

# UNLOCKING INSIGHT INTO THE GLOBAL AIR TRANSPORTATION NETWORK

---

## Project report

### Introduction:

#### Description of project:

The global air transportation network dataset is the comprehensive collection of information on airports, airlines, airplane and routes. It content information such as names, cities, country, codes {IATA and ICAO} longitudes, latitudes and altitudes of airports across the world. With detailed time zone and daylight saving time data. Additionally they include information about the airports including their Ids, name, and aliases. IATA and ICAO code , call sign country of origin and active/inactive status similarly, it also cover sources details such as airline sources to destination airports along with essential details like code share stakeholder if any stops required during this journey along with the type of aircraft being used for that particular journey.

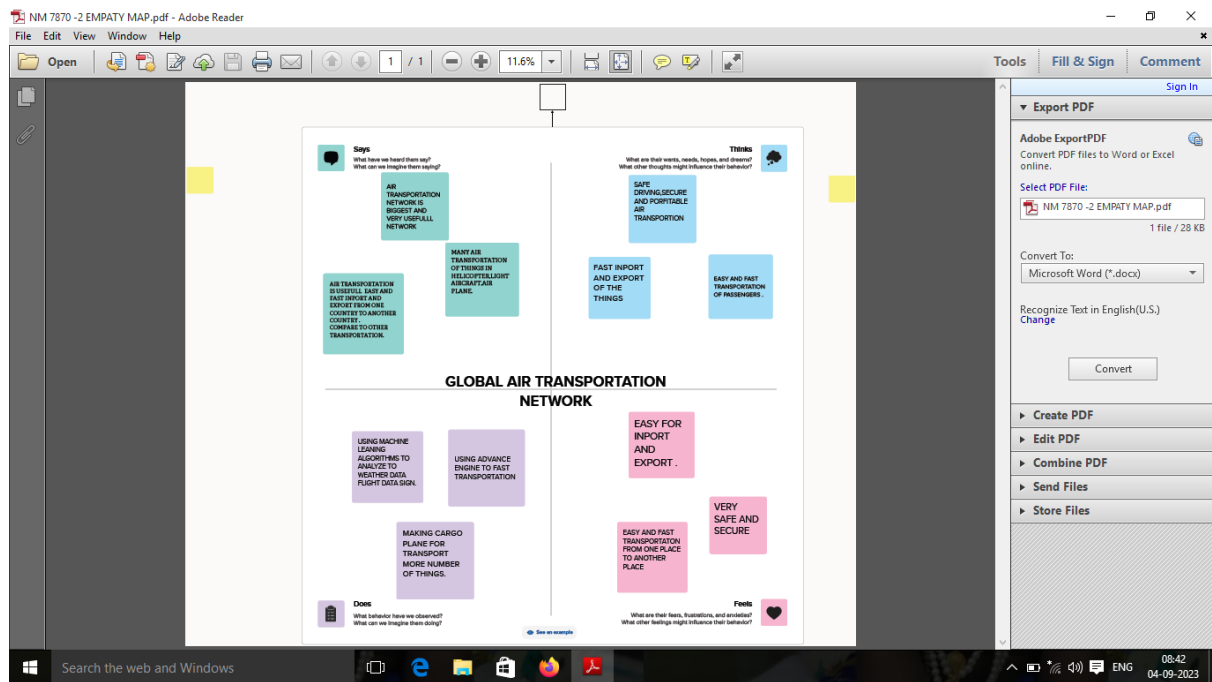
#### Uses:

It s use to analyses the details of air transportation network.

#### PROBLEM DEFINITION & DESIGN THINKING:

#### EMPATHY MAP:

Step1: first we make a empathy map for a group idea .For create a empathy go to mural web site and logic with email account and search the templates that you wanted to create.

