PROJECT TITLE: THE TRAGEDY OF FLIGHT-A COMPREHENSIVE ANALYSIS

INDEX

1. Introduction:

1.1 Overview

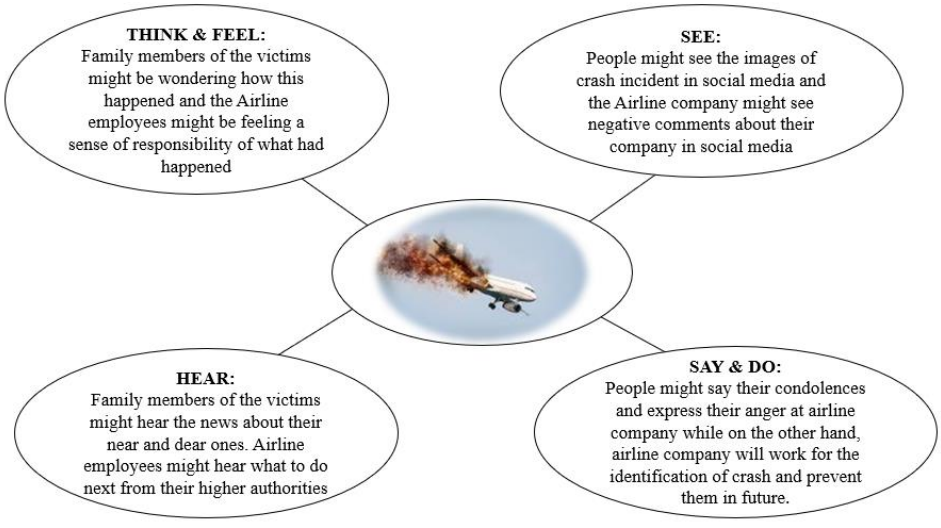
The tragedy of flight refers to the various incidents and accidents that have occurred in the aviation industry, resulting in loss of life, property damage and other significant consequences. In this project, we have prepared and visualized the data, Data Base is connected in MySQL and integrated the same with TABLEAU public and developed website for the same.

1.2 Purpose

The purpose of analysing flight tragedies is to understand what went wrong during the flight and identify factors that contributed to the accident or incident. The goal of this project is to improve aviation safety by identifying areas where improvements can be made to prevent similar accidents from happening in the future.

2. Problem definition and design thinking:

2.1 Empathy map



2.2 Ideation and Brainstorming map

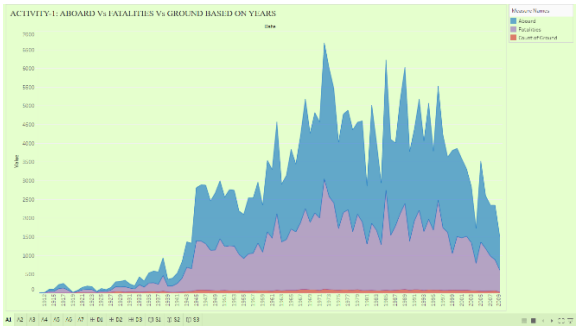
3. Result:

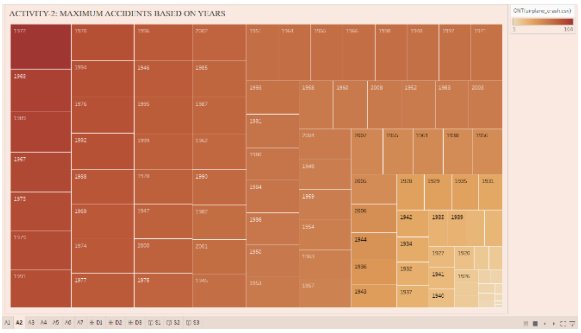
3.1 Worksheets, dashboard and story

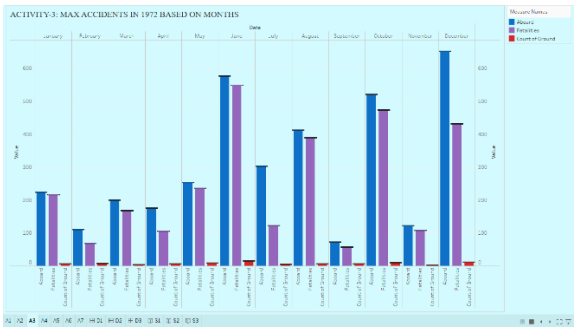
Below are the seven worksheets from TABLEAU representing the following activities:

