AIRLINE DATA ANALYTICS FOR AVIATION INDUSTRY

A PROJECT REPORT

Submitted by

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AIRLINE DATA ANALYTICS FOR AVIATION INDUSTRY

TEAM ID:- PNT2022TMID25103

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1. INTRODUCTION

1.1 Project Overview :-

The use of data and analytics to inform decision-making is causing a revolution that will change everything. With so much data being generated by both the passengers on board and the plane's sensors today, there are more and more chances to utilize this data, which has a significant impact on air travel. It enables numerous businesses to enhance crucial facets of their operations, from utilizing data to increase consumer retention to enhancing the dependability and safety of aeroplane. In this project, we analyse the dataset, visualize the data, define terms, and give further examples for the aviation industry to analyse data from every channel, such as to develop a distinctive customer profile based on a wide variety of demographic information, habits, and preferences. Aviation manufacturers and airlines can optimise the flight of civil aircraft, including risk reduction, operation optimization, and customized services, by studying the aviation dataset of nations, airports, and regions. For civil aviation, developing a framework for storing and processing massive aviation data becomes crucial. The platform gathers information from many data sources, such as aircraft, airlines, and maintenance facilities. The platform offers decision-support tools for civil aviation, such as maintenance plans, real-time alerts, health monitoring, fuel-saving strategies, and flight schedules. The delays are responsible for large economic losses. Its important to provide better airline and airport service and avoid delays in air travel across different locations and promise to get passengers from location A to Location B on time.

Purpose:-

We provide a safe and better experience to passengers on civil aircraft by utilizing aviation data. Airport codes can refer to either the IATA airport code, a three-letter code used in passenger reservation, ticketing, and baggage-handling systems, or the ICAO airport code, a four-letter code used by ATC systems and for airports without an IATA airport code. At the municipal level, to provide better airline and airport services and to avoid delays in air travel across different locations. The goal is to provide airports, airlines, and the general public to view the delay of flights to the destination which may occur due to climatic conditions to make the passengers aware of the arrival of flights.

2. LITERATURE SURVEY

2.1 Existing problem :-

Flight delay is inevitable and it plays an important role in both profits and loss of the airlines. An accurate estimation of flight delay is critical for airlines because the results can be applied to increase customer satisfaction and incomes of airline agencies. There have been many researches on modeling and predicting flight delays, where most of them have been trying to predict the delay through extracting important characteristics and most related features. However, most of the proposed methods are not accurate enough because of massive volume data, dependencies and extreme number of parameters. As the air travels have a significant role in economy of agencies and airports, it is necessary for them to increase quality of their services. One of the important modern life challenges of airports and airline agencies is flight delay. In addition, delay in flight makes passengers concerned and this matter causes extra expenses for the agency and the airport itself. In 2007, U.S government had endured 31–40 billion dollar downsides due to flight delays.

2.2 References :-

Mohamed et al. have studied the pattern of arrival delay for non-stop

domestic flights at the Orlando International Airport. They focused primarily on the cyclic variations that happen in the air travel demand and the weather at that particular airport.

In **Shervin et al.**'s work , their motive of research is to propose an approach that improves the operational performance without hampering or effecting the planned cost.

Adrian et al. have created a data mining model which enables the flight delays by observing the weather conditions. They have used WEKA and R to build their models by selecting different classifiers and choosing the one with the best results. They have used different machine learning techniques like Naïve Bayes and Linear Discriminant Analysis classifier.

Choi et al. have focused on overcoming the effects of the data imbalancing caused during data training. They have used techniques like Decision Trees, AdaBoost, and K-Nearest Neighbors for predicting individual flight delays. A binary classification was performed by the model to predict the scheduled flight delay.

Schaefer et al. have made Detailed Policy Assessment Tool (DPAT) that is used to stimulate the minor changes in the flight delay caused by the weather changes.

2.3 Problem Statement Definition :-

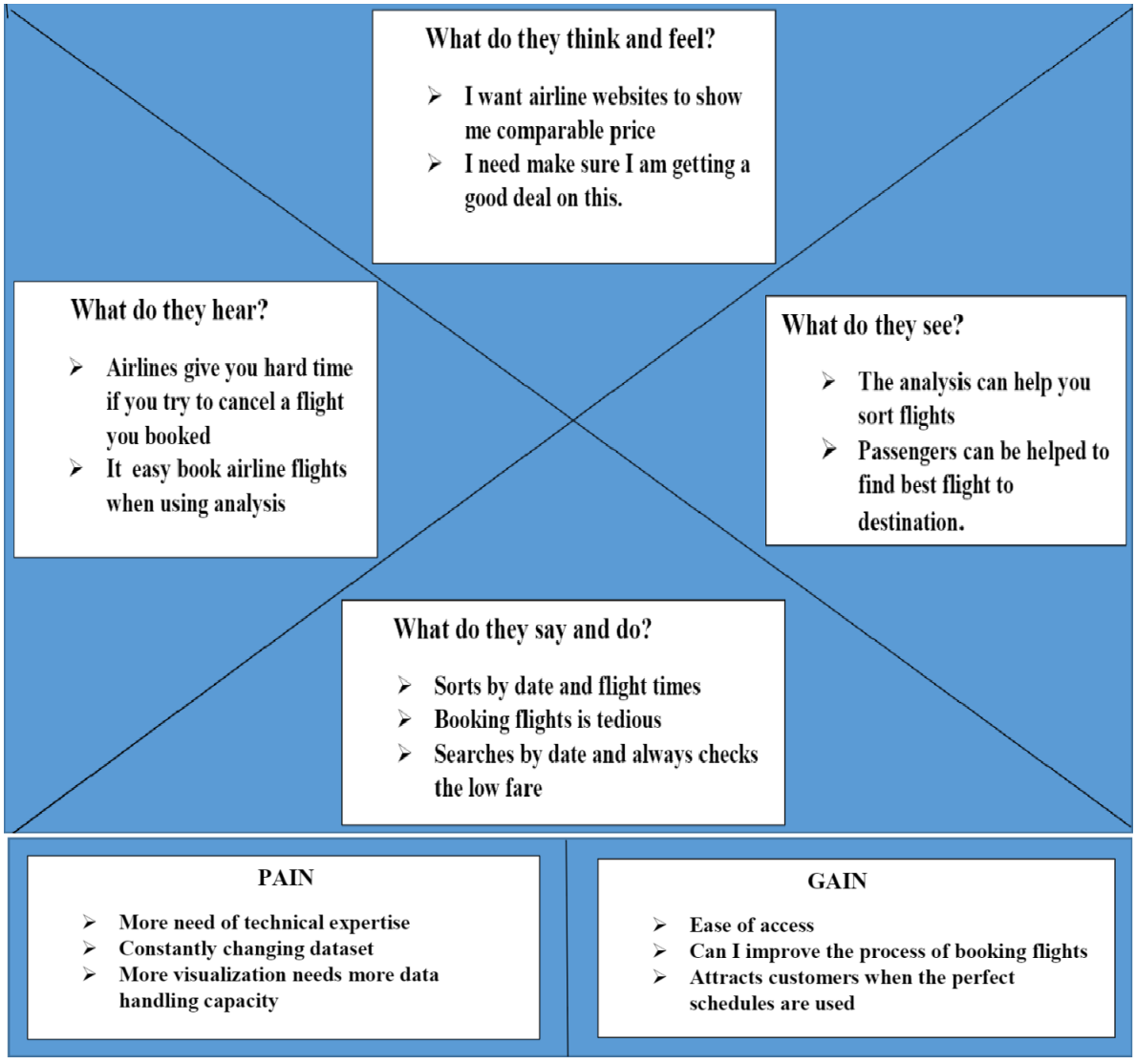
We gathered a dataset on continents, region, different airports located in different geographic regions, and we have worked with the dataset prepared the data module, explored the data and understand the dataset, finally we have performed the data visualization charts. The data which we gathered was very limited, but it gave us a great direction on how weather plays a part in flight delays. In this project, the goal is to use exploratory analysis and to build aware of the flights timings to the airports.

Problem Statement (PS)	**I am (Customer)**	**I'm trying to**	**But**	**Because**	**Which makes me feel**
PS-1	Passenger who expects to be comfortable during my airtime travel	Find best solutions and different ways to meet my expectation	Facing issues in searching for some unique resources	Details and information provided in public platform was not confidential	To enjoy my journey in the safest way

3. IDEATION & PROPOSED SOLUTION

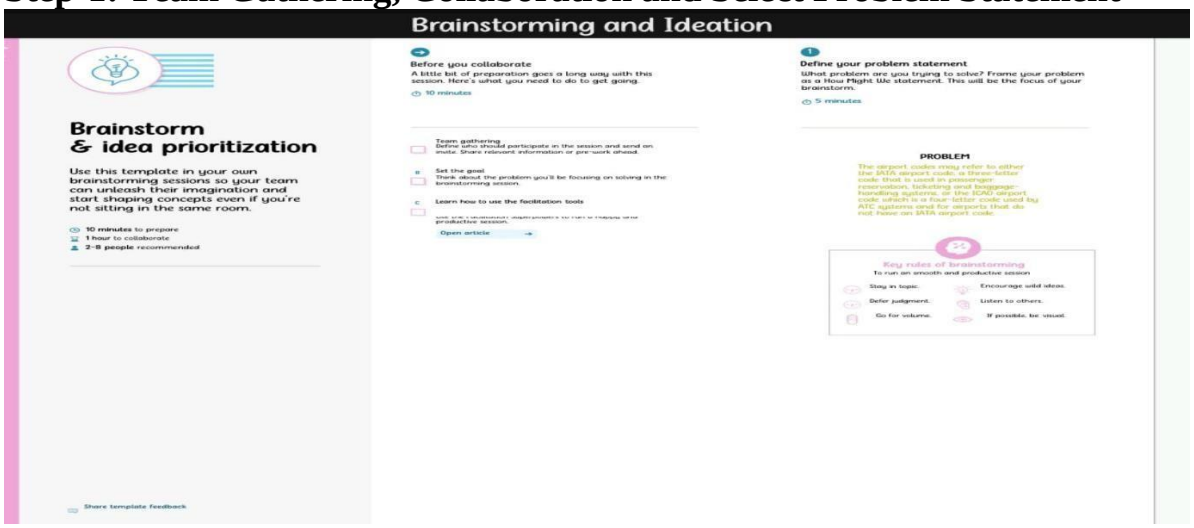
3.1 Empathy Map Canvas :-

An empathy map is a simple, easy to digit visual that captures knowledge about a user's behaviour and attitudes. It is a useful tool to help teams better understanding 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 the participants consider things from the user's perspective along with his or her goals and challenges.

