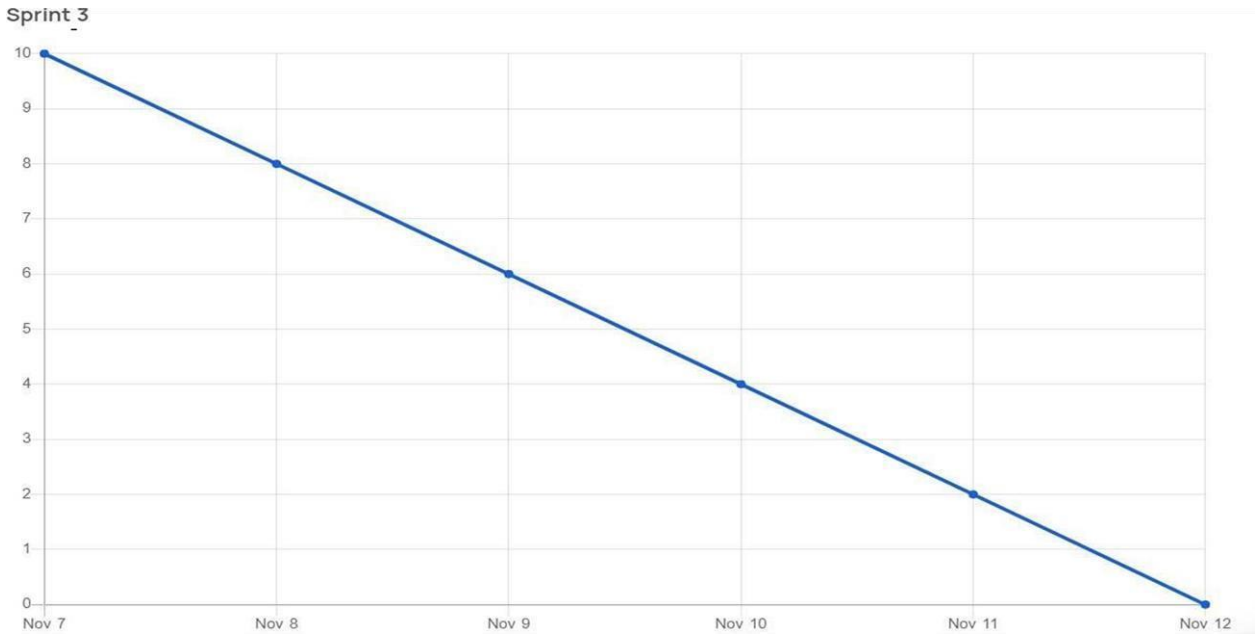
Estimated Effort: Sprint-1



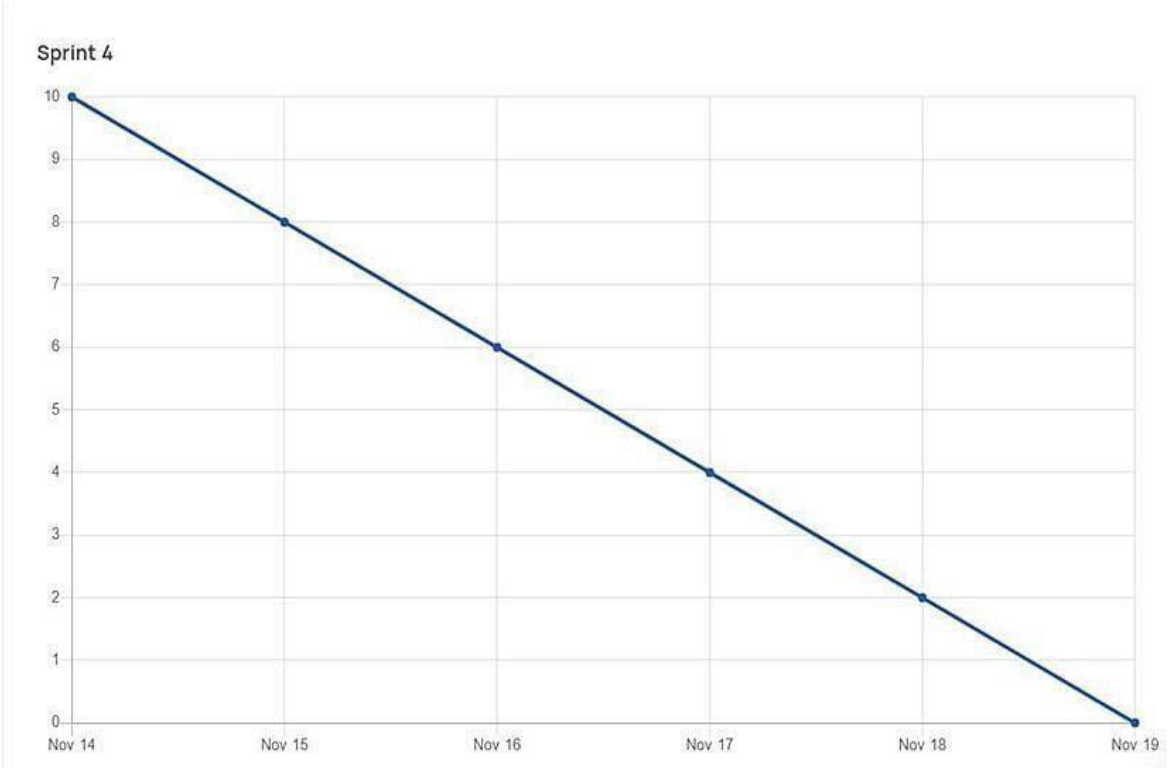
Sprint – 2:



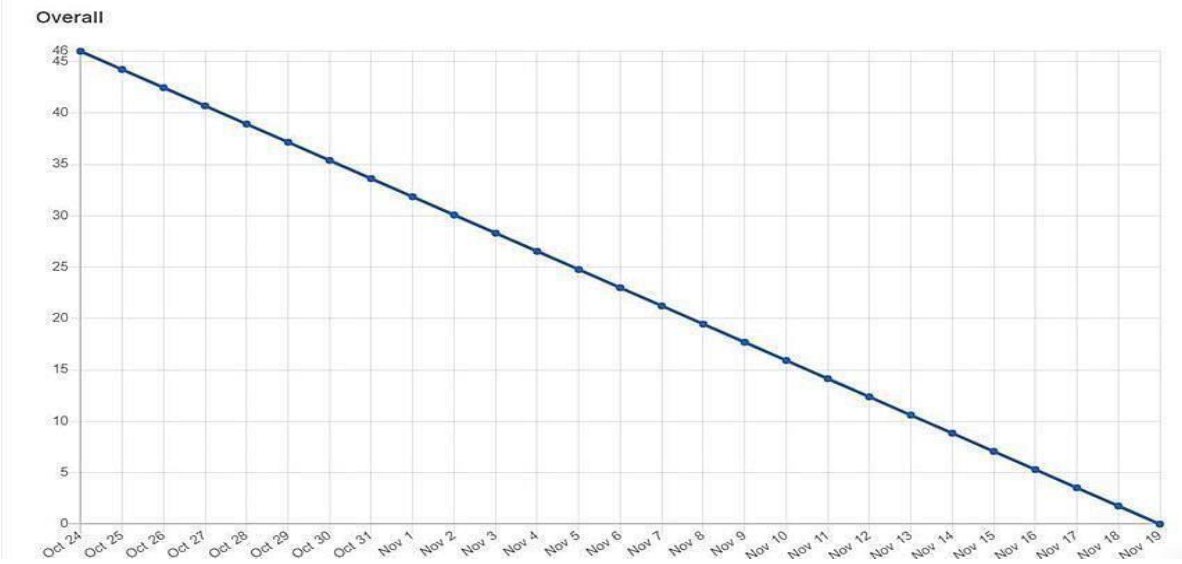
Sprint – 3:



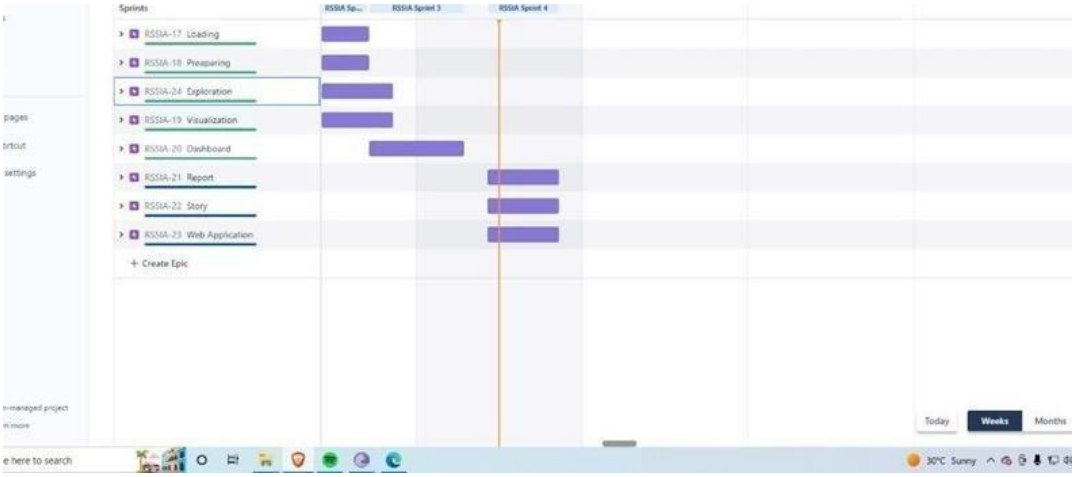
SPRINT - 4 :



Overall burnout chart:



Roadmap :



https://www.visual-paradigm.com/scrum/scrum-burndown-chart/
https://www.atlassian.com/agile/tutorials/burndowncharts

Reference:

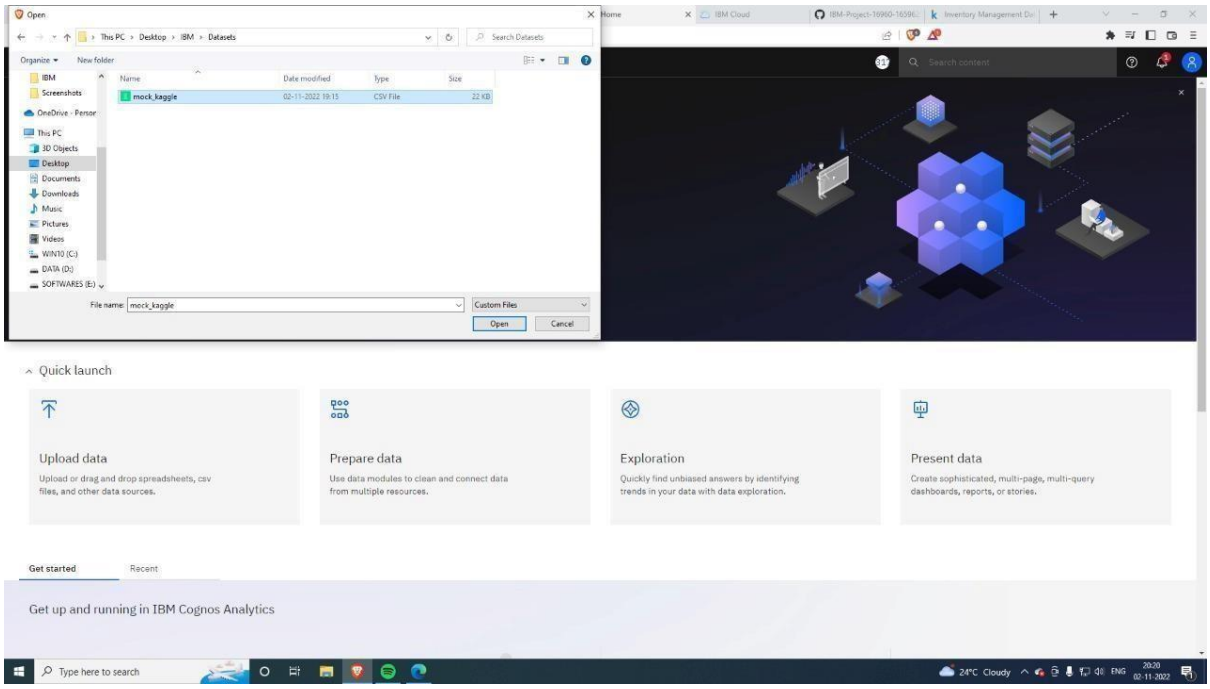
https://www.atlassian.com/agile/projectmanageme nt
https://www.atlassian.com/agile/tutorials/howtodoscrumwith-jira-software
https://www.atlassian.com/agile/tutorials/epics
https://www.atlassian.com/agile/tutorials/sprints
https://www.atlassian.com/agile/project-management/estimation
https://www.atlassian.com/agile/tutorials/burndowncharts
https://pnt2022tid29780.atlassian.net/jira/software/projects/RSSIA/boards/1/roadmap