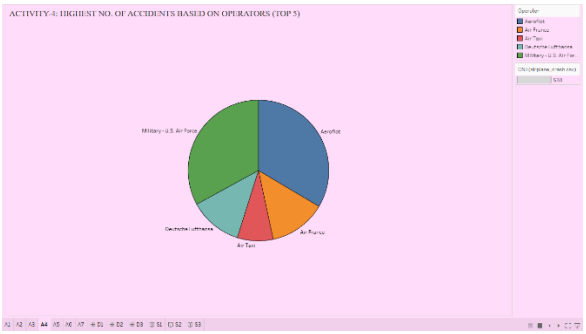
i) Comparing Aboard vs Fatalities vs Ground
ii) Max accidents based on years
iii) Accidents happened in 1972 (MAX ACCIDENTS) based on months
iv) Highest No. of accident happened by Operators
v) Top 10 locations which had more accidents
vi) Top 3 flights which have max accident history
vii) Accidents based on regions

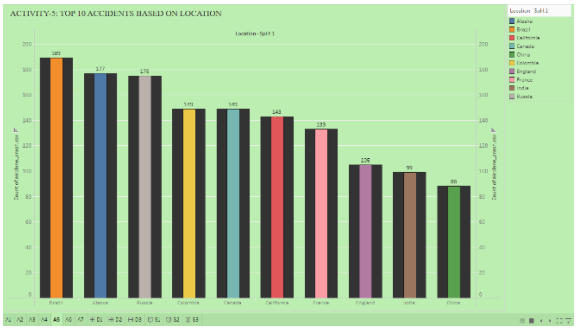
Followed by this, we have attached the screenshots of the dashboard and stories developed for this project.