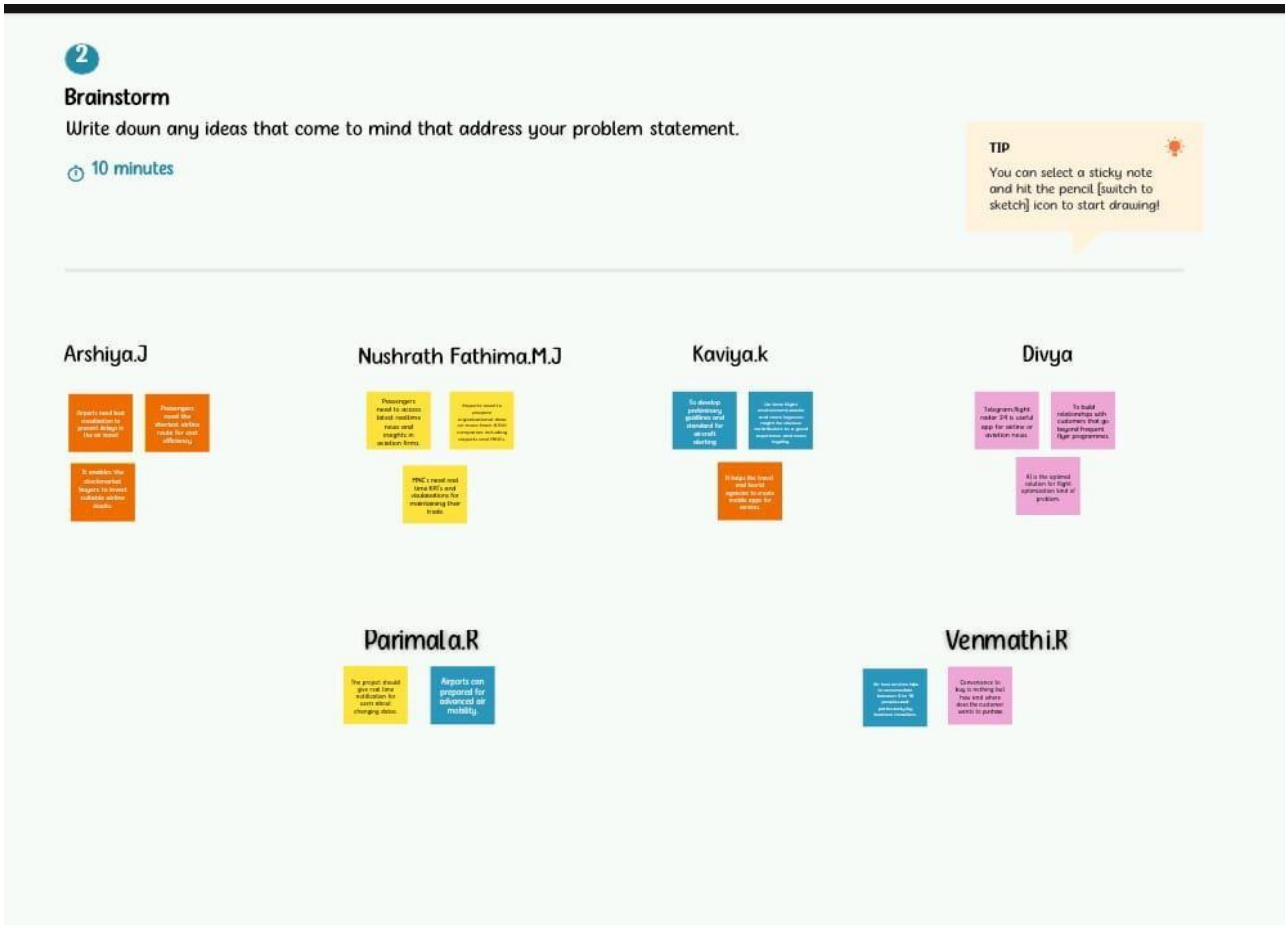


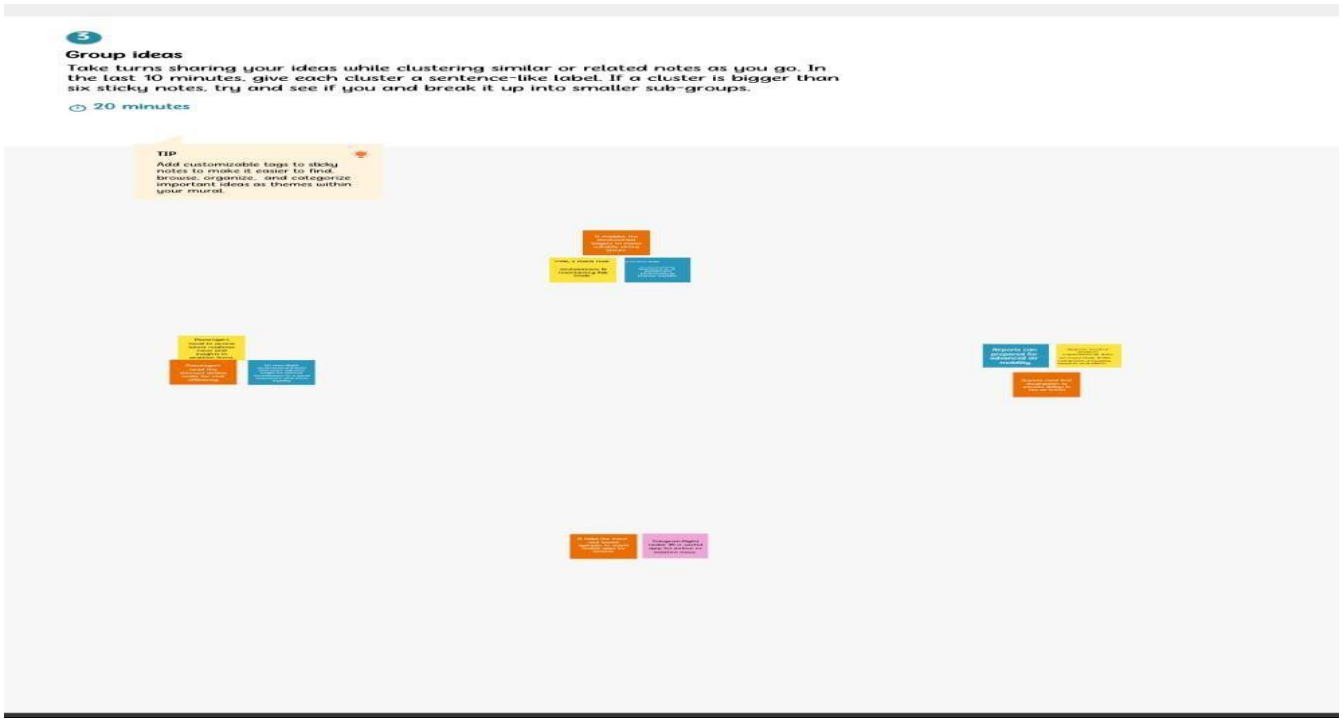
3.2 Ideation & Brainstorming:-

Step-1: Team Gathering, Collaboration and Select Problem Statement

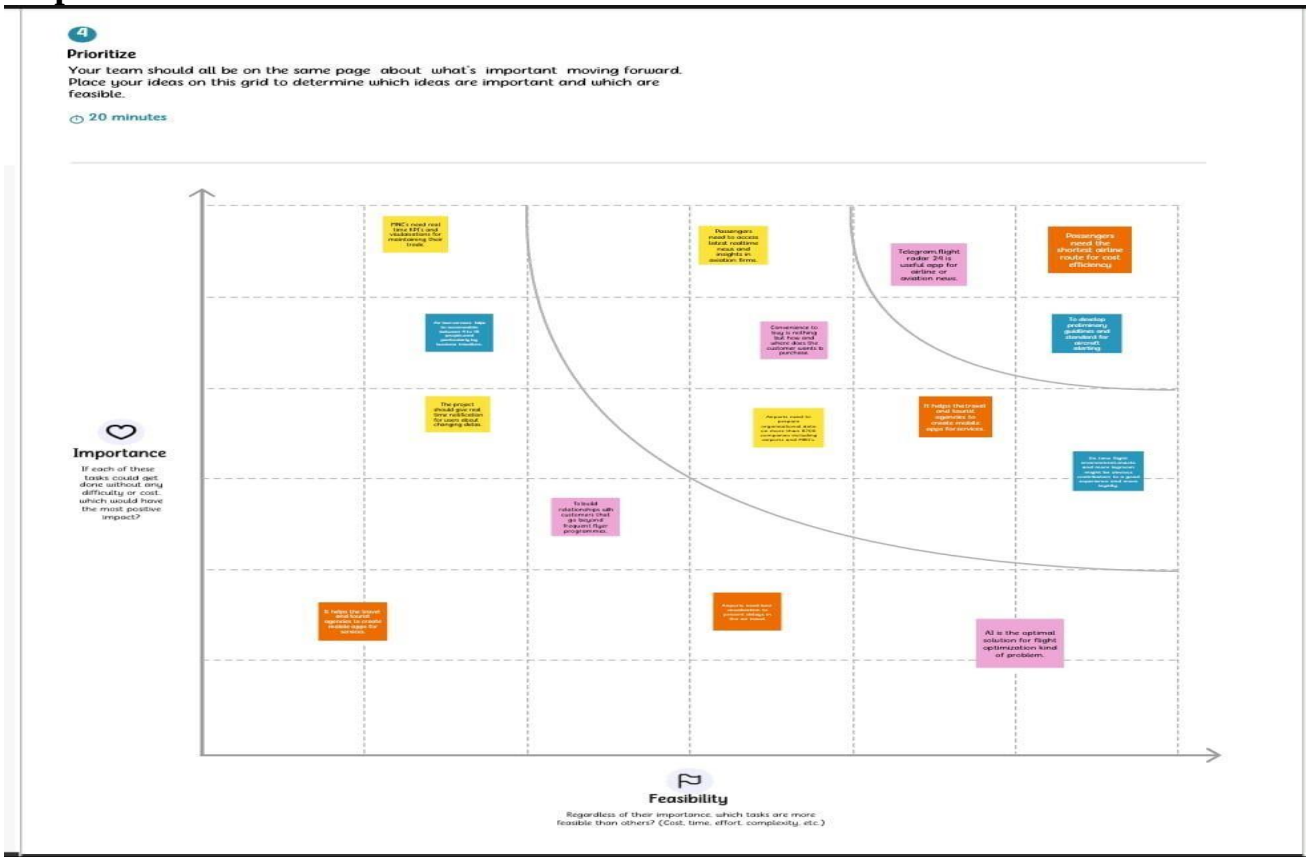


Step-2:Brainstorm, Idea listing and grouping





Step-3: Idea Prioritization



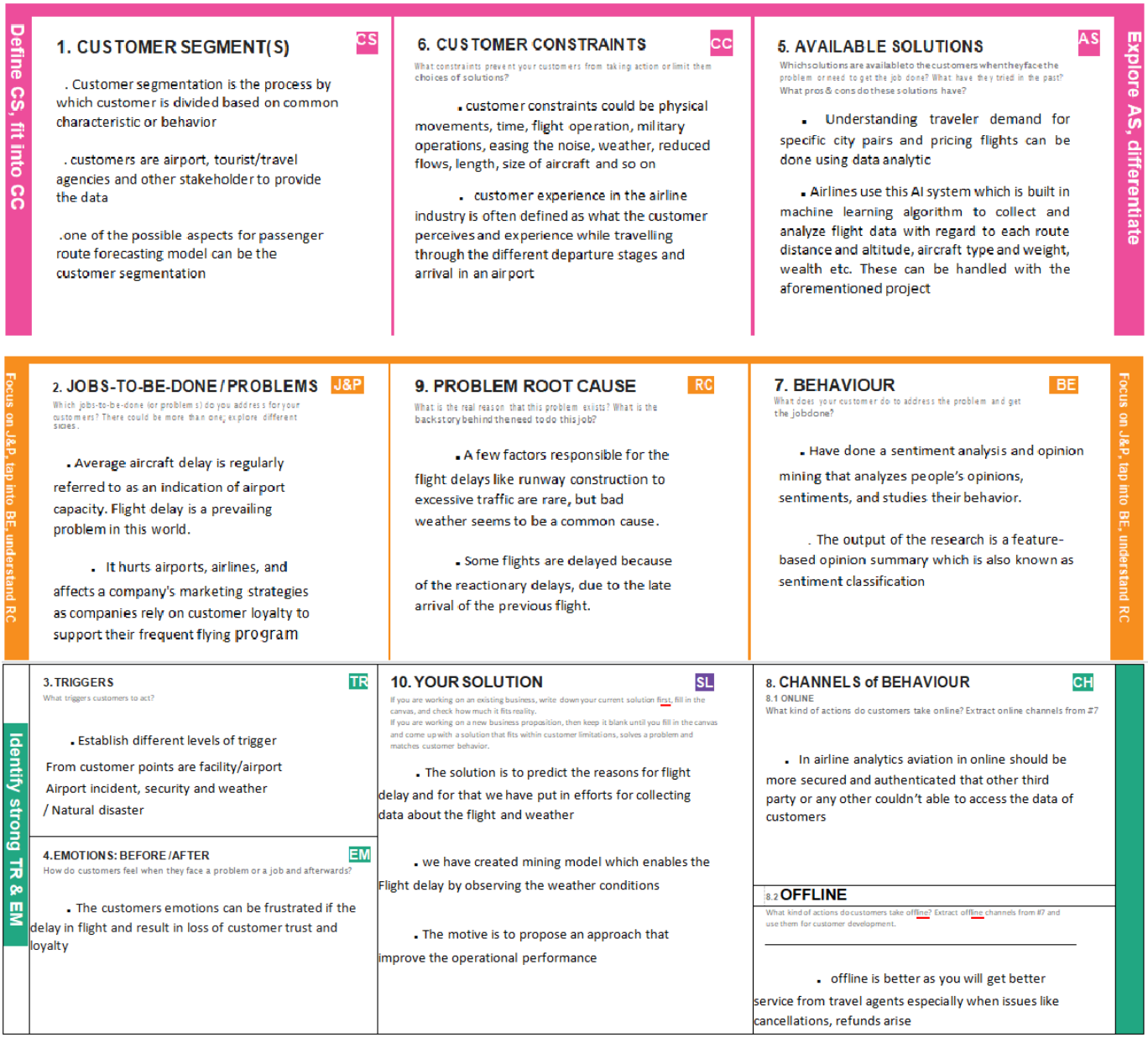
3.3 Proposed Solution :-

Understanding traveler demand for specific cities and pricing flights can be done using data analytic. Airlines use this AI system which is collected and analyze flight data with regard to each route distance and altitude,aircraft type and weight,wealth etc. Airlines airports aviation ground handling companies to provide audits workshop,presentation & seminar centered around executive presence corporate image ,team building and exceptional customer service. Due to the use of smart data analytics, passengers will avoid many issues with baggage tracking. While radio-frequency identification prevents mishandling the baggage, predictive analysis assists in improving the predictability of fleet reliability.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	❖ At airline there is many problem in planning and operation like complexity,detailed and on target modelling is needed to secure useful and well organized solution. ❖ At the same time there is continuous change in an airline environment. ❖ The industry adapts passenger airlines and air transportation come up with needs to look at how they can reduce health concerns without shrink the customer experience.
2.	Idea / Solution description	❖ Understanding traveler demand for specific city pairs and pricing flights can be done using data analytic. ❖ Airlines use this AI system which is built in machine learning algorithm to collect and analyze flight data with regard to each route distance and altitude,aircraft type and weight,wealth etc. These can be handled with the aforementioned project.

3.	Novelty / Uniqueness	❖ Airlines airports aviation ground handling companies to provide audits workshop,presentation & seminar centered around executive presence corporate image ,team building and exceptional customer service. ❖ Due to the use of smart data analytics, passengers will avoid many issues with baggage tracking. While radio- frequency identification prevents mishandling the baggage, predictive analysis assists in improving the predictability of fleet reliability.
4.	Social Impact / Customer Satisfaction	❖ The industry to understand the customers' convenience,quality,price and other maintenance issues by the Data analytics. ❖ The airline industry keeps the detail of customers up-to-date in real time and they also provide their need unique experiences,If there is any issues the customer don't get a proper response for the problem ,next time the customer wont like to choose this Airline.The speed of response is important.