CODING AND SOLUTIONING

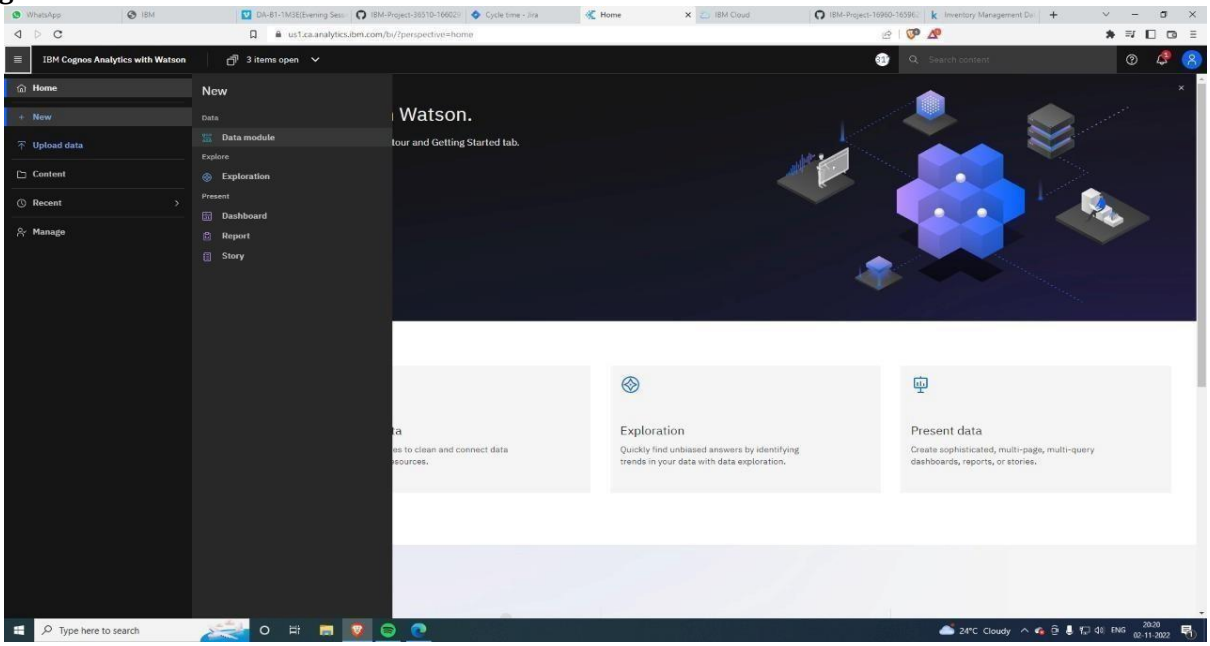
Feature – 1

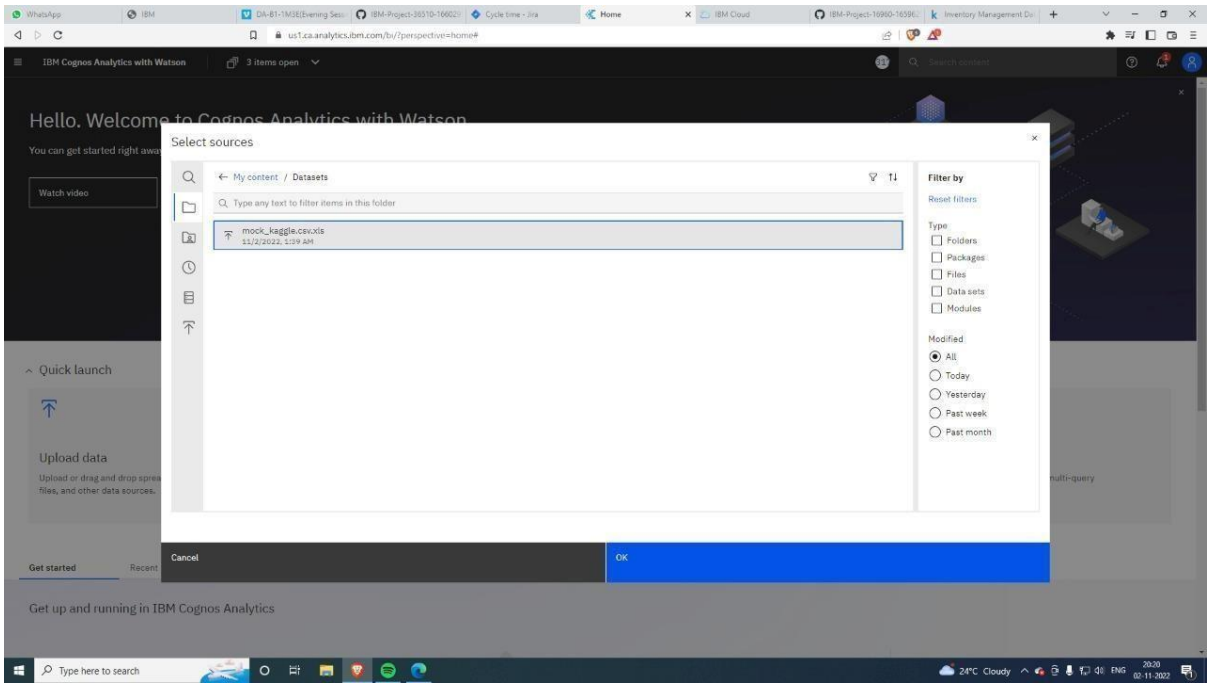
- Data Collection
- Data Preparation

Uploading the data



Creating data module



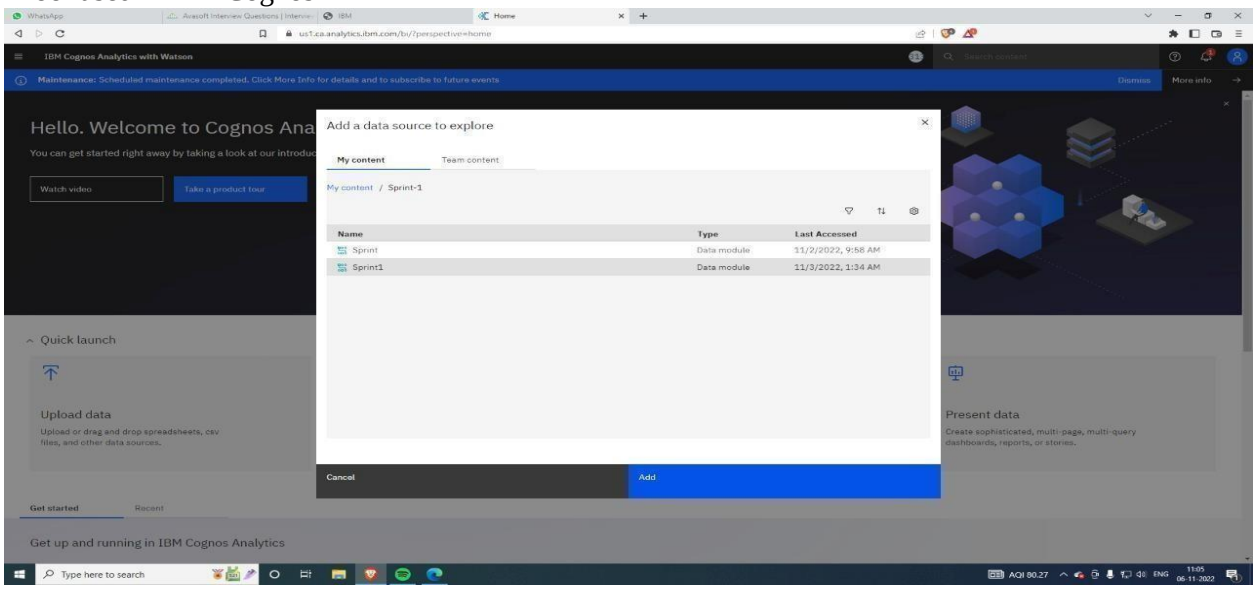


Feature – 2

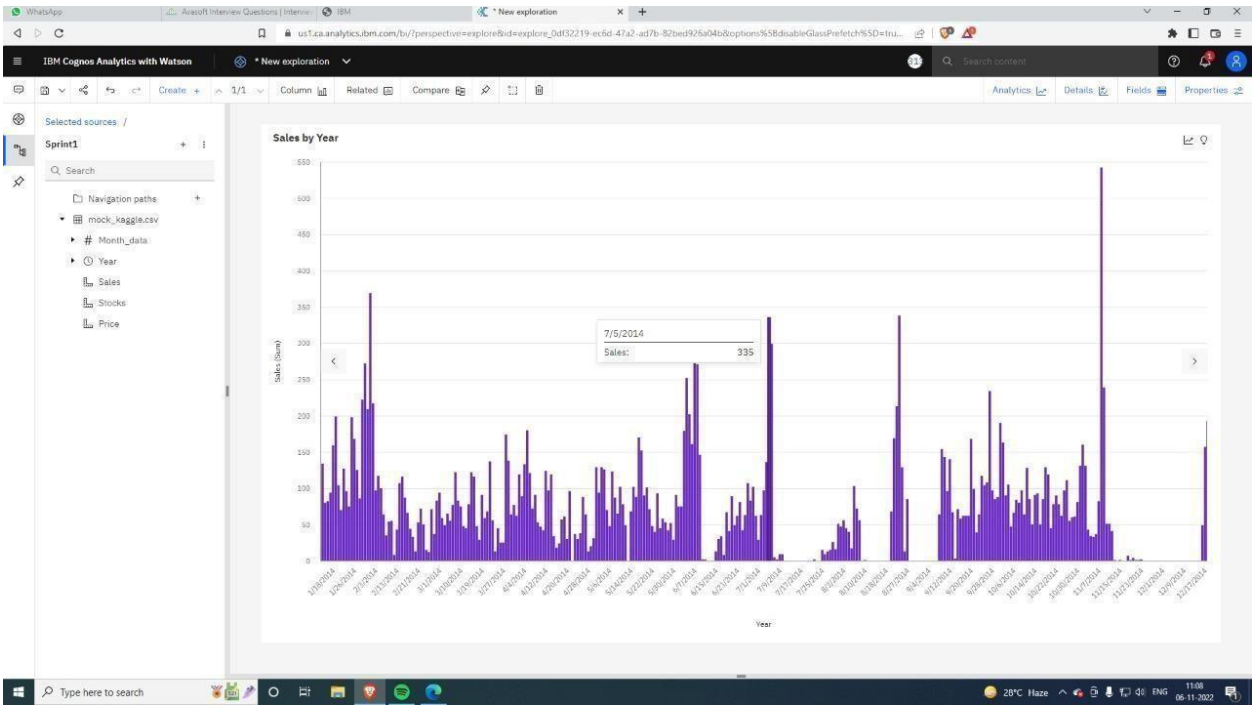
➢ Data Exploration

LOAD THE DATASET:

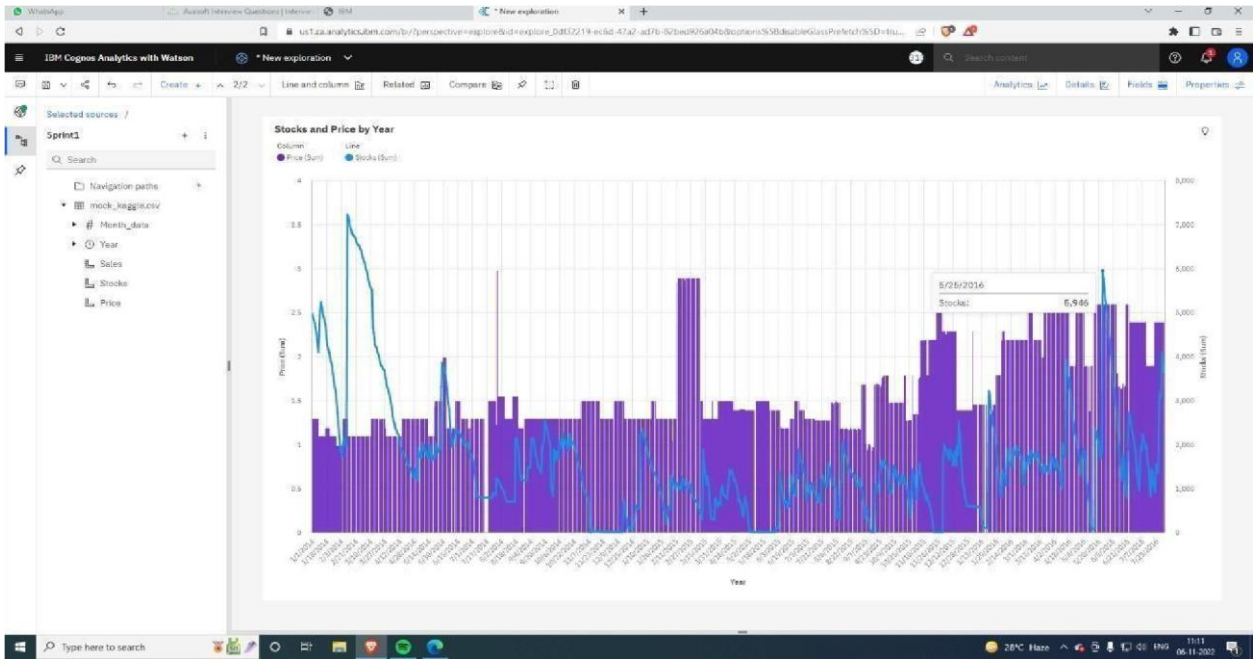
• Tool used – IBM Cognos



SALES ANALYSIS:



STOCK AND PRICE FOR YEAR COLORED BY PRICE:

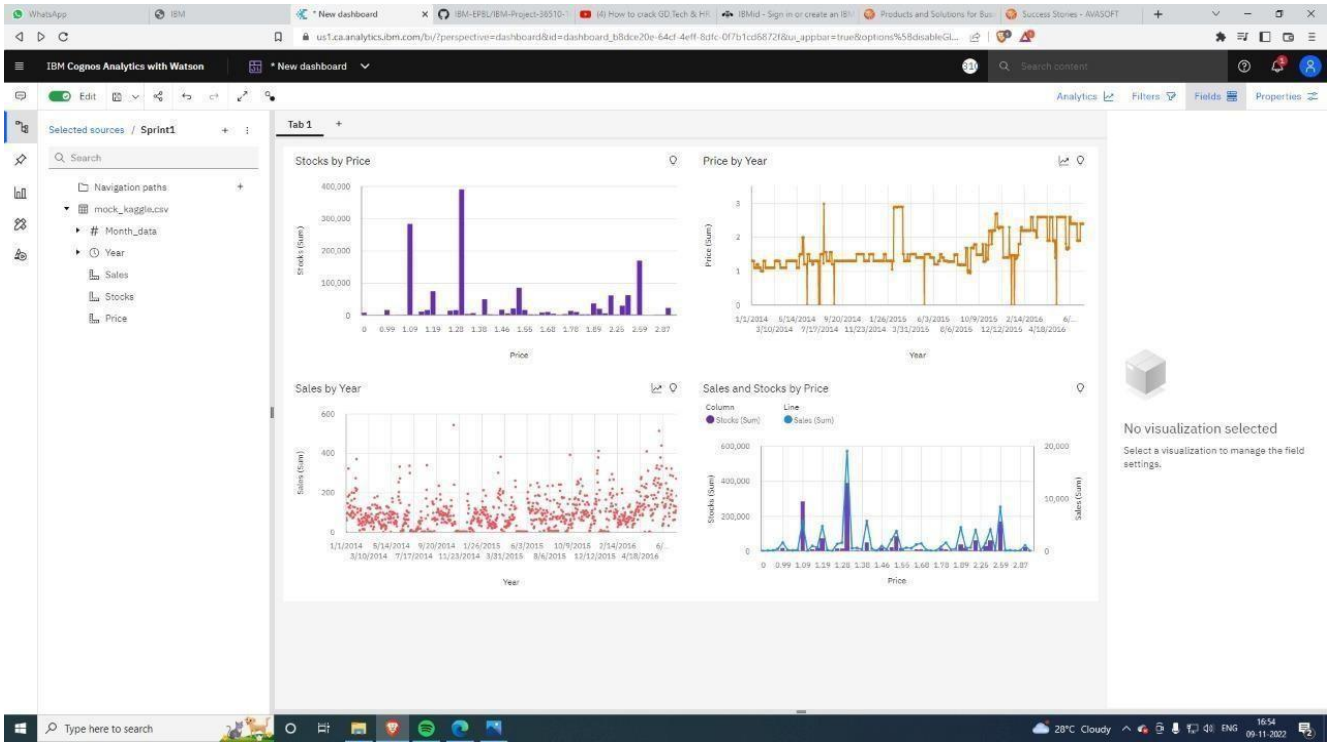


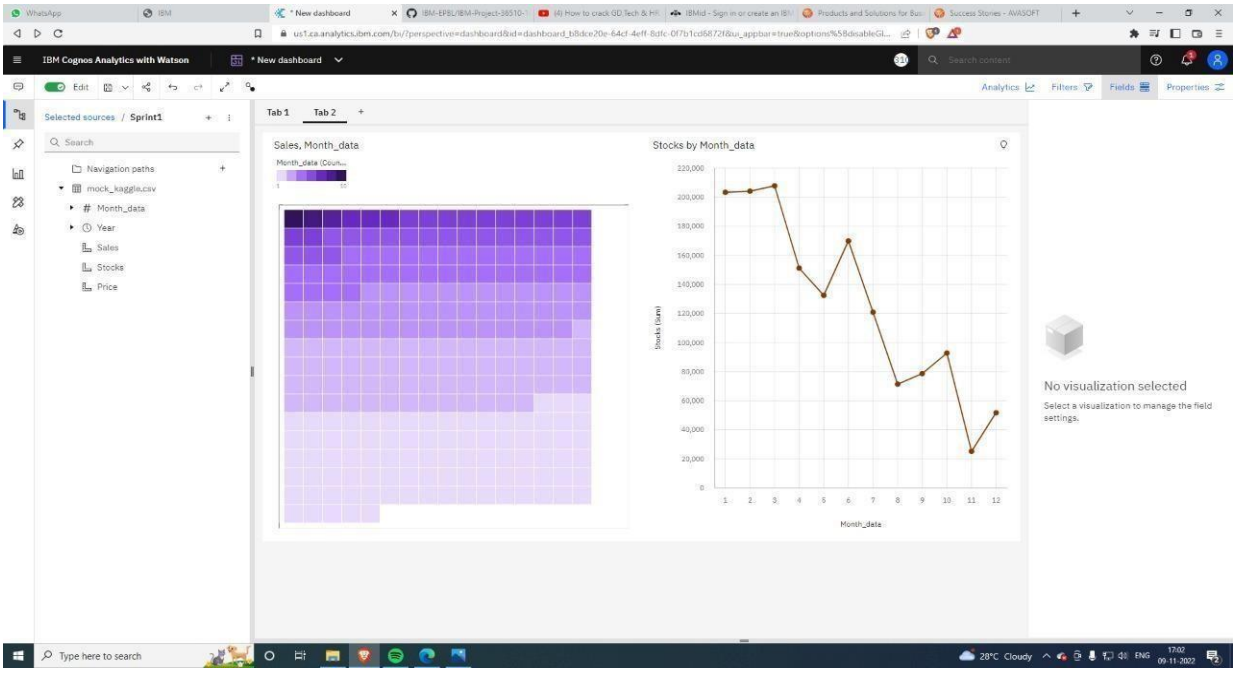
PREPARED DATA LINK :

