TRAGEDY OF FLIGHT – A COMPREHENSIVE CRASH ANAYLYSIS
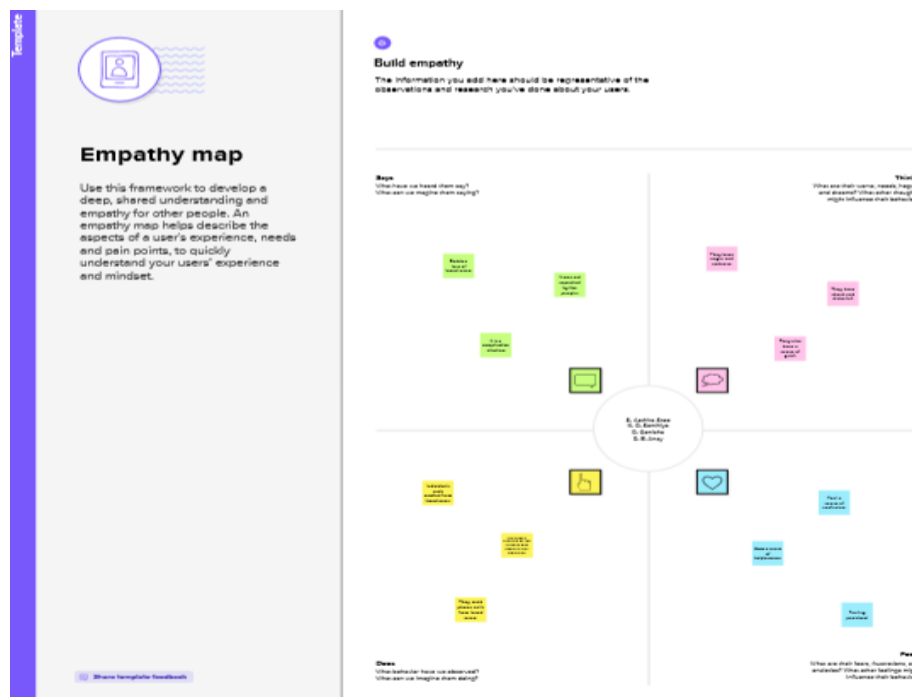
1. INTRODUCTION :

An airplane crash analysis is a detailed investigation into the causes of an aviation accident. It was perform to determine the cause of errors once an accident has happened. It was used to analyze a database of past accidents in order to prevent an accident from happening. This analysis provides insight in observing the trend of aircrash over the years. The process of conducting an airplane crash analysis typically involves the collection and analysis of a wide range of data
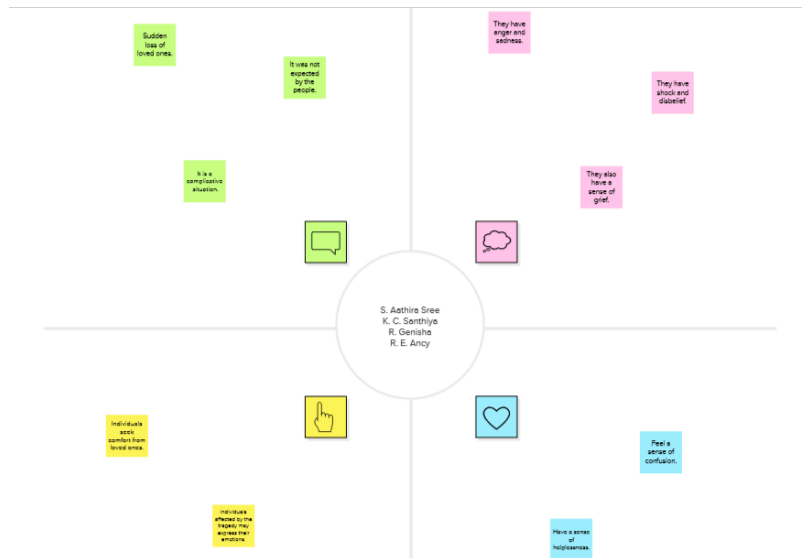
❖ PURPOSE:

The primary purpose of aircrash analysis is to determine the cause of the clash and any contributing factors involved in the crash .The goal of an airplane crash analysis is to identify any factors that contributed to the accident, with the ultimate goal of improving safety and preventing future accidents.
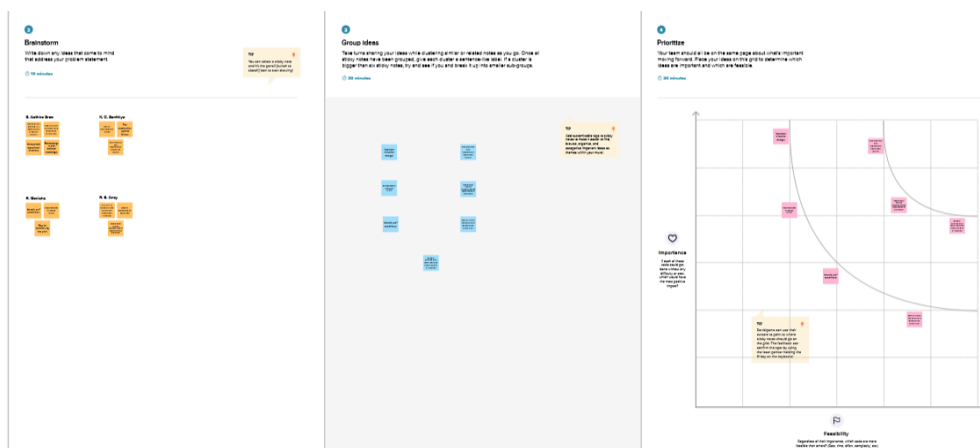
2. PROBLEM DEFINITION AND DESIGN THINKING:

EMPATHY MAP

Sudden loss of loved ones.

It was not expected by the people.

It is a complicative situation.

They have anger and sadness.

They have shock and disbelief.

They also have a sense of grief.

S. Aathira Sree
K. C. Santhiya
R. Genisha
R. E. Ancy

Individuals seek comfort from loved ones.

Individuals affected by the tragedy may express their emotions.

Feel a sense of confusion.

Have a sense of helplessness.

IDEATION AND BRAINSTORMING MAP:

Brainstorm
Write down any ideas that come to mind that address your problem statement.

S. Aathira Sree   K. C. Santhiya

R. Genisha   R. E. Ancy

Group Ideas
Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller subgroups.

Prioritize
Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

Importance

Feasibility

3. RESULT:

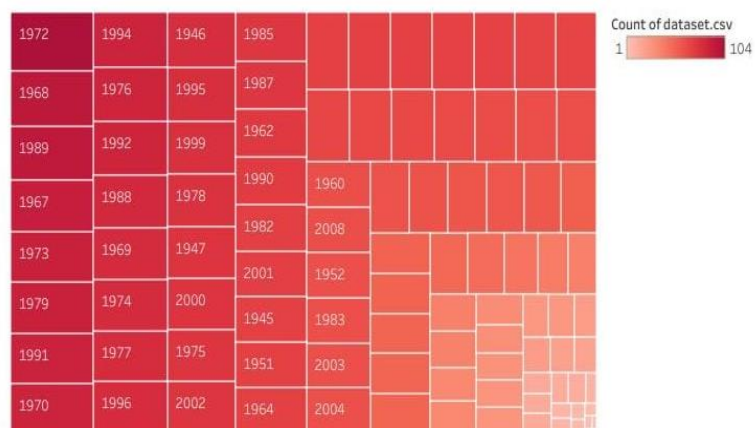The Data has been collected and visualized.