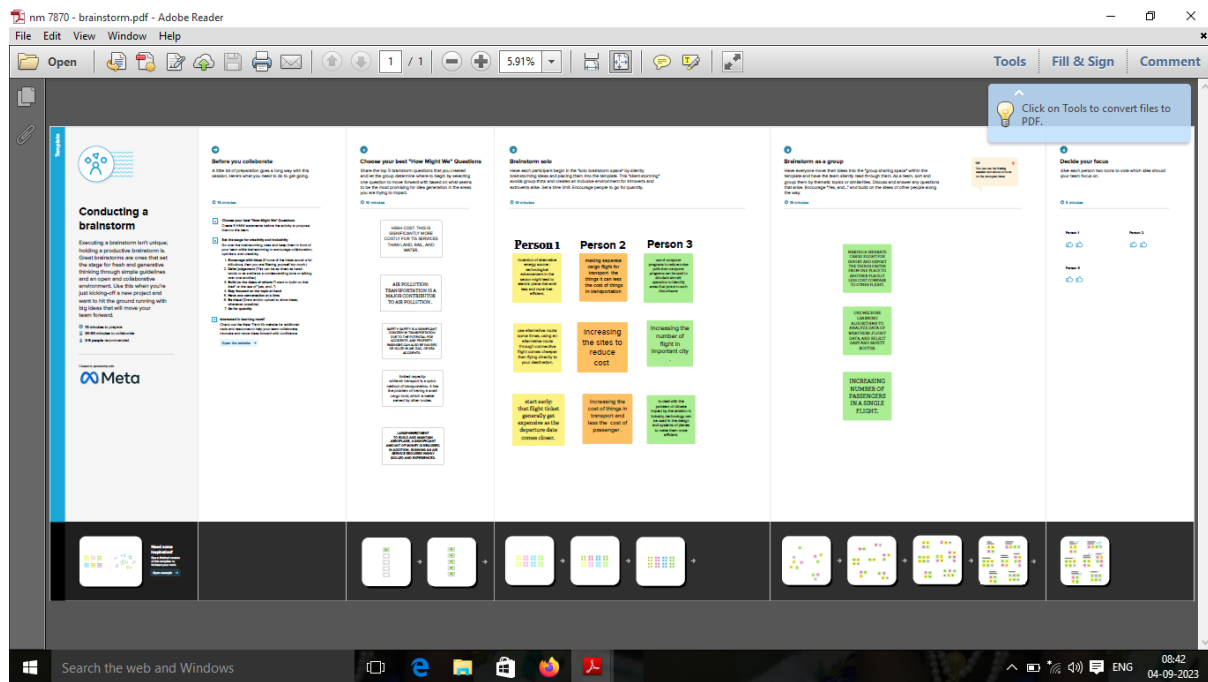


## BRAINSTORMING MAP:

Step2: then make a brainstorm used mural website, in brainstorm we discussion the define problem and understanding the problem. First we have defined what are the problem and type in the question box.

Then it is a group idea is write in the box person1, person2 and person 3 now three person give different idea for problem.

Take best three idea and type in last box.



## PROCEDURE FOR TABLEAU PROJECT:

Step3: before opening the tableau desktop we had download the dataset for your project.

Step4: after download the dataset we open the tableau desktop

Step5: after opening selected connect to data, select the “more” option and select the dataset.

Step6: it open in the data source , now we arranged the data and select the “extract” option for the better per formation for you analysis. I have arranged my in the order airports data is first, air route at second , airlines and airplanes are joined together with air routes . Now we have switched to extract mode and I have create 6000+ row that I need .then save it.