5.	Business Model (Revenue Model)	❖ Business models is used to describe about the organization design or the company's. ❖ It measures and manage the necessary data and it specify the description of company's value generation system. ❖ A revenue model is a blueprint that shows how a startup business will earn revenue or gross income from its standard business operations, and how it will pay for operating costs and expenses.
6.	Scalability of the Solution	❖ The Cloud Cognos Analytics is not only for particular organization/governments. ❖ Aviation industry acting under international, domestic or private are also getting satisfied with the aviation data analyzing process provided as per their needs.

3.3 Problem Solution fit:-



4. REQUIREMENT ANALYSIS

4.1 Functional requirement :-

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration can done through Gmail.
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Visualizing data	Using IBM cognos Analytics user can visualize if any delay of flights.
FR-4	Generating Report	User can view the delay of flights report.

4.2 Non-Functional requirements :-

Following are the non-functional requirements of the proposed solution.

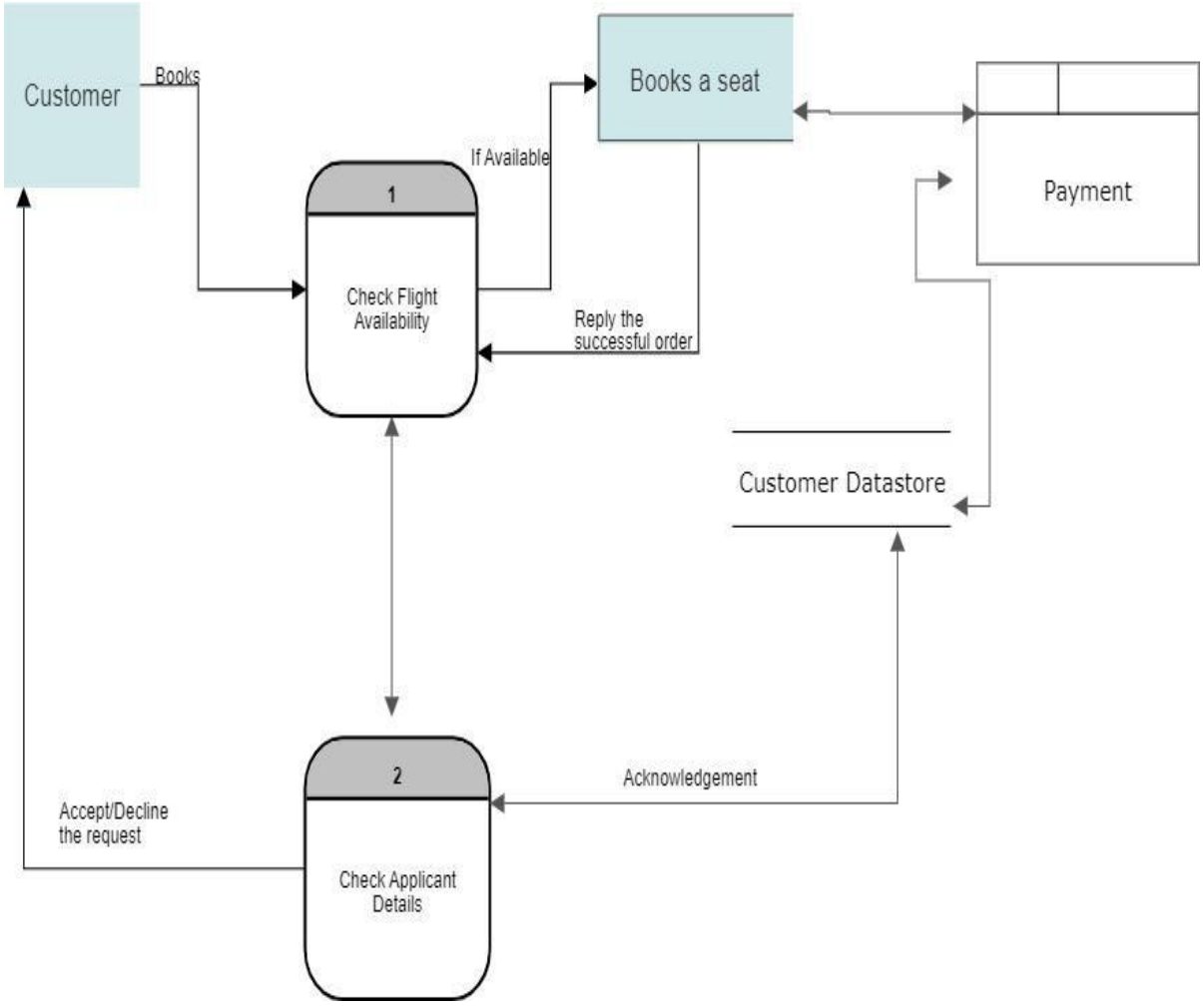
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Users can easily understand and use the features in an effective manner. The application is very simple to use and it is a user-friendly graphical interface. Actions will be performed in just a few clicks.
NFR-2	**Security**	The proper login mechanism should be used to avoid hacking.This is the main security concern in user account. The organization system should not disclose personal information of users and other organization details to public.
NFR-3	**Reliability**	If the system is disconnected or logout due to over access at the same time, it should save all the process of the users made up to the point of abnormal happenings.
NFR-4	**Performance**	While browsing through the catalogue the system should require a fair amount of speed

NFR-5	**Availability**	User can access at anytime.The system shall be available 24 hours a day 7 days a week.
NFR-6	**Scalability**	Wide range of users can make access of the websites.

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.

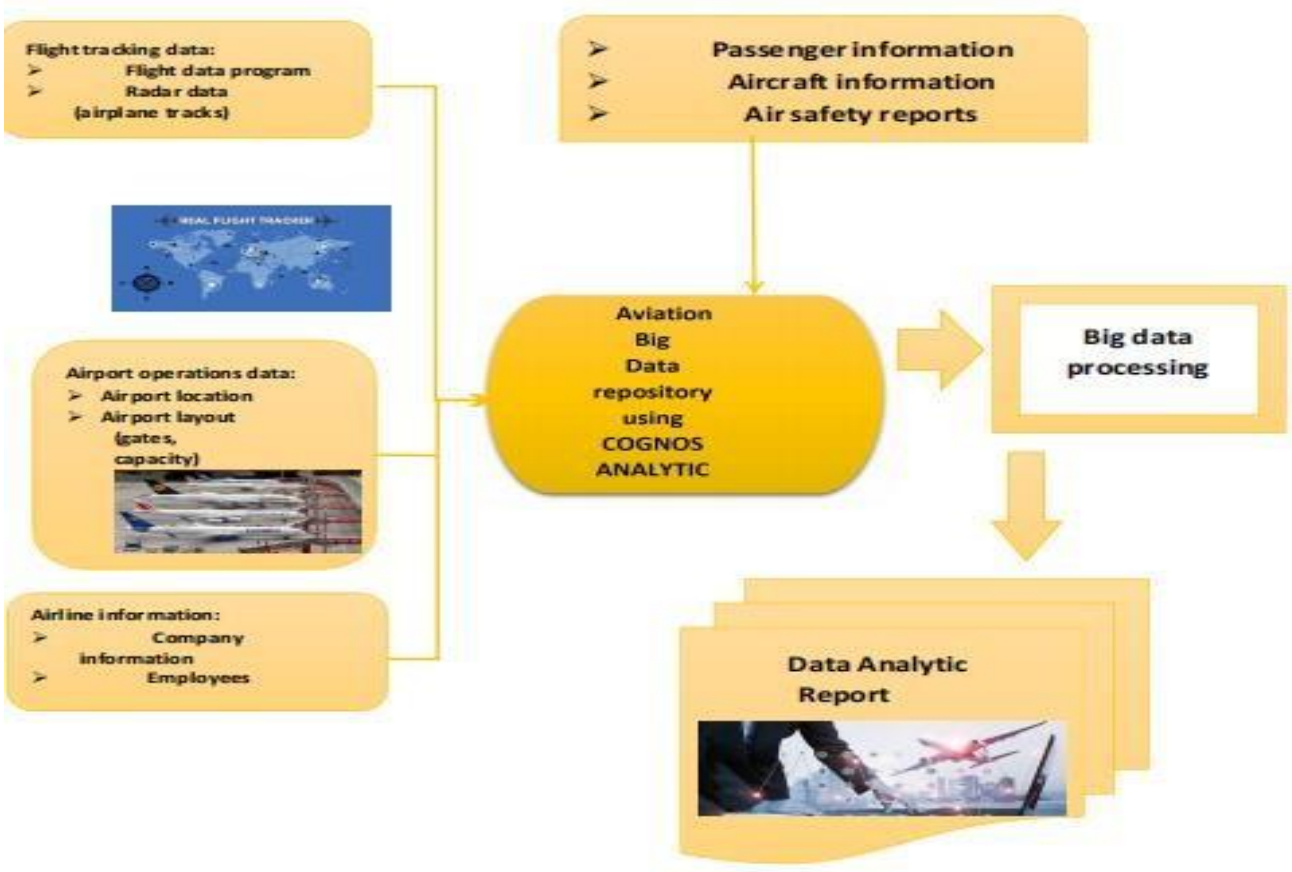


5.2 Solution & Technical Architecture :-

Solution 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, behaviour, 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**.**



Technical Architecture :