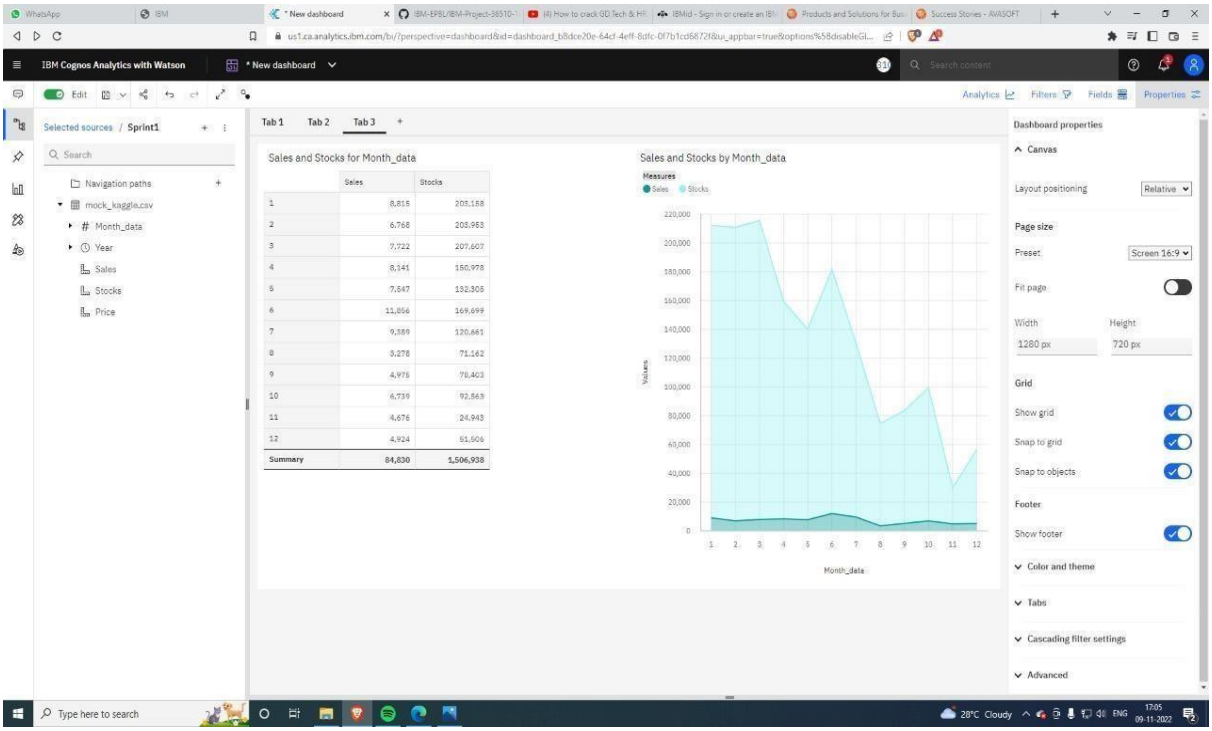
https://us1.ca.analytics.ibm.com/bi/?perspective=explore&pathRef=.my_folders%2FSprint2%2FSprint%2B2&subView=model000001844b83a2e1_00000004

Feature - 3

➢ Dashboard Creation







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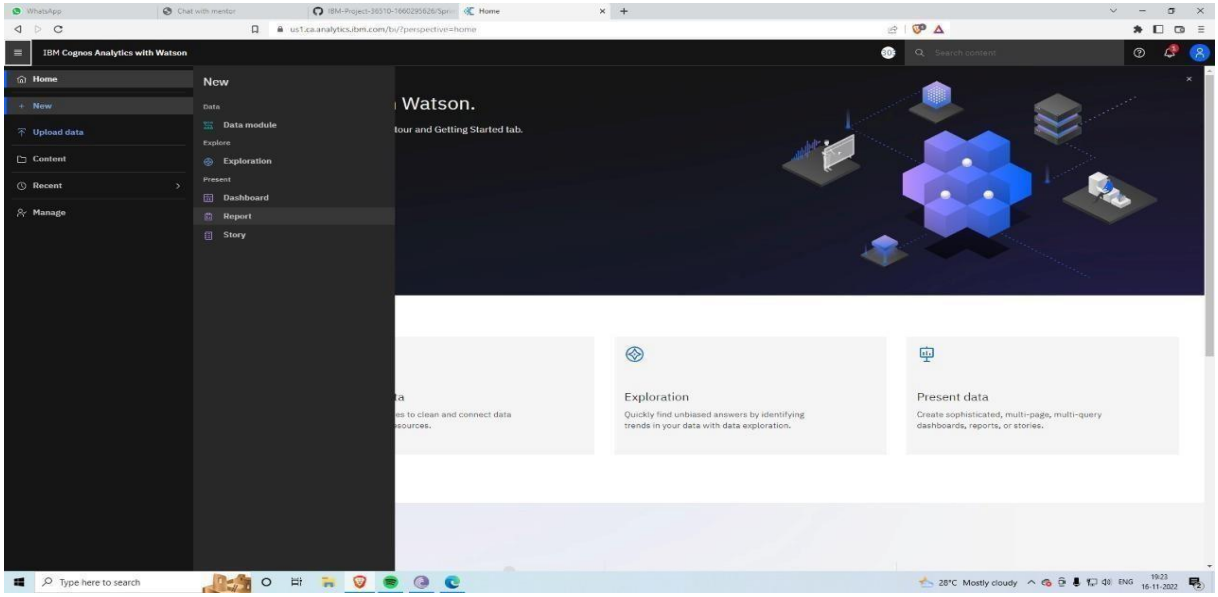
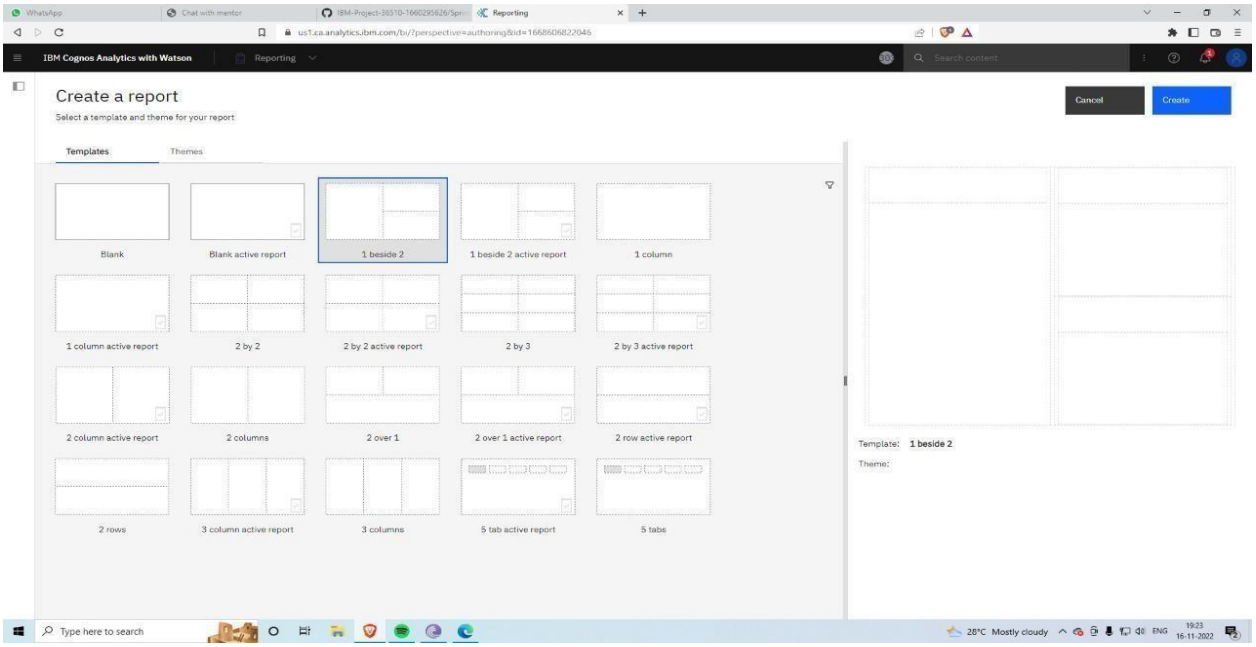
Feature - 4

- Report and Story Creation

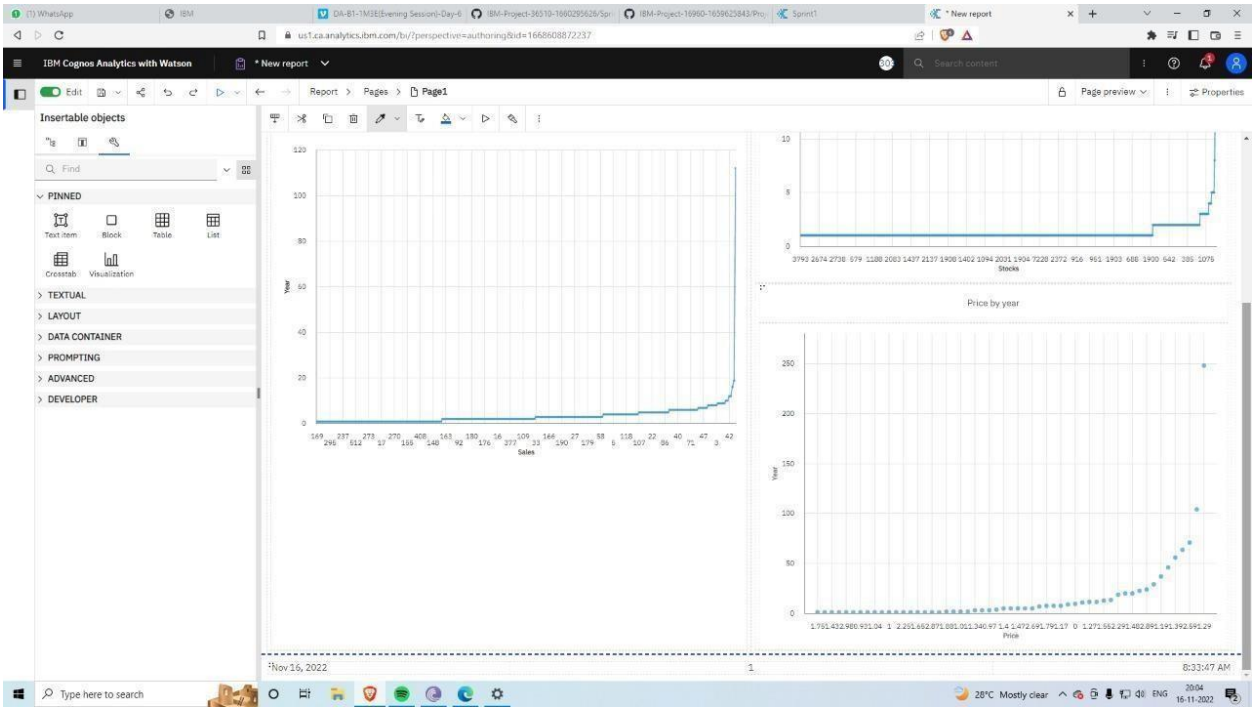
CREATE A REPORT :