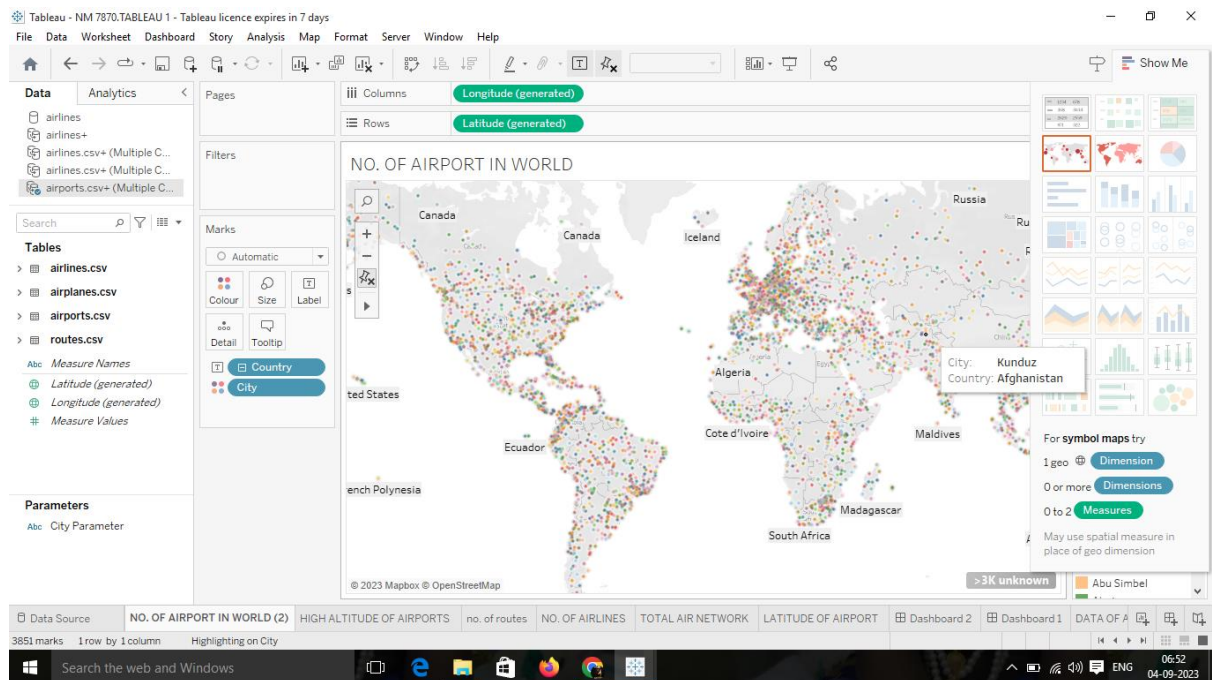
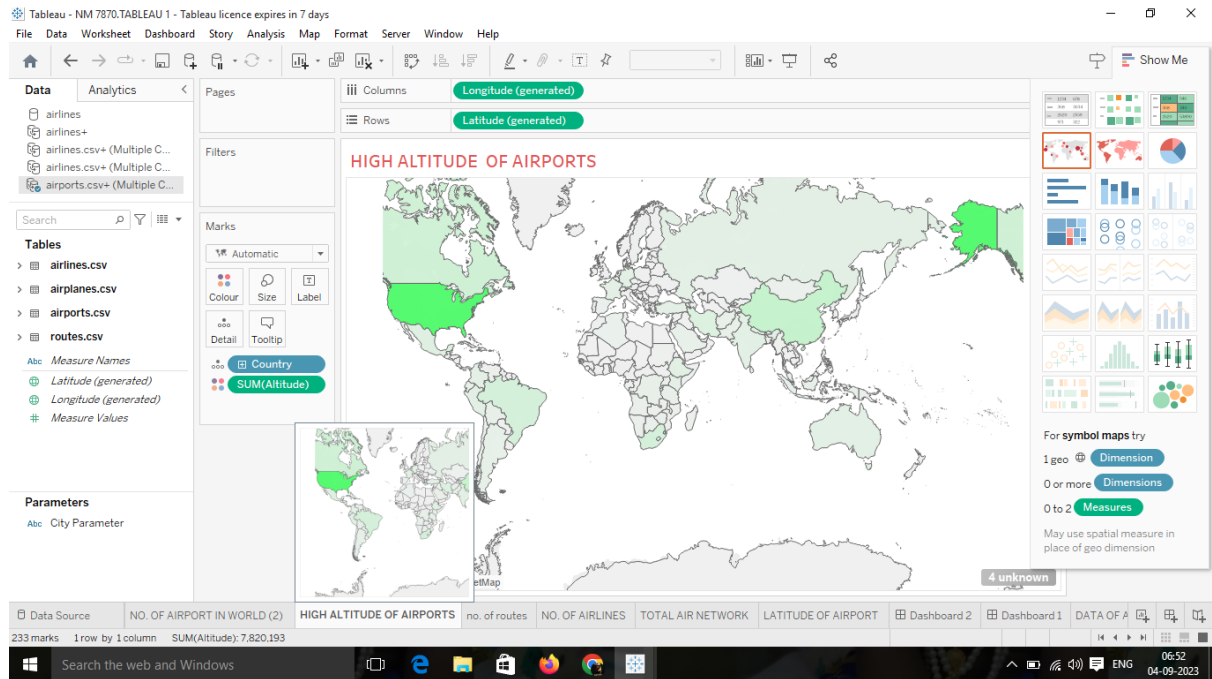
The screenshot shows the Tableau Desktop interface. On the left, the 'Connections' pane lists 'airports.csv', 'routes.csv', 'airplanes.csv', and 'airlines.csv'. The 'Files' pane shows a list of files including 'airlines.csv', 'airplanes.csv', 'airports.csv', and 'routes.csv'. The main workspace displays a data source connection diagram for 'airports.csv+ (Multiple Connections)'. The diagram shows 'airports.csv' connected to 'routes.csv', which is then connected to 'airlines.csv' and 'airplanes.csv'. Below the diagram, a data preview table is shown for 'airports.csv' with 15 fields and 7698 rows. The table has columns: Index, Airport ID, Name, City, and Country. The data shows airports in Papua New Guinea.