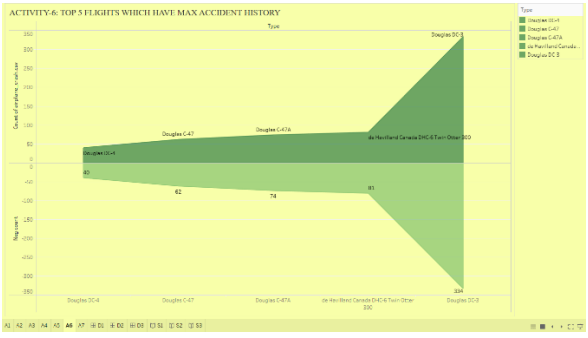

ACTIVITY-1: ABOARD Vs FATALITIES Vs GROUND BASED ON YEARS

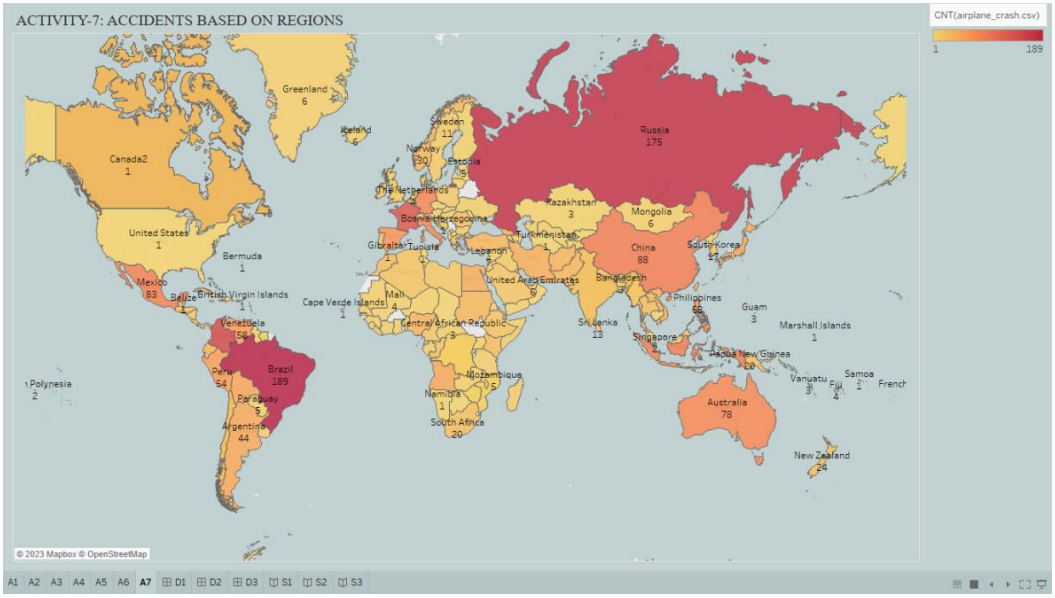

ACTIVITY-2: MAXIMUM ACCIDENTS BASED ON YEARS


ACTIVITY-3: MAX ACCIDENTS IN 1972 BASED ON MONTHS

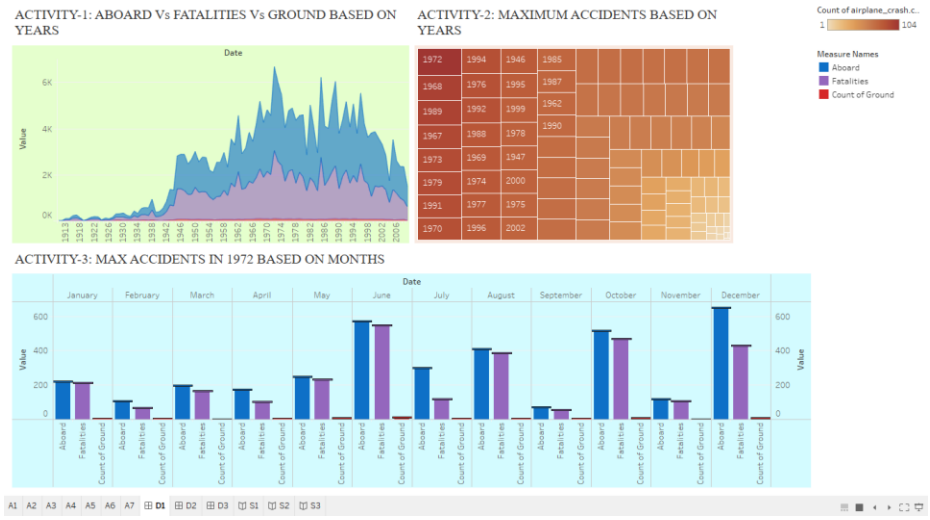

ACTIVITY-4: HIGHEST NO. OF ACCIDENTS BASED ON OPERATORS (TOP 5)
Aeroflot
Air France
Air Taxi
Deutsche Lufthansa
Military - U.S. Air Force