Airline Data Analytics For Aviation Industry

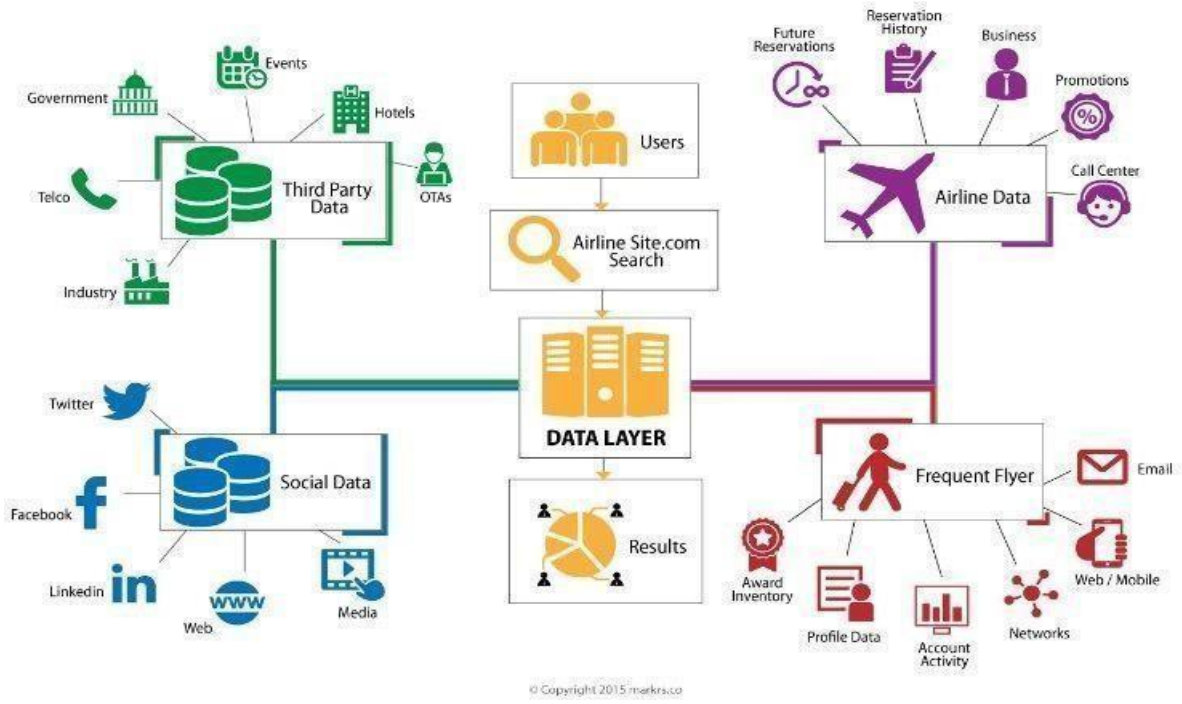


Table-1: Components & Technologies:

S.No	Components	Description	Technology
1.	User Interface	How user interacts with application. Example: Mobile App	HTML, CSS, Java Script, Excel
2.	Application Logic-1	Logic for a process in the application	IBM Watson STT service, Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson Assistant

4.	Database	Data Type, Configurations	MySQL, NSQL
5.	Cloud Database	Database service on cloud	IBM DB2, IBM Cloud
6.	File Storage	File Storage requirements	IBM Blocks Storage or other storage service or Local File system
7.	External API-1	Purpose of External API used in the application	IBM Weather API
8.	External API-1	Purpose of External API used in the application	Aadhar API
9.	Infrastructure (Server/Cloud)	Application Deployment on Local System/Cloud Local Server Configuration: Cloud Server Configuration	Local, Cloud Foundry

5.3 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 (Web 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 Gmail.		Medium	Sprint-1
	Login	USN-4	As a user, I can log into the application by entering email & password.	I can get to access my web portal	High	Sprint-1
	Dashboard	USN-5	As a user, I can get to know what my dashboard consists of.	I can my details of my registration.	Low	Sprint-2
Customer Care Executive	Organization	USN-6	The organization which owns this airplane analysis system will enable the option to customers to reach out the organization if	The customer care workers will help out the customers in trouble.	High	Sprint-1

			• they have any problem with the organization's system ofcustomer interaction or • airplane issues- delay, landing ina different location			
Administrator	Administration	USN-7	The organization takes in-charge of the administrative policies of different departments like: • registration • flight booking • delay visualization • generation of delay report	As an administrator, confirmation of user while registration is done.	High	Sprint-1

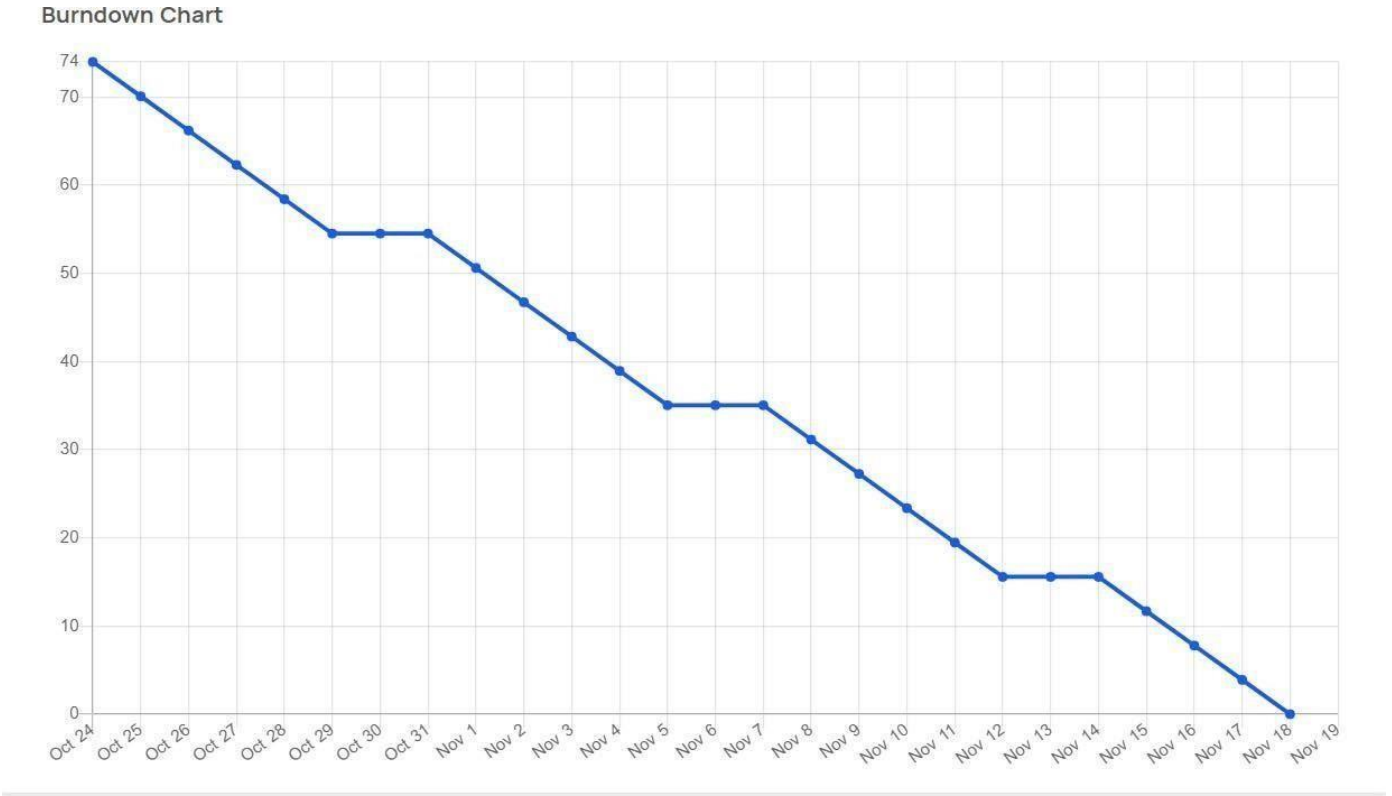
6. PROJECT PLANNING AND SCHEDULING

6.1 Sprint Planning and Estimation :-

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	I can sign up for the application as a user by providing my email address, password, and confirming that.	2	High	Venmathi R
Sprint-1	Registration	USN-2	When I register for the application as a user, I will get a confirmation email.	3	High	Divya V
Sprint-1	Login	USN-3	I've grown accustomed to using credentials to access the system as a user.	2	Low	Kaviya K
Sprint-1	Collection of dataset	USN-4	I can collect the dataset and choose the area of interest to be tracked and analysed as a user.	5	Medium	Arshiya J
Sprint-2	Dataset Exploration	USN-5	I can explore the given dataset through IBM cognos	6	High	Divya V
Sprint-2	Dataset Visualization	USN-6	I will use cognos as a developer to visualise the provided dataset into a dashboard.	6	High	Venmathi R
Sprint-3	Dashboard Customization	USN-7	I can personalise the dashboard that is visualised as a user.	6	Medium	Arshiya J Nushrath fathima m.j
Sprint-3	Ease of Access	USN-8	I can simply access and use the dashboard as a user.	6	Medium	Parimala R
Sprint-4	Report Generation	USN-9	I can view the detailed report of my visualization	6	High	Nushrath Fathima.M. J
Sprint-4	Dashboard Establishment	USN-10	Established the dashboard into a website and submit the website.	6	High	Kaviya K

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	12	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	12	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	12	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	12	19 Nov 2022



Velocity:

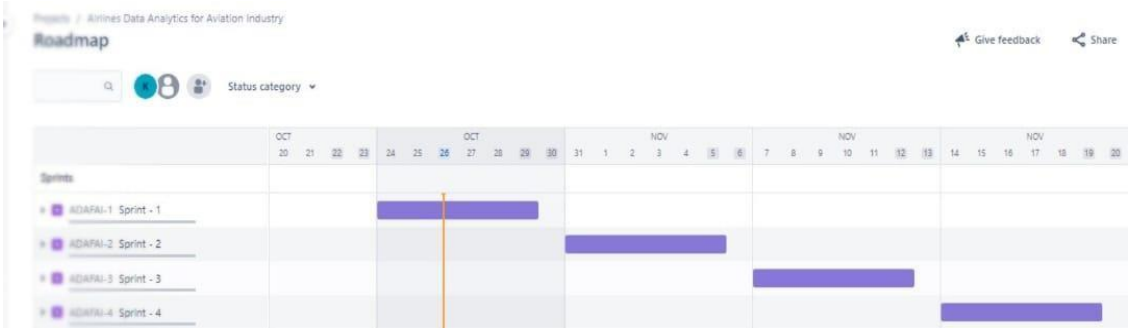
Imagine we have a 10 day sprint duration and the velocity of the team is 20. Lets calculate the teams average velocity(AV) per iteration unit(story points per day)

Average velocity=Sprint duration/velocity=12/6=2

Burndown Chart:

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

6.3 Report from JIRA :-

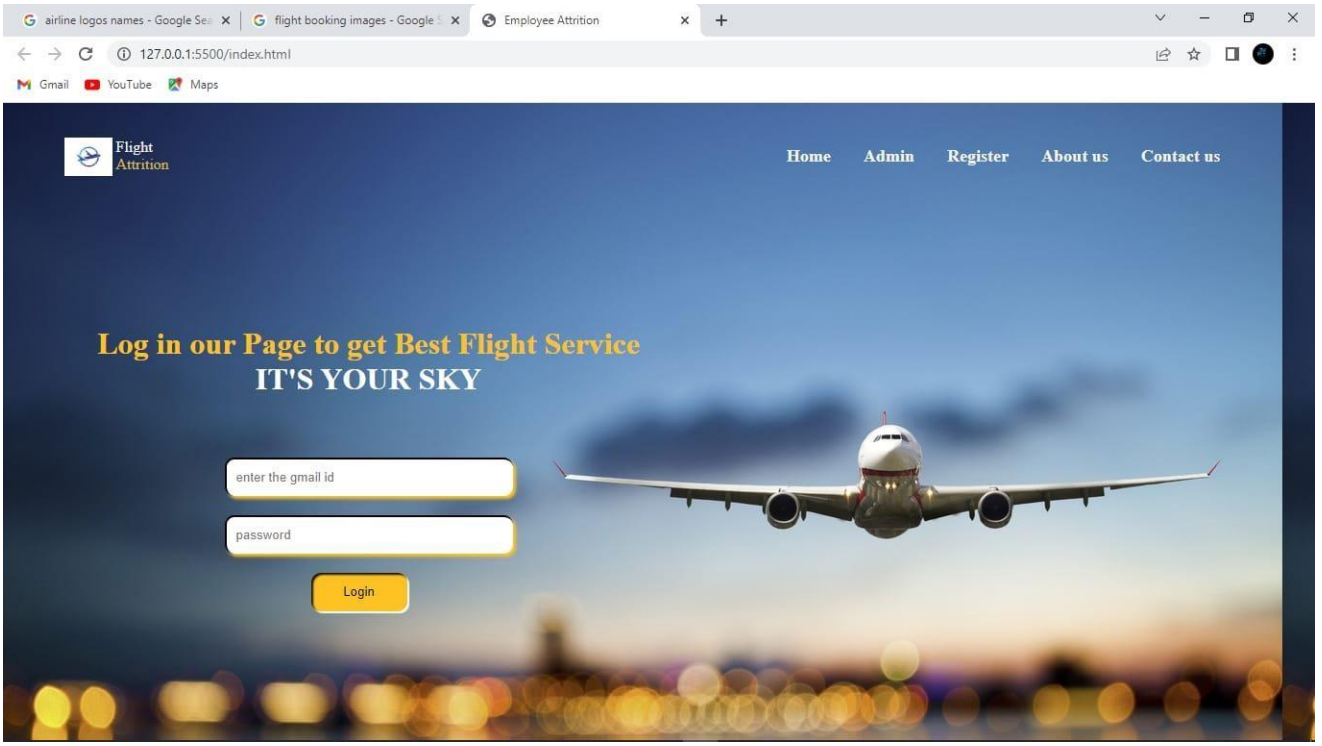


7. CODING AND SOLUTIONING

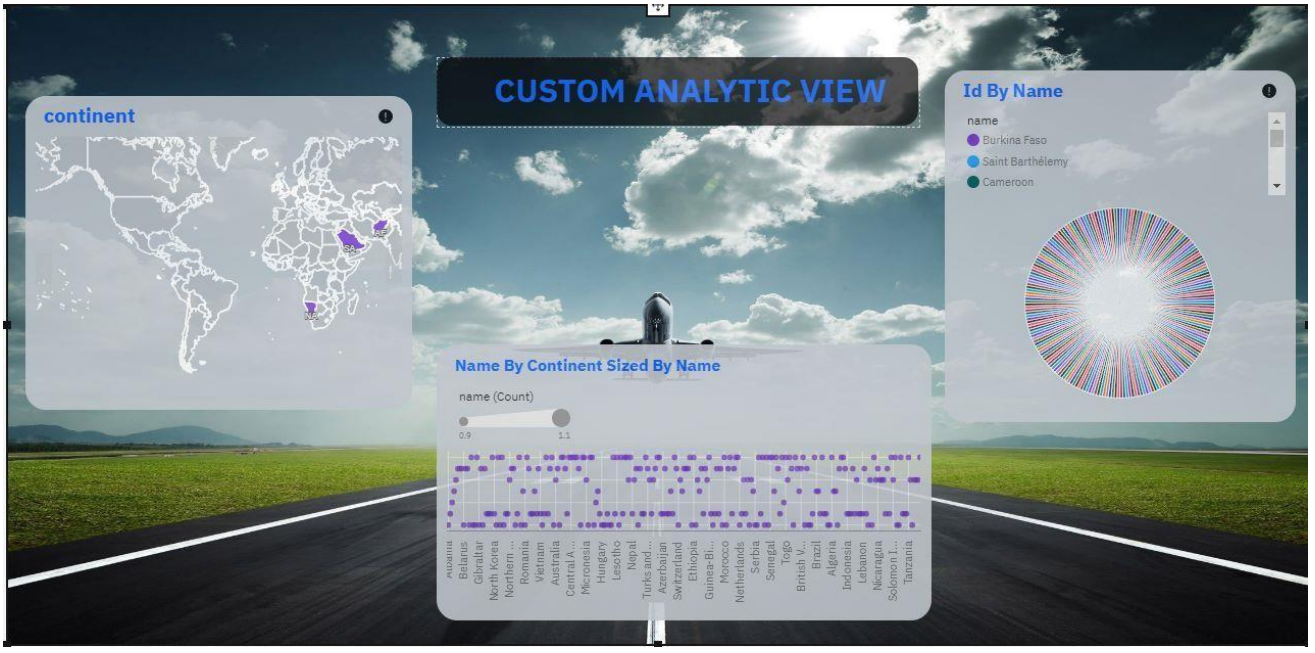
7.1 Feature 1 :-Building a login page using html

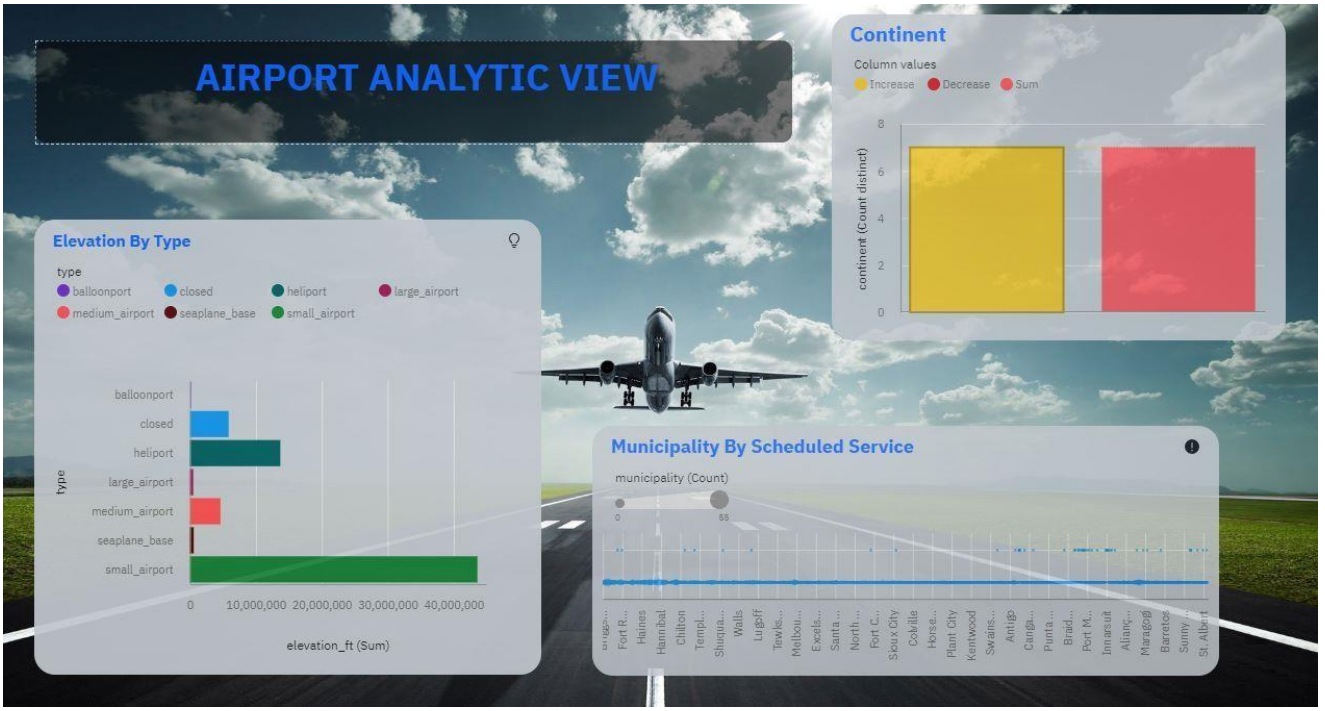
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Employee Attrition</title>
    <link rel="stylesheet" href="./style.css">
</head>
<body>
    <nav>
    <div id="lat">
        <div id="logo">
            <img src="./images/logo 2.png" alt="logo" width="50px" height="40px"
style="margin-top: 5px;">
        </div>
        <div id="title">
            <span>Flight</span>
            <span style="color:rgb(209,184,87)">Attrition</span>
        </div>
    </div>
    <div id="menu" style="font-size: large;">
        <span id="home"><b>Home</b></span>
        <span id="admin"><b>Admin</b></span>
        <span id="register" ><b>Register</b></span>
        <span id="about"><b>About us</b></span>
        <span id="contact"><b>Contact us </b></span>
```