CHOOSING TEMPLATE :



VISUALISATION :



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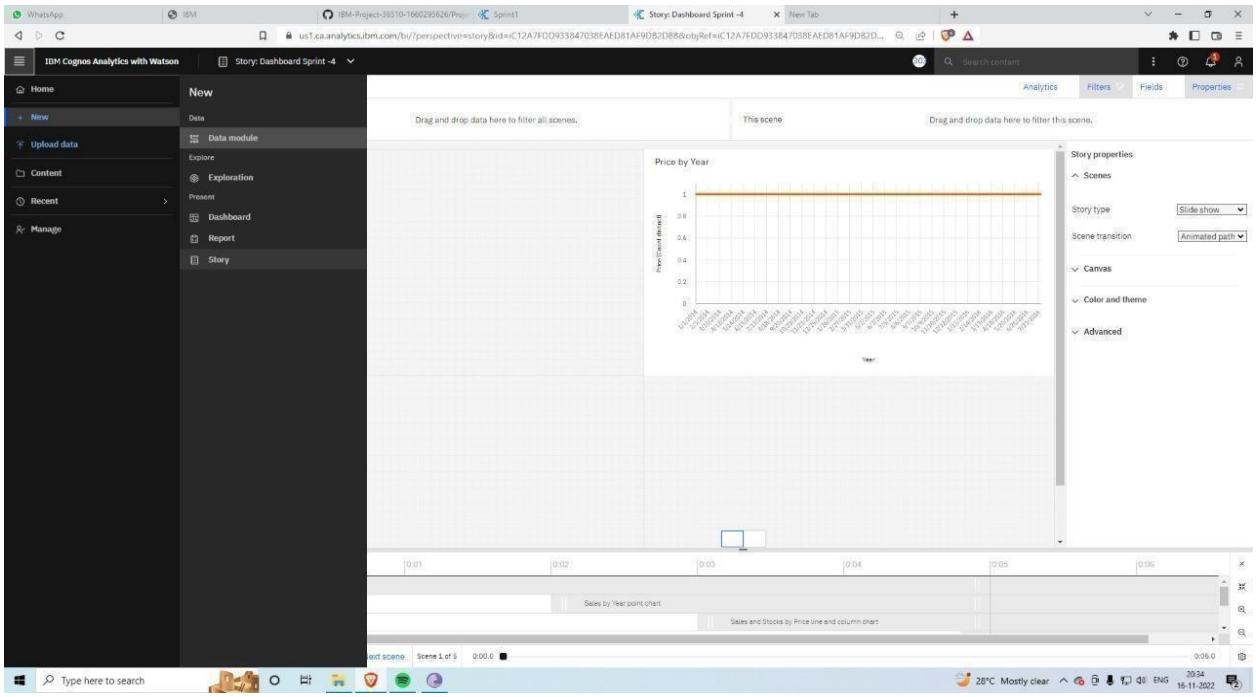
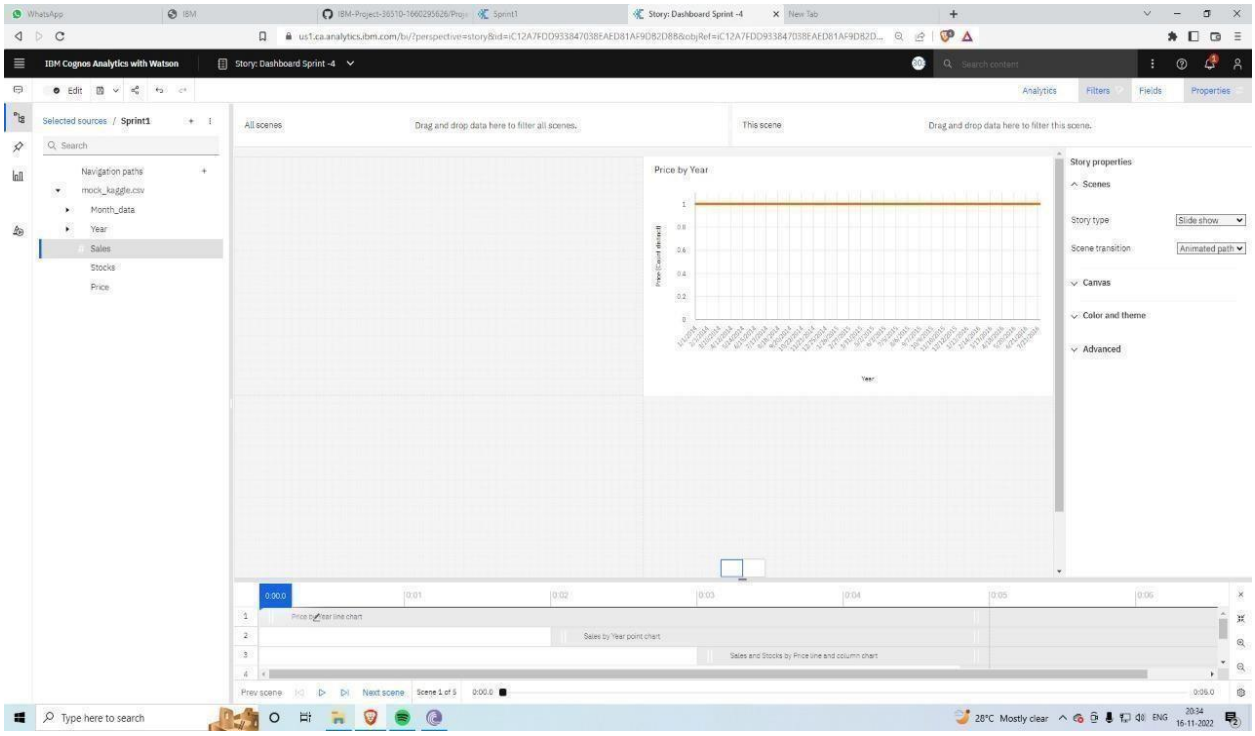
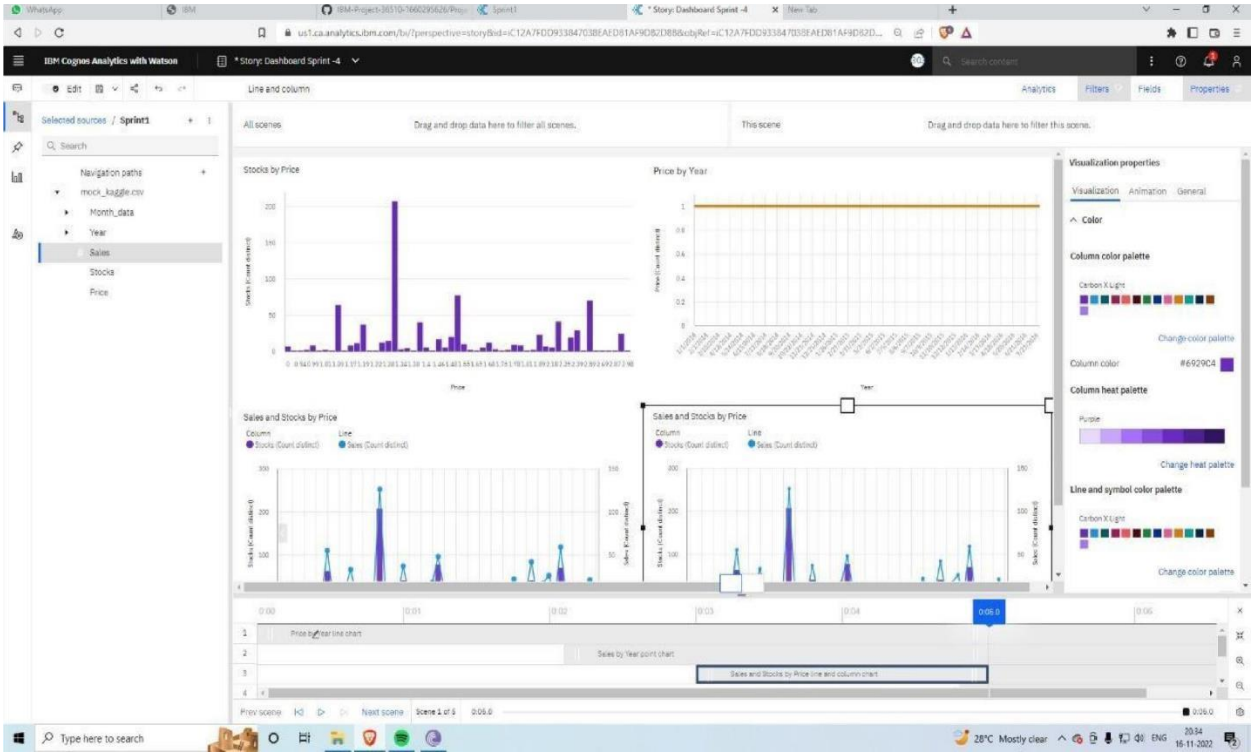
CREATE STORY:



SELECT SLIDESHOW :



PREPARING STORY:



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Feature - 5

- Web Application

DASHBOARD:

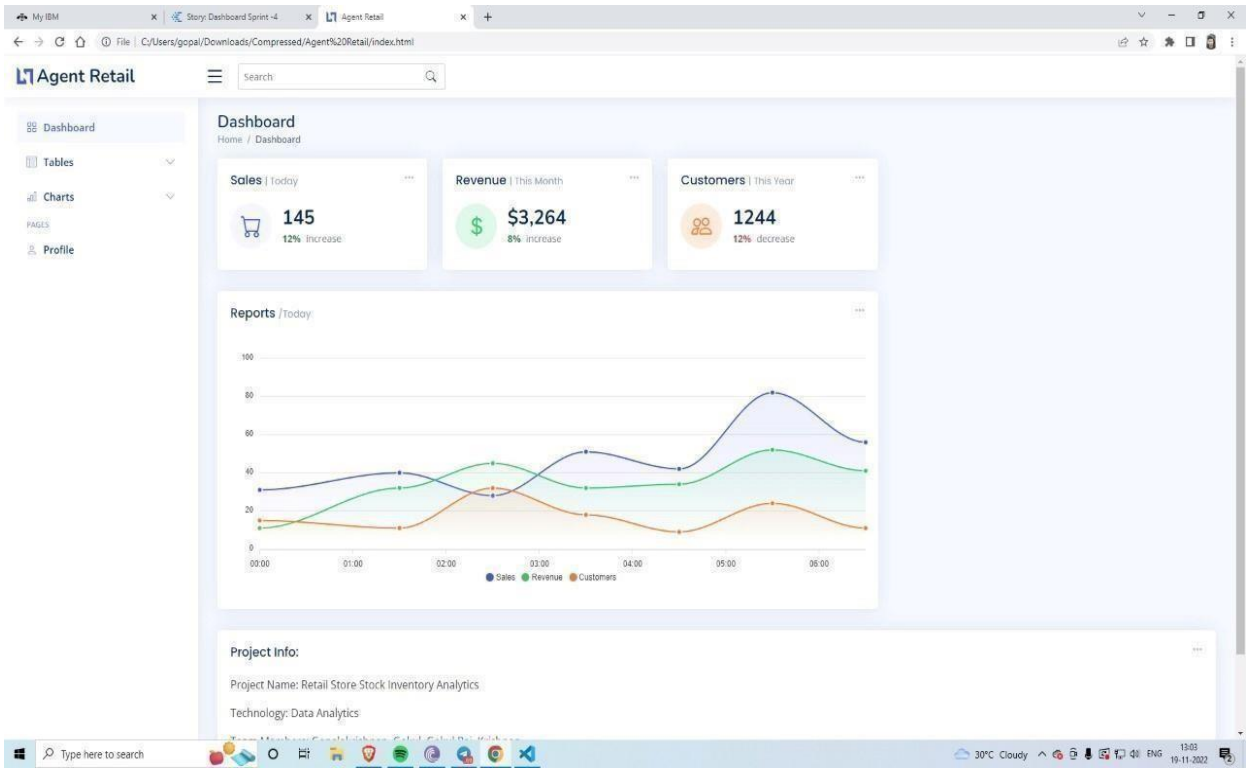
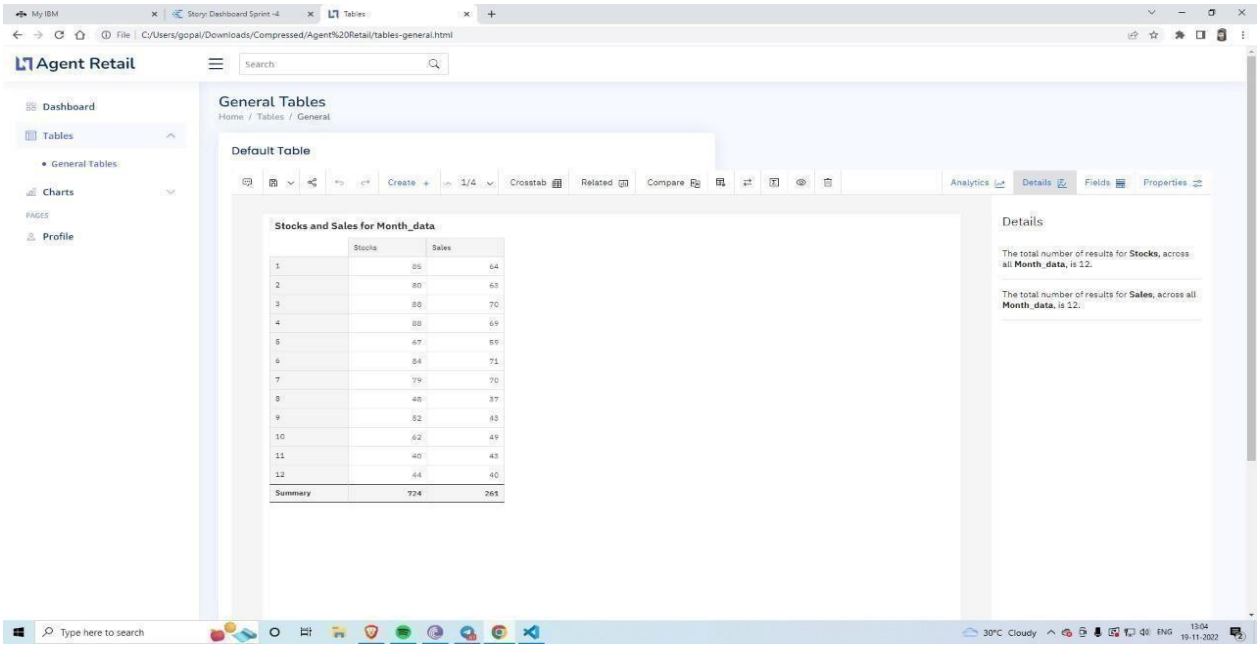
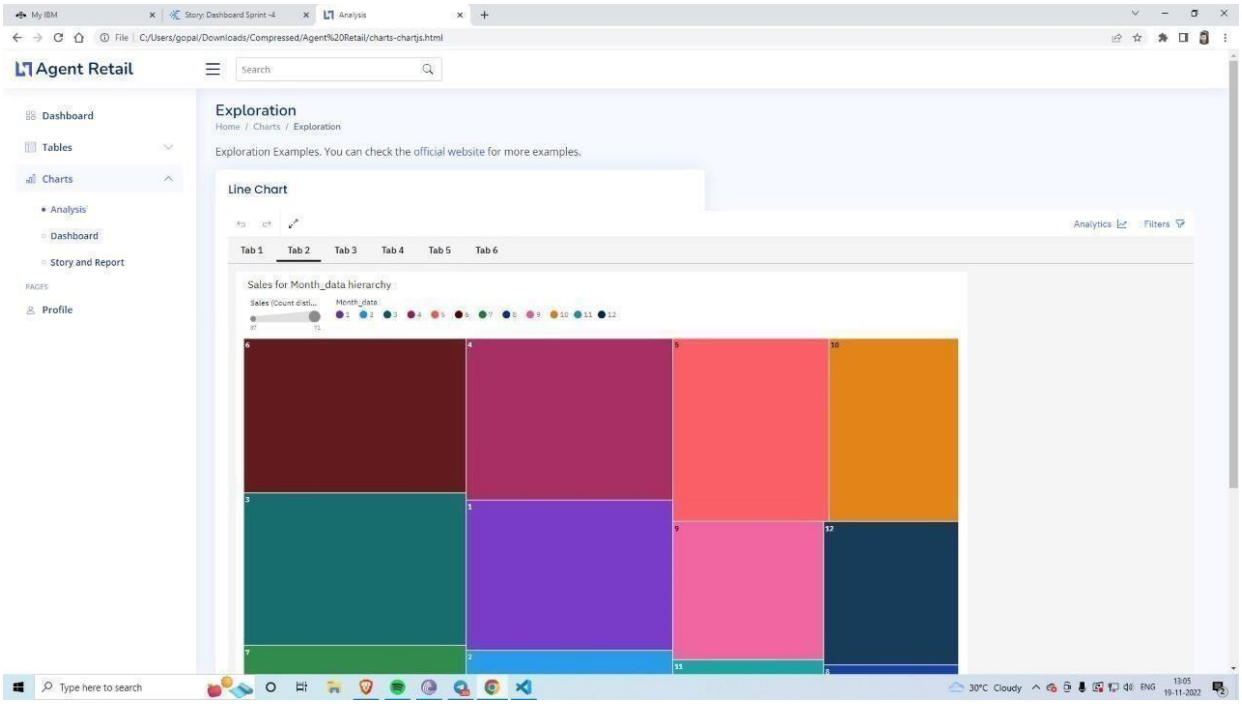


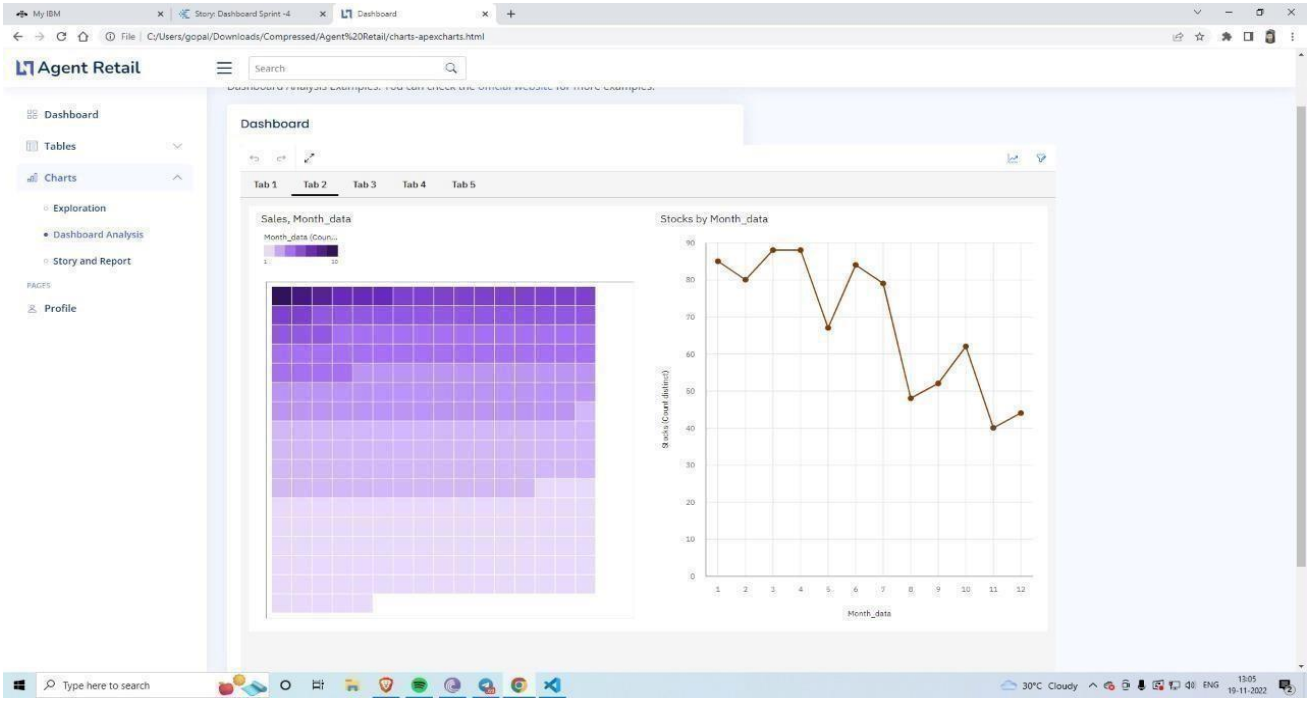
TABLE:



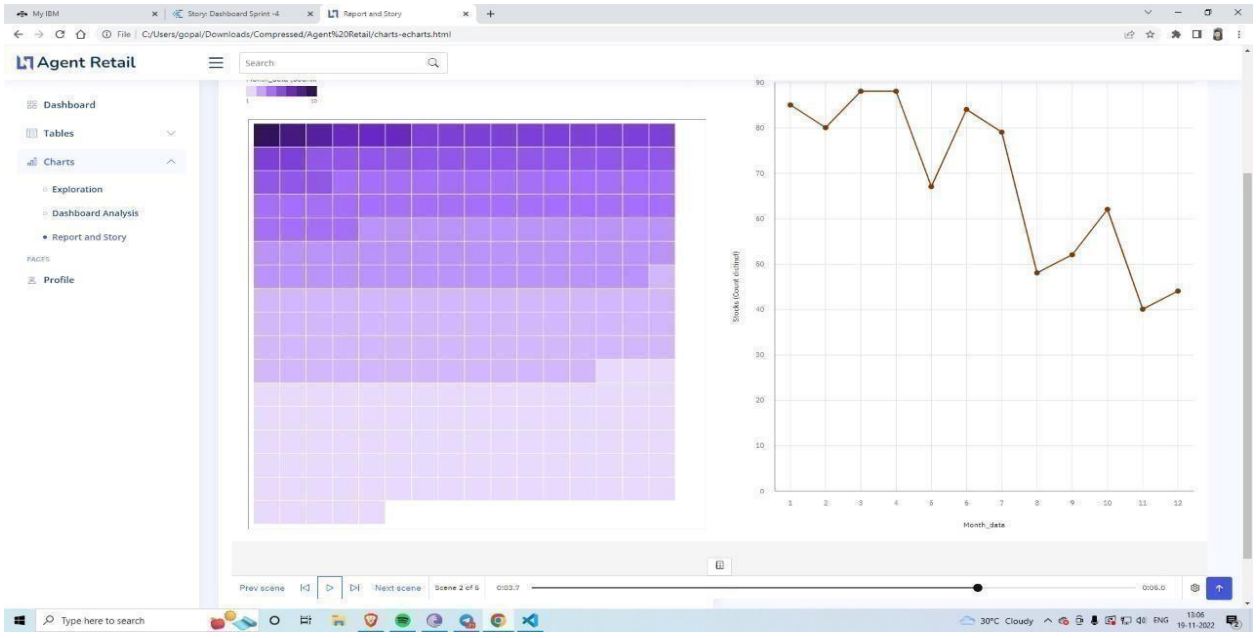
EXPLORATION:



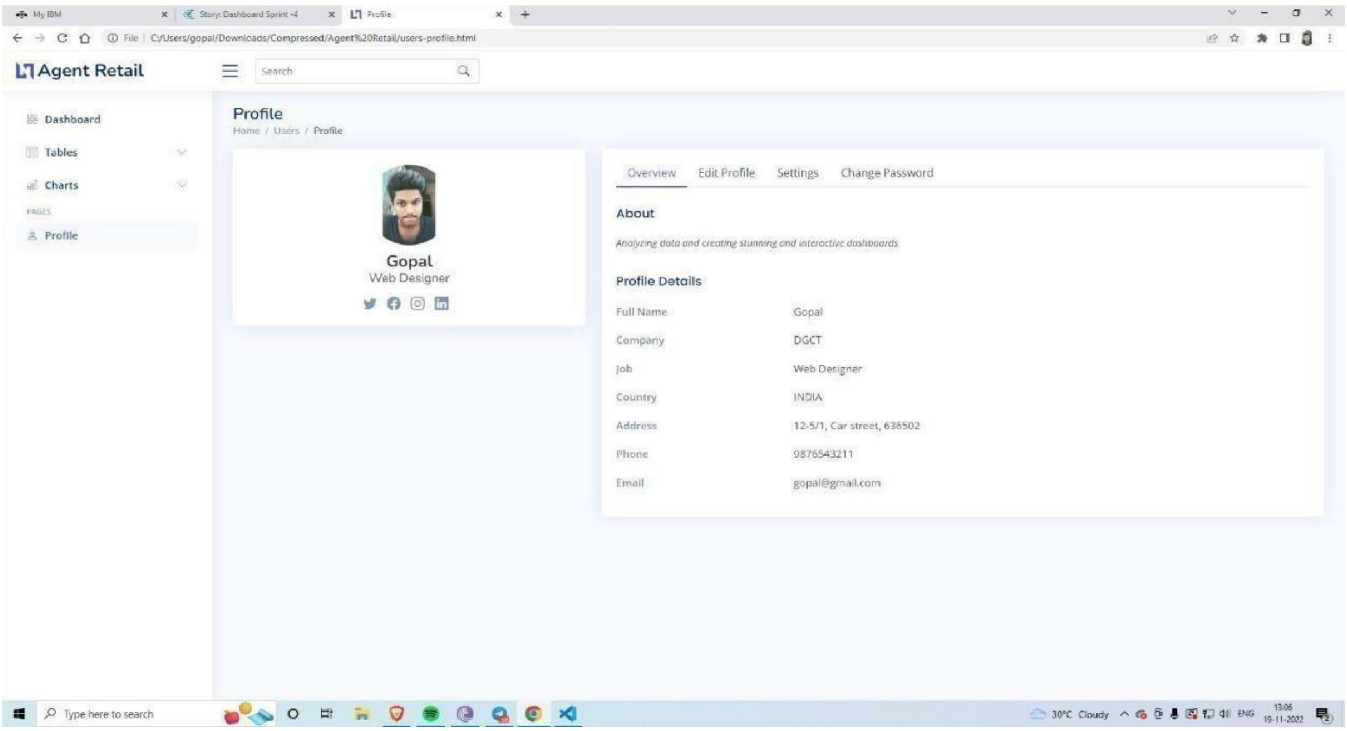
DASHBOARD:



REPORT AND STORY:



PROFILE:



TESTING

User acceptance Testing:

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [ProductName] 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	10	4	2	3	20
Duplicate	1	0	3	0	4

External	2	3	0	1	6
Fixed	11	2	4	20	37
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8
Totals	24	14	13	26	77

3. Test Case Analysis

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

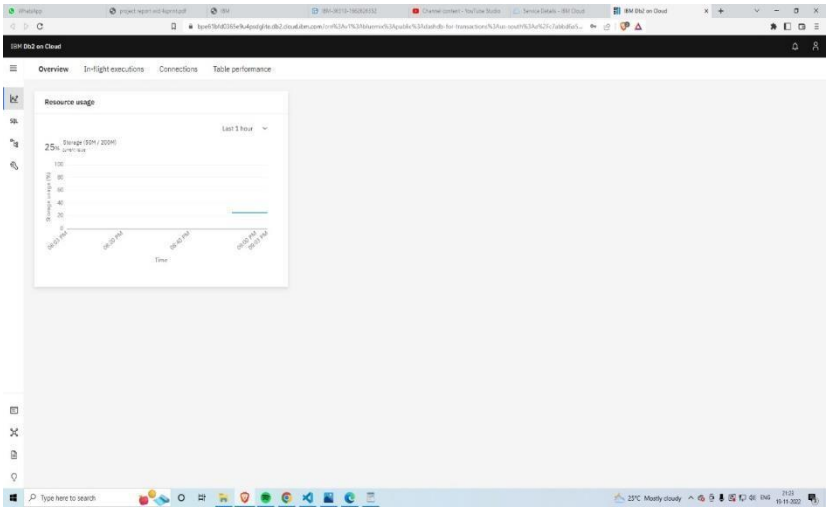
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	9	0	0	9
Final Report Output	4	0	0	4
Version Control	2	0	0	2

RESULTS :

PERFORMANCE TESTING :

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Screenshot / Values
1.	Dashboard design	No of Visulizations / Graphs - 8 charts
2.	Data Responsiveness	Great and high
3.	Amount Data to Rendered (DB2 Metrics)	
4.	Utilization of Data Filters	Null values removed Splitting the data into multiple columns for easier
5.	Effective User Story	No of Scene Added - 4
6.	Descriptive Reports	No of Visulizations / Graphs - 11

Advantages and Disadvantages :

Advantages :

The analysis being done is to identify the solution to solve out the user's query. The dataset of the store is being analysed well and the results are obtained to its optimum and best. The main advantage lying here is the usage of analytics platform like IBM cognos analytics and Google colab.

Disadvantages :

The webpage interacts with the user and receives their input, but does not provide any feedback. The results will be observable to the user through the generated report in webpage. The solution is either the query will be rectified or no. But alternate solutions are currently not suggested from retailer end. This can be included in futuristic works.

CONCLUSION :

The proposed solution architecture and the designed work holds good to provide apt solution to the user's query. A full detailed report is generated to the user's observation and inferences are obtained to conclude the query. The analysis is done accurately to yield more trustable results. This work helps retailers as well as users to negotiate much in case of continuous queries being raised by consumers. The stock inventory can be very well managed by the retailers by analyzing the dataset obtained from the database. This greatly helps in increasing the profit and reduce losses in business. Also users can be relieved off from their query either by an approved solution from retailer or via an alternate solution.

FUTURE SCOPE :

In this current work, it ends with consumer readable report to understand how well their query can be solved. In future work, it could be extended to work on few lined report generation with interactive platform for the consumer's easier access. The alert messages on the updation of inventory stock and product can be done to keep the consumer in track with their query on how much it is under progress or processing.

APPENDIX :

Source code :

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

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Agent Retail</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">
```

```
  <!-- Google Fonts -->
  <link href="https://fonts.gstatic.com" rel="preconnect">
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Nunito:300,300i,400,400i,600,600i,700,700
i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/quill/quill.snow.css" rel="stylesheet">
  <link href="assets/vendor/quill/quill.bubble.css" rel="stylesheet">
  <link href="assets/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="assets/vendor/simple-datatables/style.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/style.css" rel="stylesheet">

  <!-- =======================================================
  * Template Name: NiceAdmin - v2.4.1
  * Template URL: https://bootstrapmade.com/nice-admin-bootstrap-admin-html-template/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
  ======================================================== -->
</head>

<body>

  <!-- ======= Header ======= -->
  <header id="header" class="header fixed-top d-flex align-items-center">

    <div class="d-flex align-items-center justify-content-between">
      <a href="index.html" class="logo d-flex align-items-center">
        <img src="assets/img/logo.png" alt="">
        <span class="d-none d-lg-block">Agent Retail</span>
      </a>
      <i class="bi bi-list toggle-sidebar-btn"></i>
    </div><!-- End Logo -->

    <div class="search-bar">
      <form class="search-form d-flex align-items-center" method="POST" action="#">
        <input type="text" name="query" placeholder="Search" title="Enter search keyword">
        <button type="submit" title="Search"><i class="bi bi-search"></i></button>
      </form>
    </div><!-- End Search Bar -->

    <nav class="header-nav ms-auto">
      <ul class="d-flex align-items-center">

        <li class="nav-item d-block d-lg-none">
          <a class="nav-link nav-icon search-bar-toggle " href="#">
            <i class="bi bi-search"></i>
          </a>
        </li><!-- End Search Icon-->