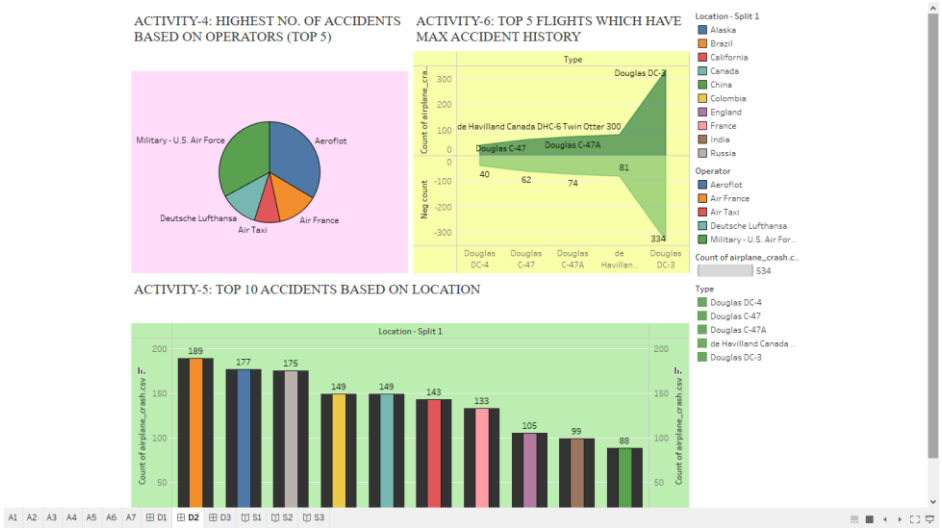

ACTIVITY-5: TOP 10 ACCIDENTS BASED ON LOCATION

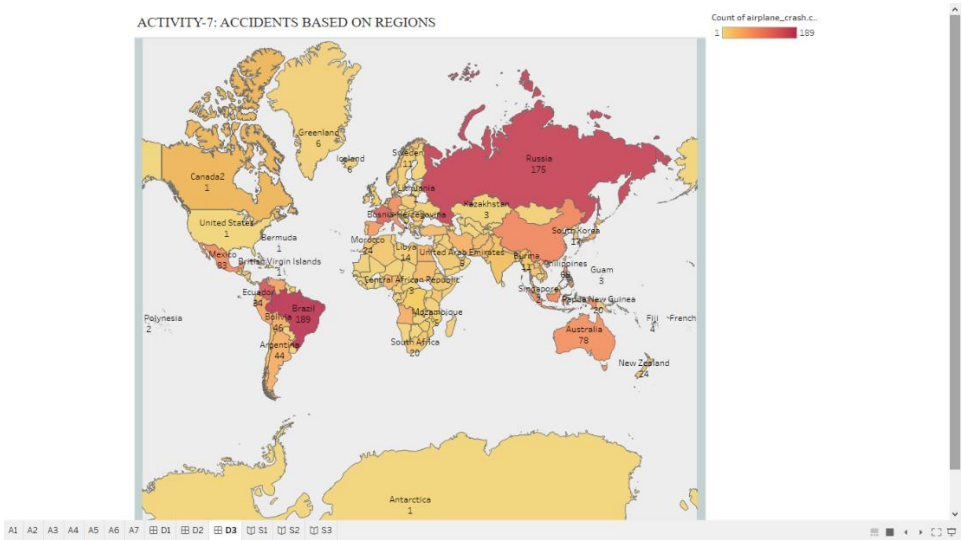

ACTIVITY-6: TOP 5 FLIGHTS WHICH HAVE MAX ACCIDENT HISTORY


ACTIVITY-7: ACCIDENTS BASED ON REGIONS
CNT(airplane_crash.csv)
1
189
Greenland 6
Canada2 1
United States 1
Bermuda 1
Mexico 83
British Virgin Islands 1
Venezuela 58
Peru 54
Brazil 189
Paraguay 5
Argentina 44
Polynesia 2
Iceland 6
Sweden 11
Norway 30
Estonia 5
The Netherlands 4
Bosnia-Herzegovina 1
Gibraltar Tunisia 1
Cape Verde Islands 1
Mali 4
Central African Republic 3
Mozambique 15
Namibia 1
South Africa 20
Russia 175
Kazakhstan 3
Mongolia 6
Turkmenistan 1
Lebanon 2
United Arab Emirates 5
China 88
South Korea 17
Bangladesh 9
Philippines 56
Sri Lanka 13
Singapore 8
Guam 3
Marshall Islands 1
Papua New Guinea 28
Vanuatu 3
Samoa 1
Fiji 4
French
Australia 78
New Zealand 24
© 2023 Mapbox © OpenStreetMap