```
    </div>
</nav>


         <div class="head">
              <span style="color: rgb(255,194,35);"><b>Log in our Page to get Best Flight Service</b></span>
                <span style="color: white;"><b>IT'S YOUR SKY</b></span>
            </div>
            <div class="body">
                <form action="connection.php" method="post">
                    <input class="input" type="email" placeholder="enter the gmail id" name="name">
                    <input class="input" type="txt" placeholder="password" name="password">
                    <button class="button" name="submit">Login</button>
                </form>
            </div>
        </div>div class="container">
        <div class="container1">
        <div class="container2">
        <div class="img">
        </div>
        </div>
    </div>
    <script src="./index.js"></script>
</body>
</html>
```

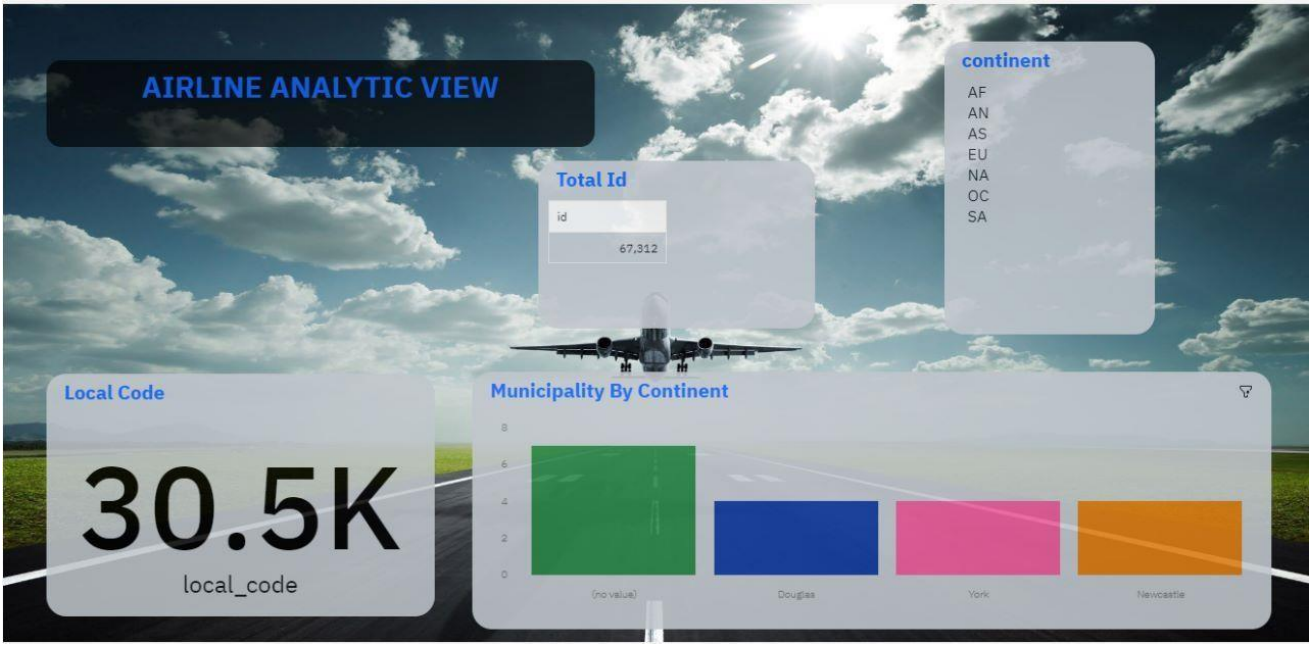


7.2 Feature 2 :- Creating dashboard using IBM cognos analytics platform




AIRPORT ANALYTIC VIEW
Continent
Column values
Increase
Decrease
Sum
continent (Count distinct)
Elevation By Type
type
balloonport
closed
heliport
large_airport
medium_airport
seaplane_base
small_airport
elevation_ft (Sum)
Municipality By Scheduled Service
municipality (Count)


AIRPORT ANALYTIC VIEW
Wikipedia Link
10.3K
wikipedia_link
Iso Country
iso_region (Count distinct)
iso_country
Continent
Nodes
All
Target category
AF
continent
AF
AN
AS
EU
NA
OC
SA


AIRLINE ANALYTIC VIEW
Total Id
id
67,312
continent
AF
AN
AS
EU
NA
OC
SA
Local Code
30.5K
local_code
Municipality By Continent
8
6
4
2
0
(no value)
Douglas
York
Newcastle

8. TESTING

8.1 Test Cases :-

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Commnets	TC for Automation(Y/N)	BUG ID
LoginPage_TC_OO1	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	Visual Studio Code Using Html,Css,javascript,sql	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Singup popup displayed or not		Login/Signup popup should display	Working as expected	Pass			
LoginPage_TC_OO2	UI	Home Page	Verify the UI elements in Login/Signup popup	Visual Studio Code Using Html,Css,javascript,sql	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Singup 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		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
LoginPage_TC_OO3	Functional	Home page	Verify user is able to log into application with Valid credentials	Visual Studio Code Using Html,Css,javascript,sql	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box	Username: chalam@gmail.com password: Testing123	User should navigate to user account homepage	Working as expected	pass			
LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with InValid credentials	Visual Studio Code Using Html,Css,javascript,sql	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter InValid username/email in Email text box 4.Enter valid password in password text box	Username: chalam@gmail password: Testing123	Application should show 'Incorrect email or password ' validation message.	Working as expected	pass			
LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with InValid credentials	Visual Studio Code Using Html,Css,javascript,sql	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter Invalid password in password text box	Username: chalam@gmail.com password: Testing123678686786876876	Application should show 'Incorrect email or password ' validation message.	Working as expected	pass			
LoginPage_TC_OO5	Functional	Login page	Verify user is able to log into application with InValid credentials	Visual Studio Code Using Html,Css,javascript,sql	1.Enter URL and click go 2.Click on My Account dropdown button 3.Enter InValid username/email in Email text box 4.Enter Invalid password in password text box 5.Click on login button	Username: chalam password: Testing123678686786876876	Application should show 'Incorrect email or password ' validation message.	Working as expected	pass			
ntering to dashboar	Functional	dashboard	can visualize the dashboard	IBM cognos			Working as expe		pass			
Enter report	Functional	page	can view detailed visualization	IBM cognos			Working as expe		Pass			

8.2 User Acceptance Testing :-

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [Product Name] 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

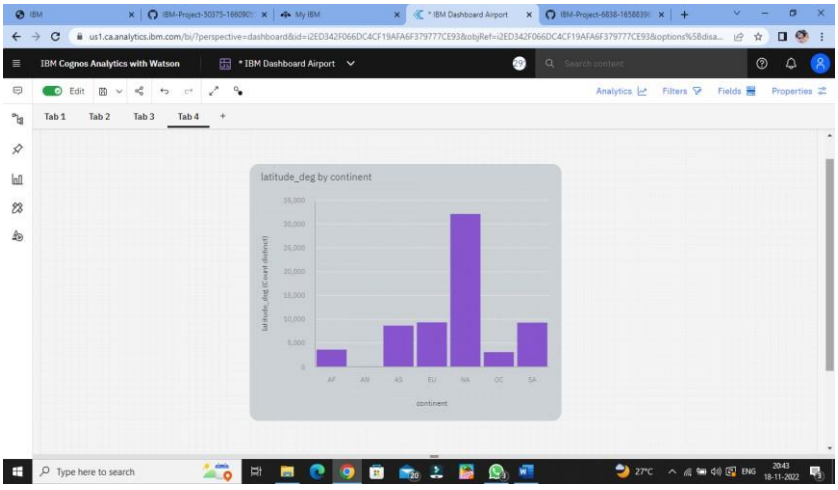
This report shows the number of test cases that have passed, failed, and untested

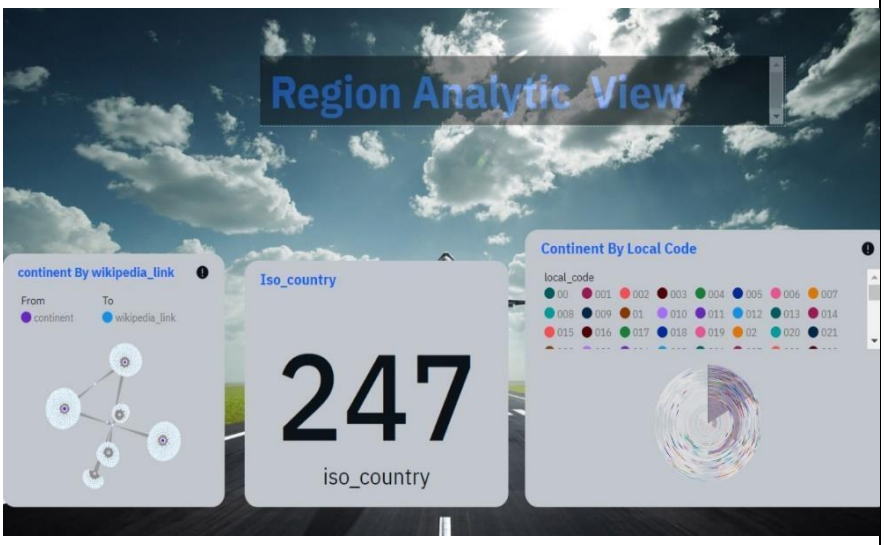
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	9	0	0	9
Final Report Output	4	0	0	4
Version Control	2	0	0	2

9. RESULTS

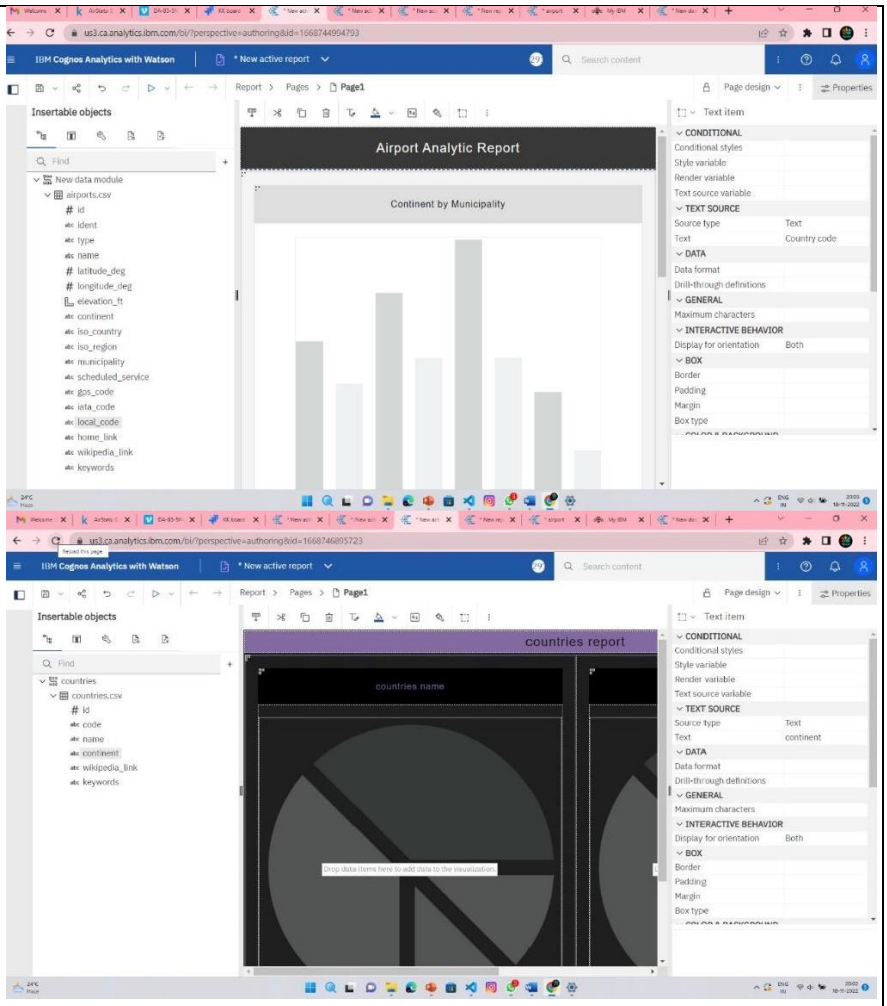
9.1 Performance Metrics :-

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

S.No.	Parameter	Screenshot / Values
1.	Dashboard design	No of Visualizations / Graphs – 19 Number of tabs-6 
2.	Data Responsiveness	Data will dynamically change if the dataset changes and graphs too changes 

3.	Amount Data to Rendered (DB2 Metrics)	No.of total local code- 30.5k Total ID-67,312 Total country-7 
4.	Utilization of Data Filters	We have created filters for dashboard which is working perfect 

5.	Effective User Story	with help of dataset of airport, country and region No of Scene Added 
6.	Descriptive Reports	No of Visualizations / Graphs – 4


IBM Cognos Analytics with Watson
* New active report
Insertable objects
Airport Analytic Report
Continent by Municipality
countries report
countries name

10. ADVANTAGE AND DISADVANTAGE

Advantage

- Delay in flights can be visualized.
- Cancellation due to climatic change can be visualized.

Disadvantage

- High temperature on the tarmac can lead to hear stress and other illness associated with extreme working conditions.
- Heat or flooding can make airports inoperable. When temperature soar toward 100 degree Fahrenheit, tarmacs can get soft and cause the wheels of planes to get stuck.
- In addition to extreme heat, climate change triggered by human is contributing to rising sea levels, which are leading to higher storm surges and more floods.

11. CONCLUSION

Understanding traveler demand for specific cities and pricing flights can be done using data analytic. Airlines use this AI system which is collected and analyze flight data with regard to each route distance and altitude,aircraft type and weight,wealth etc. It can be used to predict future glitches prevent them from happening and make the maintenance procedure more accurate, after analyzing the data, a lot of insights have been generated. Most of the delays and cancellations are due to three main reasons which are stated as weather, Airlines carrier issues and the nation air system.

12. FUTURE SCOPE

After analyzing the data we obtain Atlanta is one of the most busiest airport. In the year 2018 there is a maximum cancellations had taken place, most of the delays and cancellations whether in 2018 specifically on time span were due to three major reasons:

- Weather
- Airlines/carrier issues
- National air system

The weather data for each of the major airports could be obtained and combined with the existing dataset. With the new dataset, one could determine the exact weather conditions that resulted in delay/cancellations like rain, fog, etc and there can also book the flight using this web application.

13. APPENDIX

13.1 Source code :-

Index.html

```
<!DOCTYPE html>
<html lang="en">
<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">
   <title>flight Attrition</title>
   <link rel="stylesheet" href="./style.css">
</head>
<body>
   <nav>
   <div id="lat">
      <div id="logo">
         <img src="./images/logo 2.png" alt="logo" width="50px" height="40px"
style="margin-top: 5px;">
      </div>
      <div id="title">
         <span>Flight</span>
         <span style="color:rgb(209,184,87)">Attrition</span>
      </div>
   </div>
   <div id="menu" style="font-size: large;">
      <span id="home"><b>Home</b></span>
      <span id="admin"><b>Admin</b></span>
      <span id="register" ><b>Register</b></span>
      <span id="about"><b>About us</b></span>
      <span id="contact"><b>Contact us </b></span>
   </div>
</nav>

      <div class="head">
         <span style="color: rgb(255,194,35);"><b>Log in our Page to get Best Flight
Service</b></span>
         <span style="color: white;"><b>IT'S YOUR SKY</b></span>
      </div>
      <div class="body">
         <form action="connection.php" method="post">
            <input class="input" type="email" placeholder="enter the gmail id"
name="name">
            <input class="input" type="txt" placeholder="password"
name="password">
            <button class="button" name="submit">Login</button>
         </form>
```