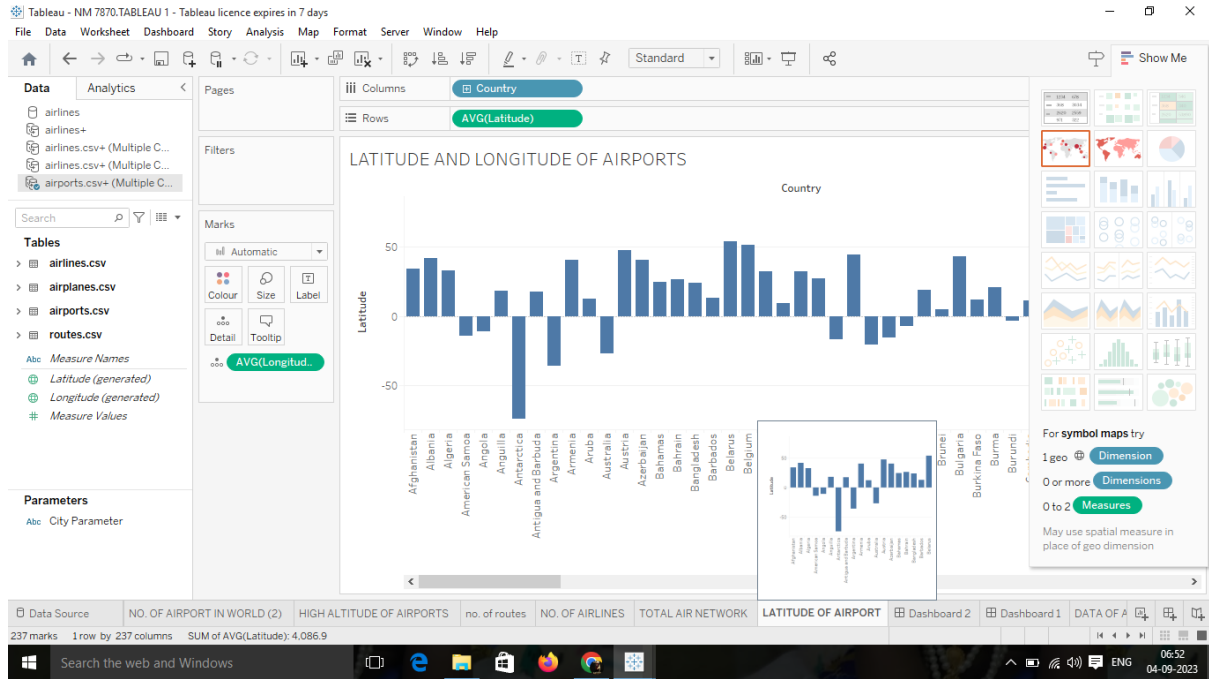
Index	Airport ID	Name	City	Country
0	1	Goroka Airport	Goroka	Papua New Guinea
1	2	Madang Airport	Madang	Papua New Guinea
2	3	Mount Hagen Kagamuga Airp...	Mount Hagen	Papua New Guinea
3	4	Nadzab Airport	Nadzab	Papua New Guinea
4	5	Port Moresby Jacksons Inter...	Port Moresby	Papua New Guinea

Step7: I have made 8 analysis sheets. The first sheet I made is a map contain the details of number of airports in the world. And the second one the map show the high amplitude of airports , then the details of total number of airports, airlines ,airplane and air route etc. The next the bar graph is show the latitude and longitude.

The screenshot shows the Tableau Desktop interface with a bar chart titled 'NO. OF AIRLINES IN WORLD'. The chart displays the count of airlines for various countries and cities. The columns are 'Country' and 'City'. The rows are 'CNT(airlines.csv)' and 'Country'. The chart shows a list of countries and cities, with bars representing the count of airlines. The chart is titled 'NO. OF AIRLINES IN WORLD' and the y-axis is labeled 'Count of airlines.csv'.

Country	City	Count of airlines.csv
Afghanistan	Camp Bastion	1
	Chaghcharan	1
	Faizabad	1
	Herat	1
	Jalalabad	1
	Kabul	1
	Kandahar	1
	Khost	1
	Kunduz	1
	Maimama	1
	Mazar-i-sharif	1
	Shank	1
	Sharona	1
	Sheberg	1
	Shindan	1
	Tarin Ko	1
	Zaranj	1
Albania	Tirane	1
Algeria	Adrar	1





File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Home Back Forward Refresh Download Print Copy Paste Undo Redo Standard View Show Me

**Data** Analytics

airlines  
airlines+  
airlines.csv+ (Multiple C...  
airlines.csv+ (Multiple C...  
airports.csv+ (Multiple C...