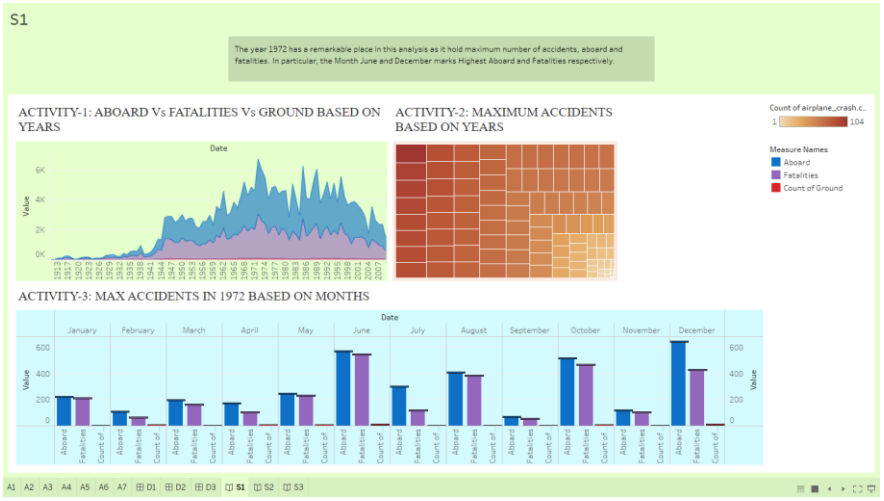
Dashboards:

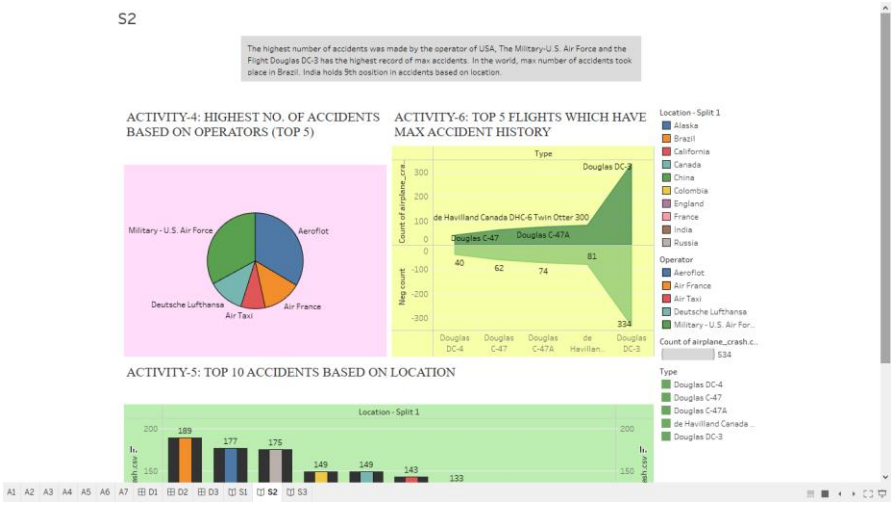

ACTIVITY-1: ABOARD Vs FATALITIES Vs GROUND BASED ON YEARS
ACTIVITY-2: MAXIMUM ACCIDENTS BASED ON YEARS
Count of airplane_crash.c..
1
104
Measure Names
Aboard
Fatalities
Count of Ground
Date
Value
ACTIVITY-3: MAX ACCIDENTS IN 1972 BASED ON MONTHS
January
February
March
April
May
June
July
August
September
October
November
December