          </ul><!-- End Profile Dropdown Items -->
        </li><!-- End Profile Nav -->

      </ul>
    </nav><!-- End Icons Navigation -->
```

```
</header><!-- End Header -->

<!-- ======= Sidebar ======= -->
<aside id="sidebar" class="sidebar">

 <ul class="sidebar-nav" id="sidebar-nav">

  <li class="nav-item">
   <a class="nav-link " href="index.html">
    <i class="bi bi-grid"></i>
    <span>Dashboard</span>
   </a>
  </li><!-- End Dashboard Nav -->




  <li class="nav-item">
   <a class="nav-link collapsed" data-bs-target="#tables-nav" data-bs-toggle="collapse" href="#">
    <i class="bi bi-layout-text-window-reverse"></i><span>Tables</span><i class="bi bi-chevron-down ms-auto"></i>
   </a>
   <ul id="tables-nav" class="nav-content collapse " data-bs-parent="#sidebar-nav">
    <li>
     <a href="tables-general.html">
      <i class="bi bi-circle"></i><span>General Tables</span>
     </a>
    </li>

   </ul>
  </li><!-- End Tables Nav -->

  <li class="nav-item">
   <a class="nav-link collapsed" data-bs-target="#charts-nav" data-bs-toggle="collapse" href="#">
    <i class="bi bi-bar-chart"></i><span>Charts</span><i class="bi bi-chevron-down ms-auto"></i>
   </a>
   <ul id="charts-nav" class="nav-content collapse " data-bs-parent="#sidebar-nav">
    <li>
     <a href="charts-chartjs.html">
      <i class="bi bi-circle"></i><span>Exploration</span>
     </a>
    </li>
    <li>
     <a href="charts-apexcharts.html">
      <i class="bi bi-circle"></i><span>Dashboard Analysis</span>
     </a>
    </li>
    <li>
     <a href="charts-echarts.html">
      <i class="bi bi-circle"></i><span>Story and Report</span>
     </a>
    </li>
   </ul>
  </li><!-- End Charts Nav -->


  <li class="nav-heading">Pages</li>

  <li class="nav-item">
   <a class="nav-link collapsed" href="users-profile.html">
    <i class="bi bi-person"></i>
```

```
      <span>Profile</span>
    </a>
   </li><!-- End Profile Page Nav -->









   </li><!-- End Register Page Nav -->


   </li><!-- End Login Page Nav -->



  </ul>

</aside><!-- End Sidebar-->

<main id="main" class="main">

  <div class="pagetitle">
   <h1>Dashboard</h1>
   <nav>
    <ol class="breadcrumb">
     <li class="breadcrumb-item"><a href="index.html">Home</a></li>
     <li class="breadcrumb-item active">Dashboard</li>
    </ol>
   </nav>
  </div><!-- End Page Title -->

  <section class="section dashboard">
   <div class="row">

    <!-- Left side columns -->
    <div class="col-lg-8">
     <div class="row">

      <!-- Sales Card -->
      <div class="col-xxl-4 col-md-6">
       <div class="card info-card sales-card">

        <div class="filter">
         <a class="icon" href="#" data-bs-toggle="dropdown"><i class="bi bi-three-dots"></i></a>
         <ul class="dropdown-menu dropdown-menu-end dropdown-menu-arrow">
          <li class="dropdown-header text-start">
           <h6>Filter</h6>
          </li>

          <li><a class="dropdown-item" href="#">Today</a></li>
          <li><a class="dropdown-item" href="#">This Month</a></li>
          <li><a class="dropdown-item" href="#">This Year</a></li>
         </ul>
        </div>

        <div class="card-body">
         <h5 class="card-title">Sales <span>| Today</span></h5>

         <div class="d-flex align-items-center">
          <div class="card-icon rounded-circle d-flex align-items-center justify-content-center">
```

```
        <i class="bi bi-cart"></i>
       </div>
       <div class="ps-3">
        <h6>145</h6>
        <span class="text-success small pt-1 fw-bold">12%</span> <span class="text-muted small pt-2 ps-1">increase</span>

       </div>
      </div>
     </div>

    </div>
  </div><!-- End Sales Card -->

  <!-- Revenue Card -->
  <div class="col-xxl-4 col-md-6">
    <div class="card info-card revenue-card">

     <div class="filter">
      <a class="icon" href="#" data-bs-toggle="dropdown"><i class="bi bi-three-dots"></i></a>
      <ul class="dropdown-menu dropdown-menu-end dropdown-menu-arrow">
       <li class="dropdown-header text-start">
        <h6>Filter</h6>
       </li>

       <li><a class="dropdown-item" href="#">Today</a></li>
       <li><a class="dropdown-item" href="#">This Month</a></li>
       <li><a class="dropdown-item" href="#">This Year</a></li>
      </ul>
     </div>

     <div class="card-body">
      <h5 class="card-title">Revenue <span>| This Month</span></h5>

      <div class="d-flex align-items-center">
       <div class="card-icon rounded-circle d-flex align-items-center justify-content-center">
        <i class="bi bi-currency-dollar"></i>
       </div>
       <div class="ps-3">
        <h6>$3,264</h6>
        <span class="text-success small pt-1 fw-bold">8%</span> <span class="text-muted small pt-2 ps-1">increase</span>

       </div>
      </div>
     </div>

    </div>
  </div><!-- End Revenue Card -->

  <!-- Customers Card -->
  <div class="col-xxl-4 col-xl-12">

    <div class="card info-card customers-card">

     <div class="filter">
      <a class="icon" href="#" data-bs-toggle="dropdown"><i class="bi bi-three-dots"></i></a>
      <ul class="dropdown-menu dropdown-menu-end dropdown-menu-arrow">
       <li class="dropdown-header text-start">
        <h6>Filter</h6>
       </li>

       <li><a class="dropdown-item" href="#">Today</a></li>
```

```
    <li><a class="dropdown-item" href="#">This Month</a></li>
    <li><a class="dropdown-item" href="#">This Year</a></li>
   </ul>
  </div>

  <div class="card-body">
   <h5 class="card-title">Customers <span>| This Year</span></h5>

   <div class="d-flex align-items-center">
    <div class="card-icon rounded-circle d-flex align-items-center justify-content-center">
     <i class="bi bi-people"></i>
    </div>
    <div class="ps-3">
     <h6>1244</h6>
     <span class="text-danger small pt-1 fw-bold">12%</span> <span class="text-muted small pt-2 ps-1">decrease</span>

    </div>
   </div>

  </div>
 </div>

</div><!-- End Customers Card -->

<!-- Reports -->
<div class="col-12">
 <div class="card">

  <div class="filter">
   <a class="icon" href="#" data-bs-toggle="dropdown"><i class="bi bi-three-dots"></i></a>
   <ul class="dropdown-menu dropdown-menu-end dropdown-menu-arrow">
    <li class="dropdown-header text-start">
     <h6>Filter</h6>
    </li>

    <li><a class="dropdown-item" href="#">Today</a></li>
    <li><a class="dropdown-item" href="#">This Month</a></li>
    <li><a class="dropdown-item" href="#">This Year</a></li>
   </ul>
  </div>

  <div class="card-body">
   <h5 class="card-title">Reports <span>/Today</span></h5>

   <!-- Line Chart -->
   <div id="reportsChart"></div>

   <script>
    document.addEventListener("DOMContentLoaded", () => {
     new ApexCharts(document.querySelector("#reportsChart"), {
      series: [{
       name: 'Sales',
       data: [31, 40, 28, 51, 42, 82, 56],
      }, {
       name: 'Revenue',
       data: [11, 32, 45, 32, 34, 52, 41]
      }, {
       name: 'Customers',
       data: [15, 11, 32, 18, 9, 24, 11]
      }],
      chart: {
```

```
                  height: 350,
                  type: 'area',
                  toolbar: {
                    show: false
                  },
                },
                markers: {
                  size: 4
                },
                colors: ['#4154f1', '#2eca6a', '#ff771d'],
                fill: {
                  type: "gradient",
                  gradient: {
                    shadeIntensity: 1,
                    opacityFrom: 0.3,
                    opacityTo: 0.4,
                    stops: [0, 90, 100]
                  }
                },
                dataLabels: {
                  enabled: false
                },
                stroke: {
                  curve: 'smooth',
                  width: 2
                },
                xaxis: {
                  type: 'datetime',
                  categories: ["2018-09-19T00:00:00.000Z", "2018-09-19T01:30:00.000Z", "2018-09-19T02:30:00.000Z", "2018-09-19T03:30:00.000Z", "2018-09-19T04:30:00.000Z", "2018-09-19T05:30:00.000Z", "2018-09-19T06:30:00.000Z"]
                },
                tooltip: {
                  x: {
                    format: 'dd/MM/yy HH:mm'
                  },
                }
              }).render();
            });
          </script>
          <!-- End Line Chart -->

        </div>

      </div>
    </div><!-- End Reports -->









  </div>
</div><!-- End Left side columns -->

<!-- Right side columns -->
```

```
      <!-- Budget Report -->

      </div><!-- End Budget Report -->

      <!-- Website Traffic -->
      <div class="card">
       <div class="filter">
        <a class="icon" href="#" data-bs-toggle="dropdown"><i class="bi bi-three-dots"></i></a>
        <ul class="dropdown-menu dropdown-menu-end dropdown-menu-arrow">
         <li class="dropdown-header text-start">
          <h6>Filter</h6>
         </li>

         <li><a class="dropdown-item" href="#">Today</a></li>
         <li><a class="dropdown-item" href="#">This Month</a></li>
         <li><a class="dropdown-item" href="#">This Year</a></li>
        </ul>
       </div>

       <div class="card-body pb-0">
        <h5 class="card-title">Project Info: </h5>

        <p>Project Name: Retail Store Stock Inventory Analytics</p>
        <p>Technology: Data Analytics</p>

        <p>Team Members:
         Gopalakrishnan,
         Gokul,
         Gokul Raj,
         Krishnan.
        </p>


       </div>
      </div><!-- End Website Traffic -->



    </div><!-- End Right side columns -->

   </div>
  </section>

</main><!-- End #main -->

<!-- ======= Footer ======= -->
<footer id="footer" class="footer">

  </div>
</footer><!-- End Footer -->

<a href="#" class="back-to-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>

<!-- Vendor JS Files -->
<script src="assets/vendor/apexcharts/apexcharts.min.js"></script>
<script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
<script src="assets/vendor/chart.js/chart.min.js"></script>
<script src="assets/vendor/echarts/echarts.min.js"></script>
<script src="assets/vendor/quill/quill.min.js"></script>
<script src="assets/vendor/simple-datatables/simple-datatables.js"></script>
<script src="assets/vendor/tinymce/tinymce.min.js"></script>
```

```
  <script src="assets/vendor/php-email-form/validate.js"></script>

  <!-- Template Main JS File -->
  <script src="assets/js/main.js"></script>

</body>

</html>
```

GitHub Link – https://github.com/IBM-EPBL/IBM-Project-36510-1660295626

Demo Link - https://youtu.be/CjUl0FdmEpU