Search

**Tables**

- airlines.csv
- airplanes.csv
- airports.csv
- routes.csv

Measure Names  
Latitude (generated)  
Longitude (generated)  
Measure Values

**Parameters**

City Parameter

**Columns**

Country Name Icao lata

**Rows**

**DETAILS OF AIRPORTS**

Country	Name	Icao	lata
Afghanistan	Bagram Air Base	OAIK	OAI
	Bamiyan Airport	OABN	BIN
	Bost Airport	OABT	BST
	Camp Bastion Airport	OAZI	OAZ
	Chakcharan Airport	OACC	CCN
	Farah Airport	OAFR	FAH
	Fayzabad Airport	OAFZ	FBD
	Ghazni Airport	OAGN	GZI
	Hamid Karzai Internation..	OAKB	KBL
	Herat Airport	OAHR	HEA
	Jalalabad Airport	OAJL	JAA
	Kandahar Airport	OAKN	KDH
	Khost Airport	OAKS	KHT
	Konduz Airport	OAUZ	UND
	Maimana Airport	OAMN	MMZ
	Mazar-i Sharif Airport	OAMS	MZR
	Shank Air Base	OASH	OAA
	Sharana Airstrip	OASA	OAS
	Sheberghan Airport	OASG	YN
	Shindand Airport	OASD	OAH
	Tarin Kowt Airport	OATN	TII
	Zaranj Airport	OAZJ	ZAJ

**Filters**

**Marks**

Automatic

Colour Size Text

Detail Tooltip

**For sample maps try**

1 geo **Dimension**

0 or more **Dimensions**

0 to 2 **Measures**

May use spatial measure in place of geo dimension

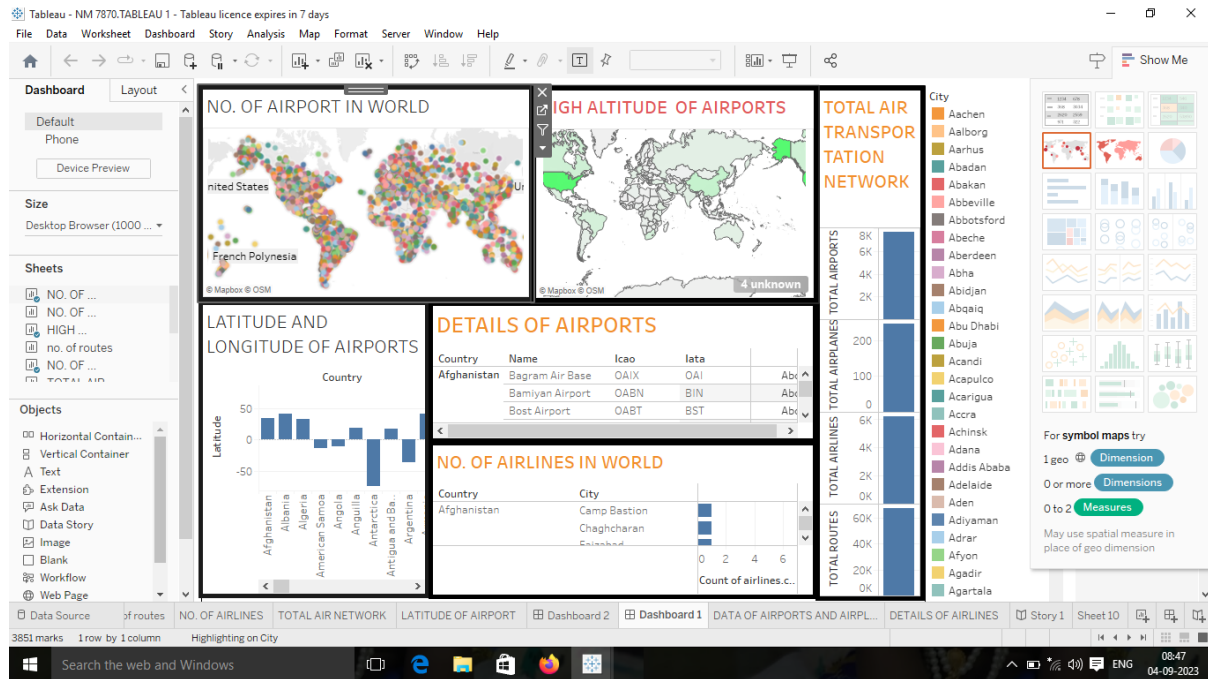
Data Source RLD (2) HIGH ALTITUDE OF AIRPORTS no. of routes NO. OF AIRLINES TOTAL AIR NETWORK LATITUDE OF AIRPORT Dashboard 2 Dashboard 1 DATA OF AIRPORTS AND AIRP...