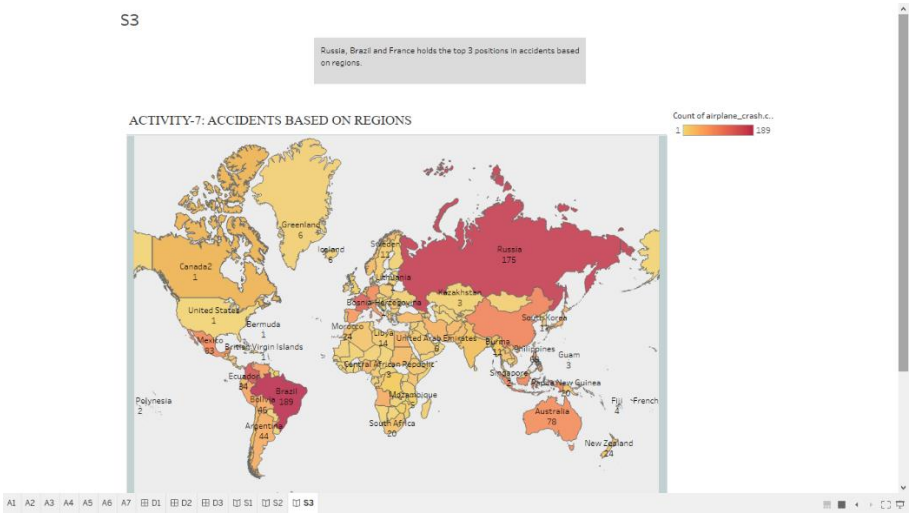

ACTIVITY-4: HIGHEST NO. OF ACCIDENTS BASED ON OPERATORS (TOP 5)
Military - U.S. Air Force
Aeroflot
Deutsche Lufthansa
Air Taxi
Air France
ACTIVITY-6: TOP 5 FLIGHTS WHICH HAVE MAX ACCIDENT HISTORY
Type
Douglas DC-3
de Havilland Canada DHC-6 Twin Otter 300
Douglas C-47
Douglas C-47A
Location - Split 1
Alaska
Brazil
California
Canada
China
Colombia
England
France
India
Russia
Operator
Aeroflot
Air France
Air Taxi
Deutsche Lufthansa
Military - U.S. Air For..
Count of airplane_crash.c..
534
Type
Douglas DC-4
Douglas C-47
Douglas C-47A
de Havilland Canada ..
Douglas DC-3
ACTIVITY-5: TOP 10 ACCIDENTS BASED ON LOCATION
Location - Split 1
Count of airplane_crash.csv
189
177
175
149
149
143
133
105
99
88


ACTIVITY-7: ACCIDENTS BASED ON REGIONS
Count of airplane_crash.c..
1
189
Greenland
6
Iceland
6
Canada2
1
United States
1
Bermuda
1
Mexico
33
British Virgin Islands
1
Ecuador
34
Brazil
189
Bolivia
46
Argentina
44
Polynesia
2
Sweden
17
Russia
175
Kazakhstan
3
South Korea
17
Morocco
24
Libya
14
United Arab Emirates
3
Burma
1
Philippines
66
Guam
3
Singapore
2
Papua New Guinea
20
Central African Republic
3
Mozambique
20
South Africa
20
Fiji
4
French
Australia
78
New Zealand
24
Antarctica
1

Story:

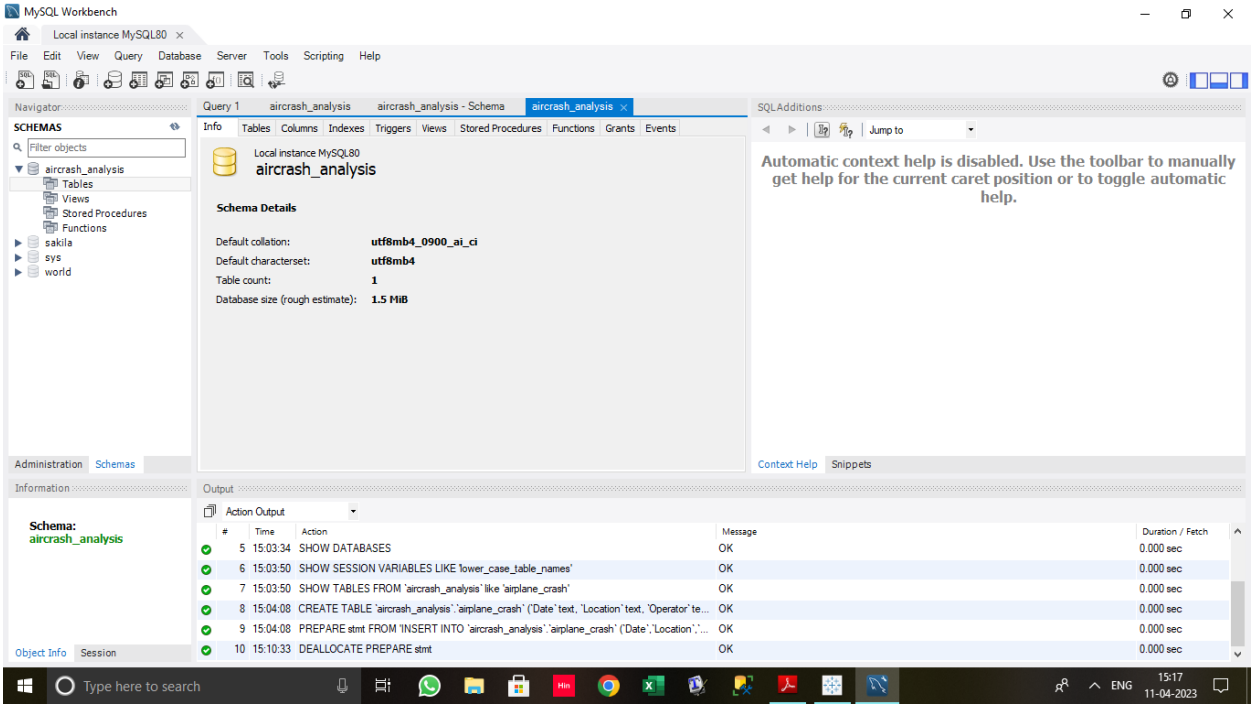

S1
The year 1972 has a remarkable place in this analysis as it hold maximum number of accidents, aboard and fatalities. In particular, the Month June and December marks Highest Aboard and Fatalities respectively.
ACTIVITY-1: ABOARD Vs FATALITIES Vs GROUND BASED ON YEARS
ACTIVITY-2: MAXIMUM ACCIDENTS BASED ON YEARS
ACTIVITY-3: MAX ACCIDENTS IN 1972 BASED ON MONTHS
Count of airplane_crash.c..
Measure Names
Aboard
Fatalities
Count of Ground