```
        </div>
      </div>div class="container">
      <div class="container1">
      <div class="container2">
      <div class="img">
      </div>
      </div>
   </div>
   <script src="./index.js"></script>
</body>
</html>
```

Style.css

```
<!DOCTYPE html>
<html lang="en">
<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">
   <title>Employee Attrition</title>
   <link rel="stylesheet" href="./style.css">
</head>
<body>
   <nav>
   <div id="lat">
      <div id="logo">
         <img src="./images/logo 2.png" alt="logo" width="50px" height="40px"
style="margin-top: 5px;">
      </div>
      <div id="title">
         <span>Flight</span>
         <span style="color:rgb(209,184,87)">Attrition</span>
      </div>
   </div>
   <div id="menu" style="font-size: large;">
      <span id="home"><b>Home</b></span>
      <span id="admin"><b>Admin</b></span>
      <span id="register" ><b>Register</b></span>
      <span id="about"><b>About us</b></span>
      <span id="contact"><b>Contact us </b></span>
   </div>
</nav>
      <div class="head">
         <span style="color: rgb(255,194,35);"><b>Log in our Page to get Best Flight
Service</b></span>
           <span style="color: white;"><b>IT'S YOUR SKY</b></span>
        </div>
        <div class="body">
           <form action="connection.php" method="post">
```

```
            <input class="input" type="email" placeholder="enter the gmail id"
name="name">
            <input class="input" type="txt" placeholder="password"
name="password">
            <button class="button" name="submit">Login</button>
          </form>
        </div>
      </div>div class="container">
      <div class="container1">

      <div class="container2">
      <div class="img">
      </div>
      </div>
   </div>
   <script src="./index.js"></script>
</body>
</html>
```

Index.js

```
const home = document.getElementById('home');
const admin = document.getElementById('admin');
const register = document.getElementById('register');
const about = document.getElementById('about');
const contact = document.getElementById('contact');
admin.addEventListener('click',()=>{
   window.location.href="./admin.php"
});
home.addEventListener('click',()=>{
   window.location.href="./index.html";
   con.classList.add("off");
   console.log("hi")
})
register.addEventListener('click',()=>{
   window.location.href="./registration.php";
})
contact.addEventListener('click',()=>{
   window.location.href="./contact.html";
})
```

User.html

```
<!DOCTYPE html>
<html lang="en">
<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">
   <title>Document</title>
```

```
</head>
<body>
   <h1>success</h1>
</body>
</html>
```

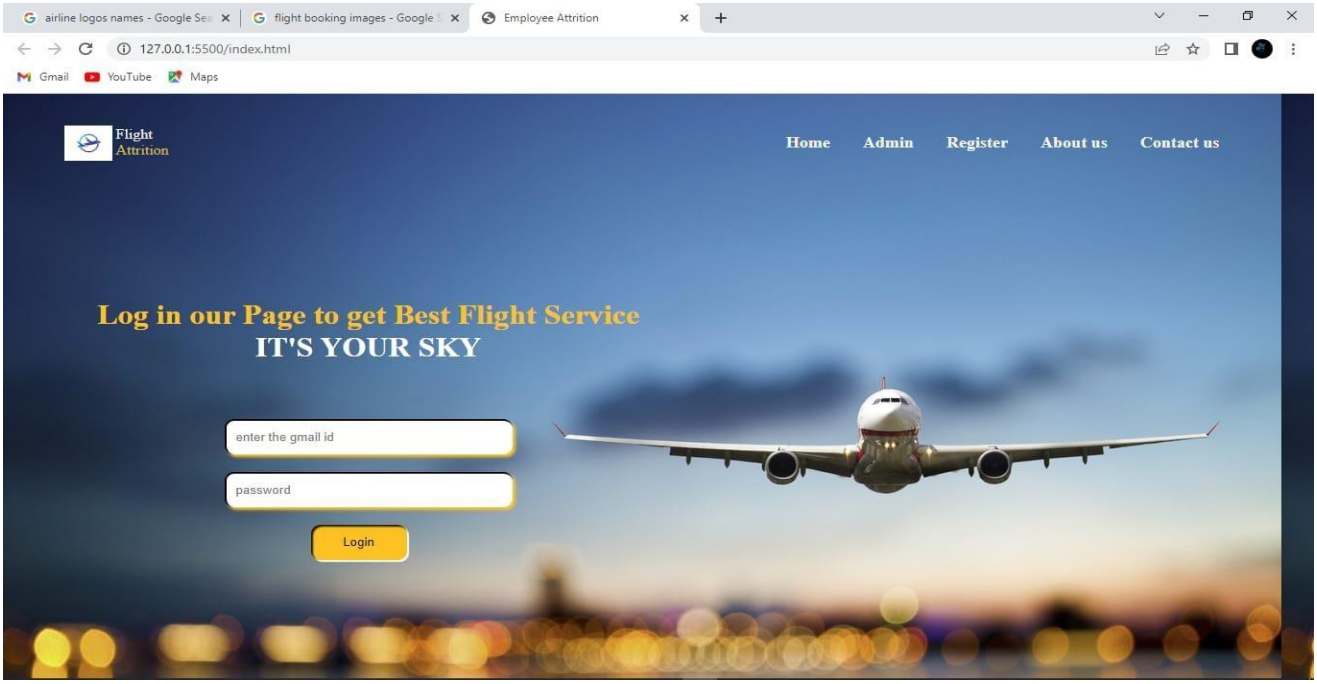
Registration.html

```
<?php

use LDAP\Result;

$con = new mysqli('localhost','root','','project');
if(isset($_POST['submit']))
{
   $name = $_POST['name'];
   $email = $_POST['email'];
   $password = $_POST['pass'];