7698 marks 7698 rows by 1 column

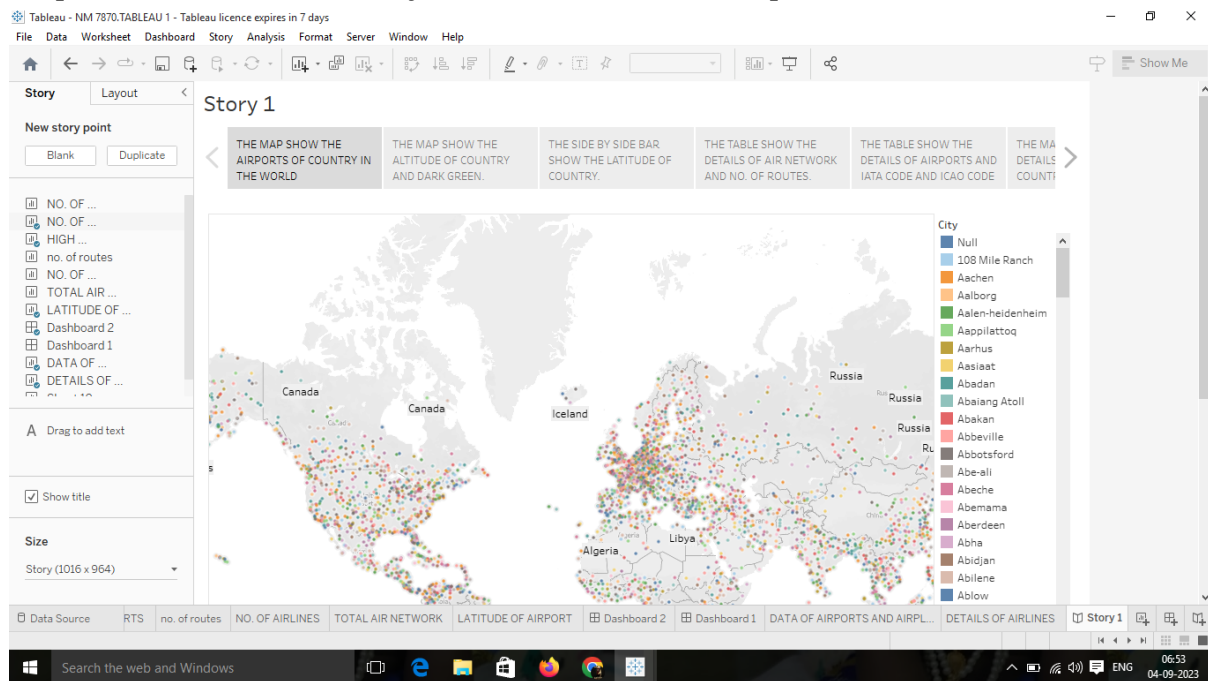
Step8: after finishing the analysis data, add a dashboard.

Step9: In the dashboard we can combine more sheets in single dashboard. The dashboard contains the combine of sheet that we created.

## RESULT:



Step10: we created a story in the tableau desktop.



Step11: sign into the tableau account.

Step12: publish the workbook in the tableau cloud.

Step13: upload the project in the github.



**ADVANTAGES:**

- It used to user to get a holistic view of the entire data one screen about the air transportation network.
- It used to saves times and resources.
- This visualizing and analyzing is very easier to analyses the data of the air transportation network and it help in making business decision.

**DISADVANTAGES:**

- Nil

**Application:**

- This visualizing and analyzing is very easier to analyses the data of the air transportation network and it help in making business decision.

**Conclusion:**

The tableau desktop is very useful to analyses the large number of data in one screen. We have learn how to analyses the data, how visualizing the data and how to create a dashboard and story.

My project is unlocking insight into the global air transportation network and has more 10 sheets, 2 dashboards and 1 story.

**Future scope:**

Easy to Analyses the data of air transportation network for the business and other purpose.