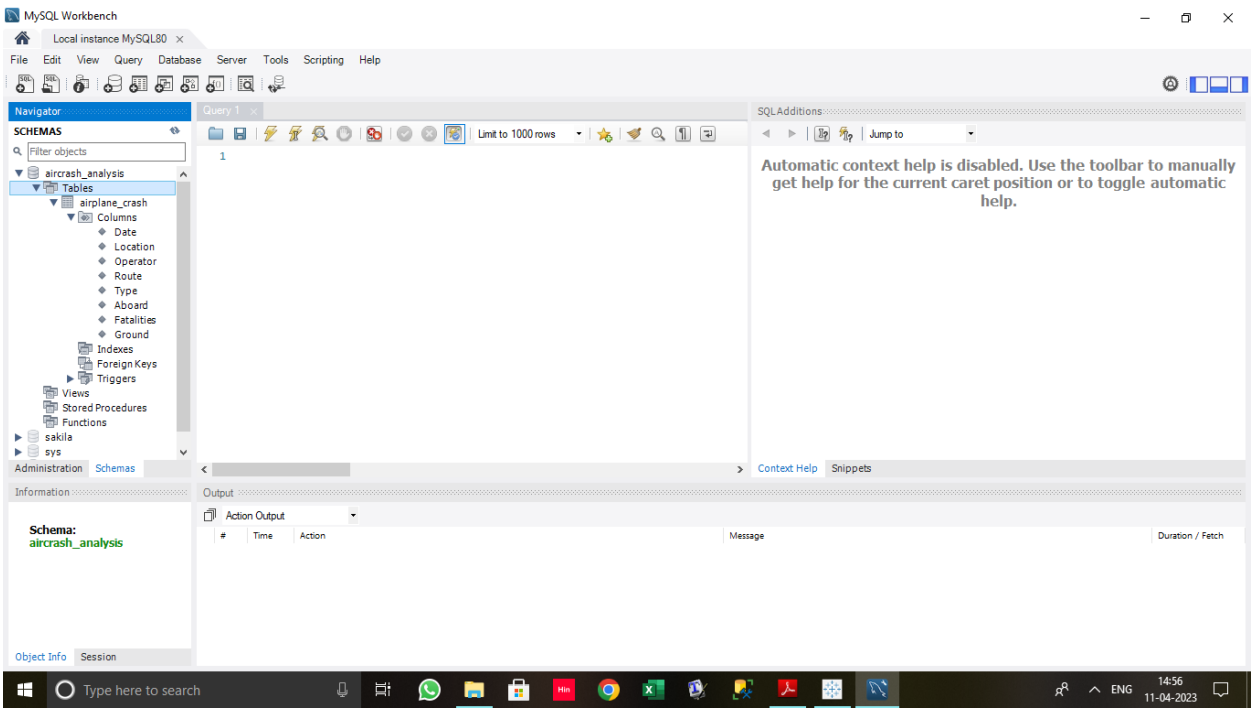

S2
The highest number of accidents was made by the operator of USA, The Military-U.S. Air Force and the Flight Douglas DC-3 has the highest record of max accidents. In the world, max number of accidents took place in Brazil. India holds 9th position in accidents based on location.
ACTIVITY-4: HIGHEST NO. OF ACCIDENTS BASED ON OPERATORS (TOP 5)
ACTIVITY-6: TOP 5 FLIGHTS WHICH HAVE MAX ACCIDENT HISTORY
ACTIVITY-5: TOP 10 ACCIDENTS BASED ON LOCATION


S3
Russia, Brazil and France holds the top 3 positions in accidents based on regions.
ACTIVITY-7: ACCIDENTS BASED ON REGIONS

3.2 Database connectivity

Below are the screenshots of connecting the database with MySQL.





4. Advantages and Disadvantages of the project:

Advantages

- A thorough analysis of a flight tragedy can help in identifying the root cause of the accident and helps in preventing those mistakes in future.
- Analysis of this project helps in enhancing aviation safety\
- Improves emergency response
- Enhances public trust
- Furthermore, such analysis plays a crucial role in legal proceedings such as determining liability and compensation for victims and their families.

Disadvantages

- Flight tragedy analysis can be emotionally taxing
- This analysis can be a lengthy process
- There are multiple factors involving in this incident
- In some cases, it is difficult to collect the data sources and may lack accuracy.

5. Applications:

The analysis of flight tragedies provides valuable insights into the causes of accidents, which can be used to improve aviation safety.

This analysis helps to identify the design flaws and weaknesses in aircraft systems which can be improved to enhance safety.

It can be helpful developing better training programmes and protocols for pilots, improving their skills and thus reducing the aviation accidents.

Overall, the flight tragedy analysis plays a crucial role in improving aviation safety and preventing future accidents.

6. Conclusion:

Investigations into the cause of flight tragedies are critical to identify any errors or faults in the system and implementing measures to prevent similar incidents from occurring in the future. The aviation industry has made significant progress in improving safety overs the year, and incidents such as by this analysis.

7. Future scope:

- The use of advanced analytic tools helps in reducing the aviation accidents.
- Real time monitoring ensures in detecting the potential safety issues and prevent accidents before they occur.
- The incorporation of new technologies such as drones, advanced sensors and autonomous systems can help in improving safety.

8. Appendix:

https://public.tableau.com/views/THE_TRAGEDY_OF_FLIGHT_A_COMPREHENSIVE_ANALYSIS/A2?:language=en-US&:display_count=n&:origin=viz_share_link

https://airplanecrashanalysis.nicepage.io/?version=ca9a37ef-6552-499b-af48-fc6cdc011af3

https://drive.google.com/file/d/100BGeu7BL8f_0qnv1YI_08v9-EE_jGbr/view?usp=drivesdk

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