   $sql="insert into `reg` (name,email,password) values('$name','$email','$password')";
   $result = mysqli_query($con,$sql);
   if(!$result)
   {
      die(mysqli_error($con));
   }
}
?>
<!DOCTYPE html>
<html lang="en">
<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">
   <title>Employee Attrition</title>
   <link rel="stylesheet" href="./style.css">
</head>
<body>
   <nav>
   <div id="lat">
      <div id="logo">
         <img src="./images/logo.png" alt="logo" width="50px" height="40px"
style="margin-top: 5px;">
      </div>
      <div id="title">
         <span>Employee</span>
         <span style="color:rgb(209,184,87)">Attririon</span>
      </div>
  </div>
   <div id="menu" style="font-size: large;">
   <span id="home"><b>Home</b></span>
```

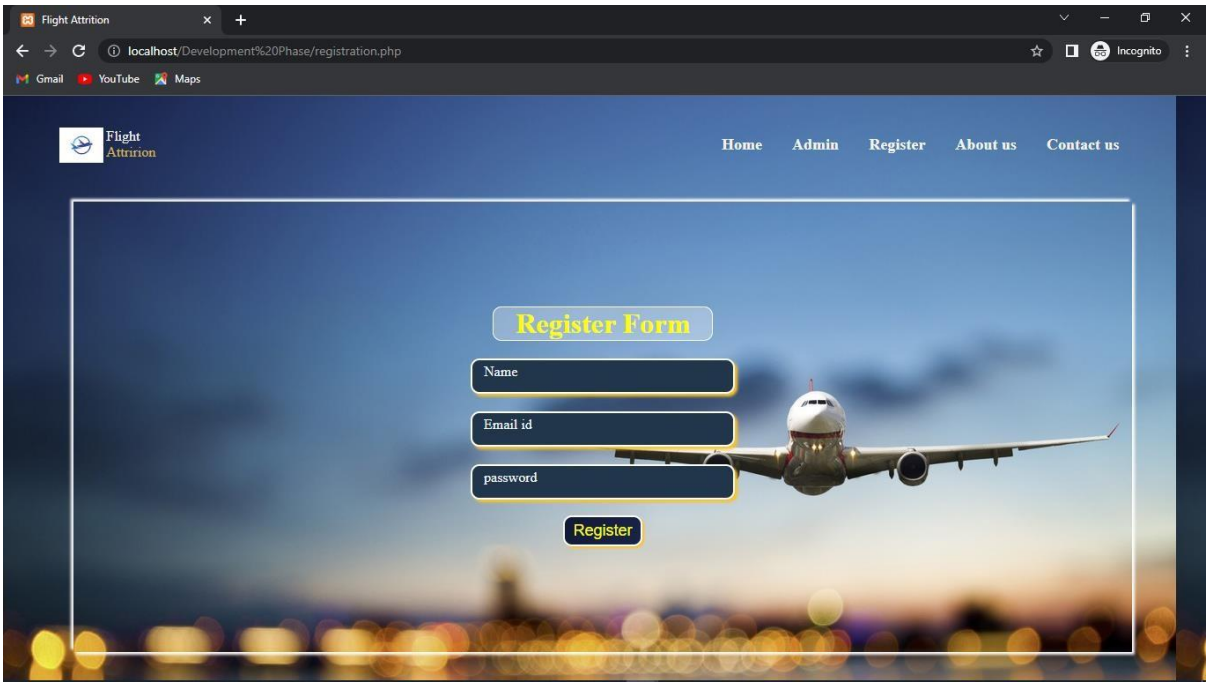
```
      <span id="admin"><b>Admin</b></span>
      <span id="register" ><b>Register</b></span>
      <span id="about"><b>About us</b></span>
      <span id="contact"><b>Contact us</b></span>
   </div>
</nav>
<div class="container ">
      <div class="con" >
         <div class="reg">
            <form class="regform" action="registration.php"  method="post">
               <h1 style="color:rgb(255,283,0); background-color: rgba(255, 255, 255, .3);
width:250px ; text-align: center;
               border-radius: 10px; border: 1px solid white;" >Register Form</h1>
               <div class="inputbox">
                  <input                    type="text"                    name="name"
required="required"><span>Name</span></div>
                  <div    class="inputbox">          <input    type="email"    name="email"
required="required"><span>Email id</span></div>
                     <!--  <div  class="inputbox">    <input type="text" name="orgname"
required="required"><span>Organization name</span></div> -->
                        <div  class="inputbox">    <input  type="password"  name="pass"
required="required"><span>password</span></div>
                           <!--    <div    class="inputbox">          <input    type="password"
required="required"><span>confirm password</span></div> -->
               <button  name="submit" >Register </button>
               </div>
            </form>
         </div>
      </div>
   </div>
   <script src="./index.js"></script>
</body>
</html>
```

Final output:

LOGIN PAGE

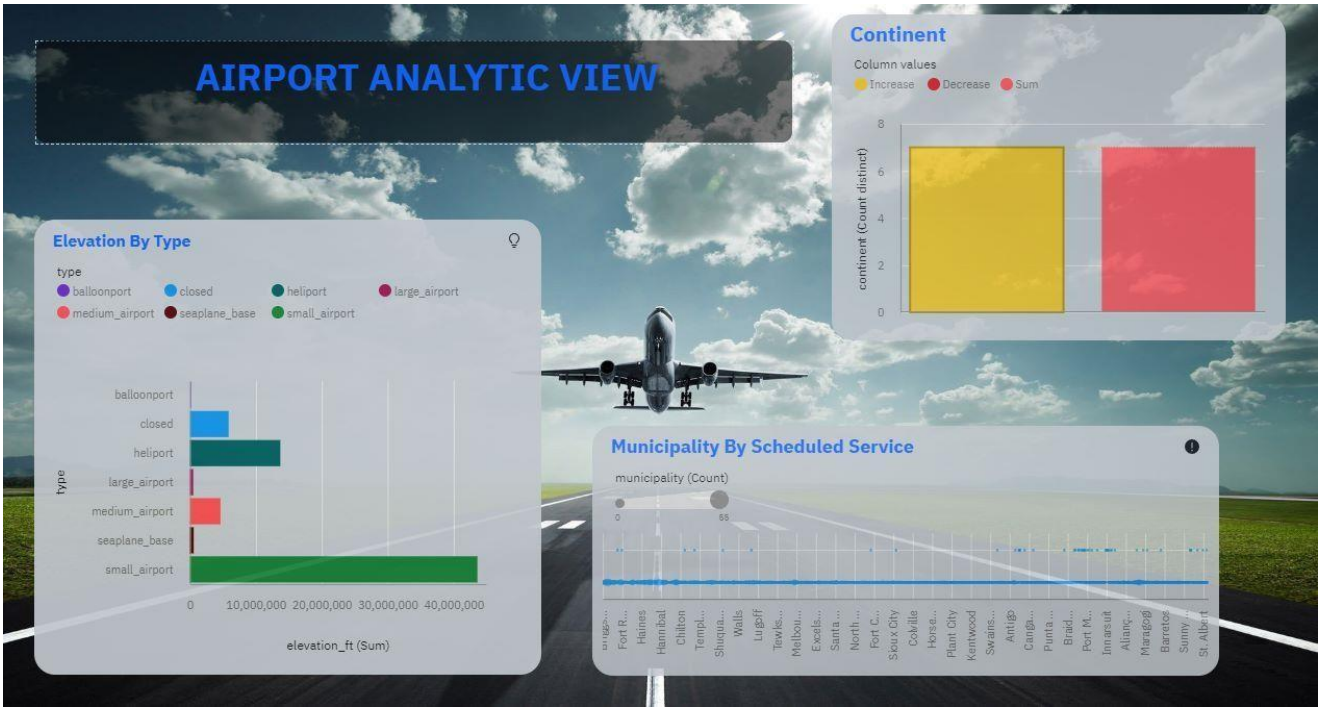


REGISTER FORM

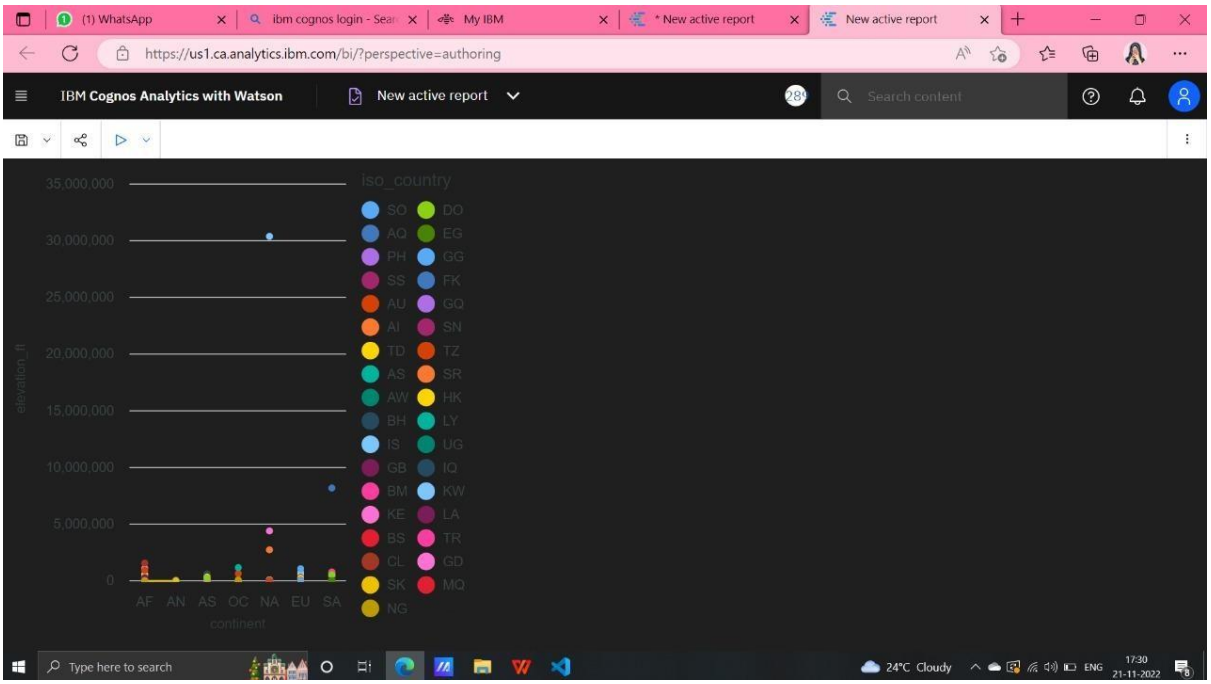


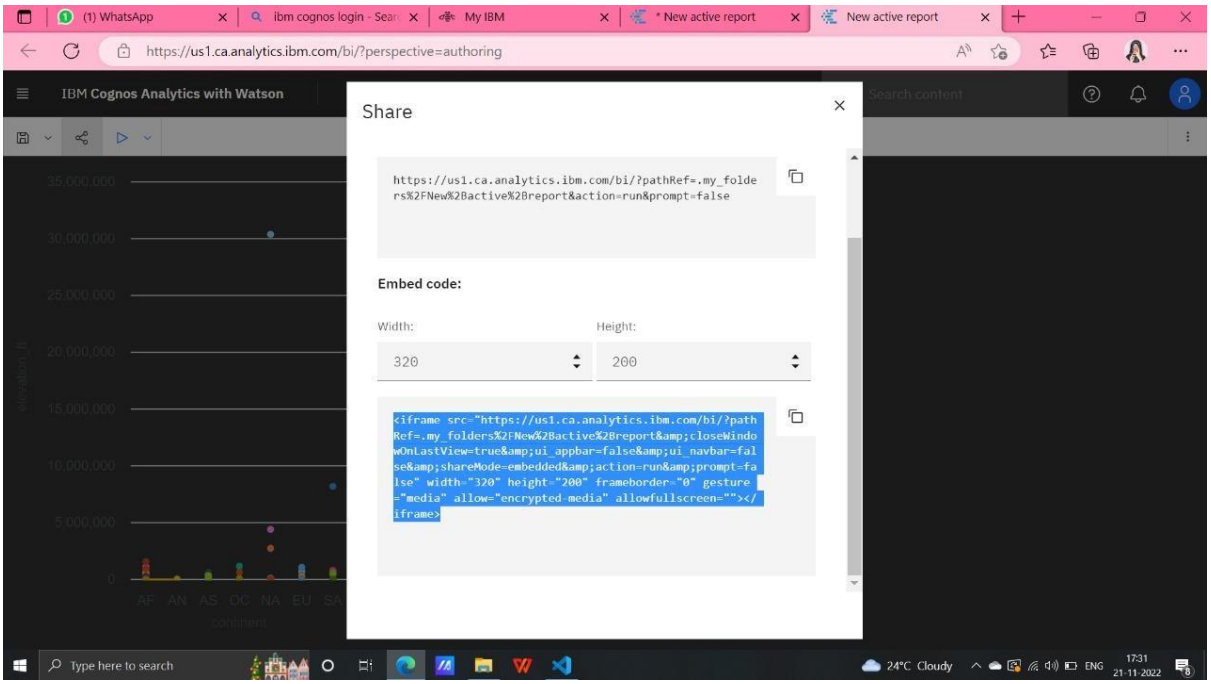
DASHBOARD 1

DASHBOARD 2

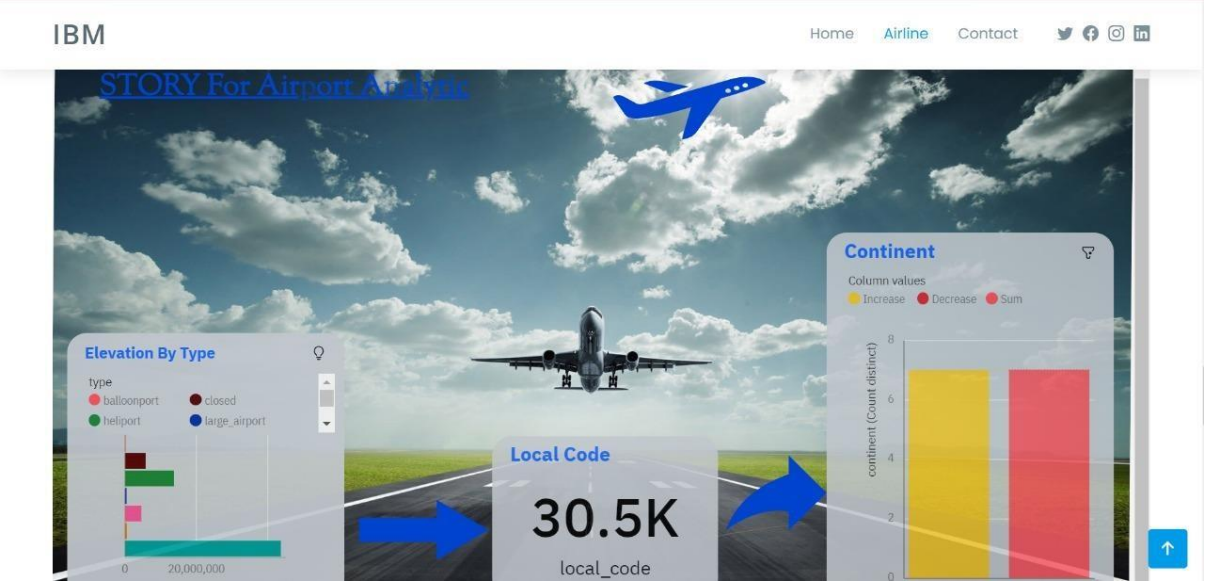


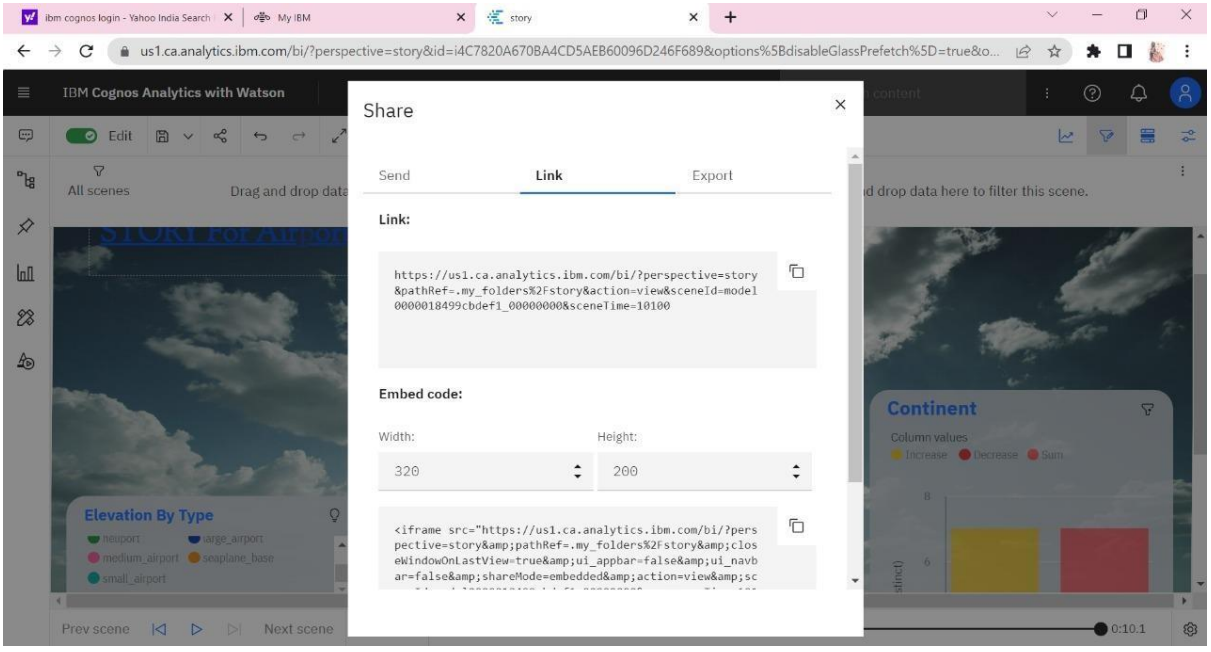
REPORT


IBM Cognos Analytics with Watson
New active report
iso_country
continent
elevation_ft


IBM Cognos Analytics with Watson
Share
https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNew%2Bactive%2Breport&action=run&prompt=false
Embed code:
Width:
Height:
320
200

STORY





13.2 GITHUB

GitHub link: https://github.com/IBM-EPBL/IBM-Project-50375-1660905515