- ***Comparison Abroad vs Fatailities vs Ground:***
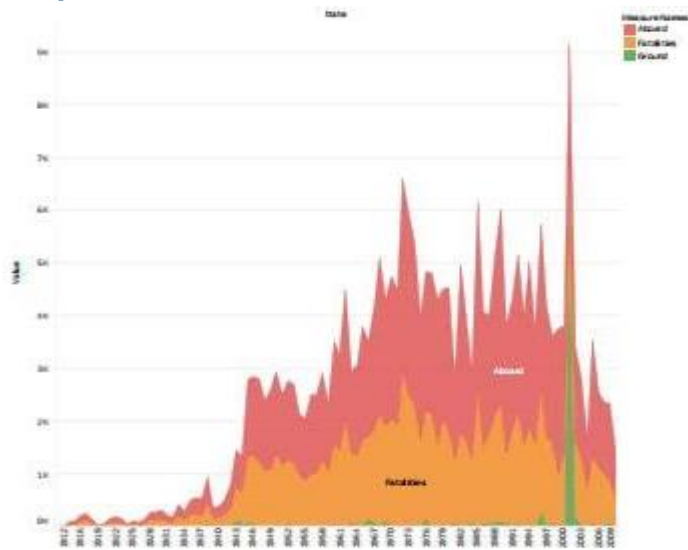
In the year 2000 more number of people are abroaded.The ground level ratio is very less.The fatality area denotes the number of persons dead.
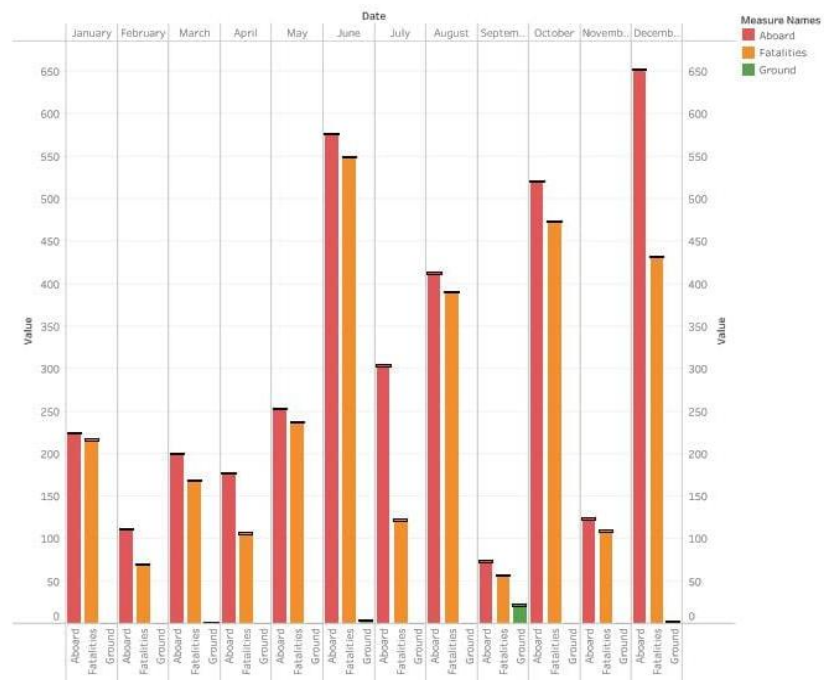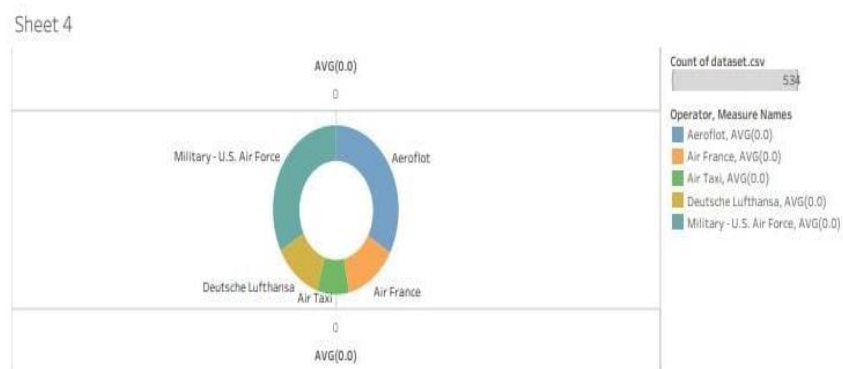
- ***Max accidents based on years***

In the year 1972 more number of accidents were happened when compared with other years.
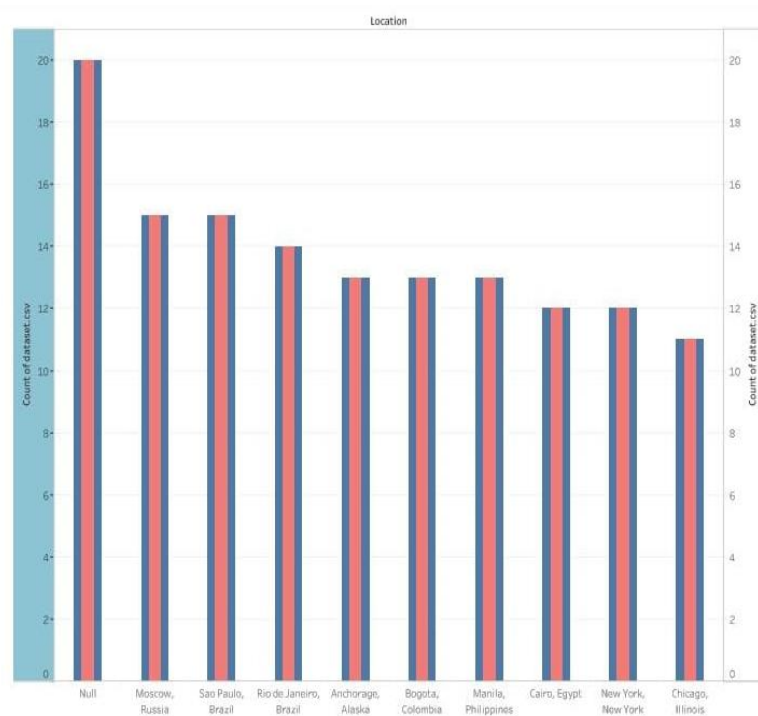
In the month of December, maximum accidents were happened. The ground level ratio is less.

- *Highest No. of accidents happened by operators :*

The military US Air Force operator has done the maximum count of airplane crash all over the world. The airplane crash by the air taxi operator is low.

- **Top 10 Locations which had more accidents:**

Top ten locations based on the accidents can be identified in the above graph.

- *Top 3 flights which have maximum accident history:*
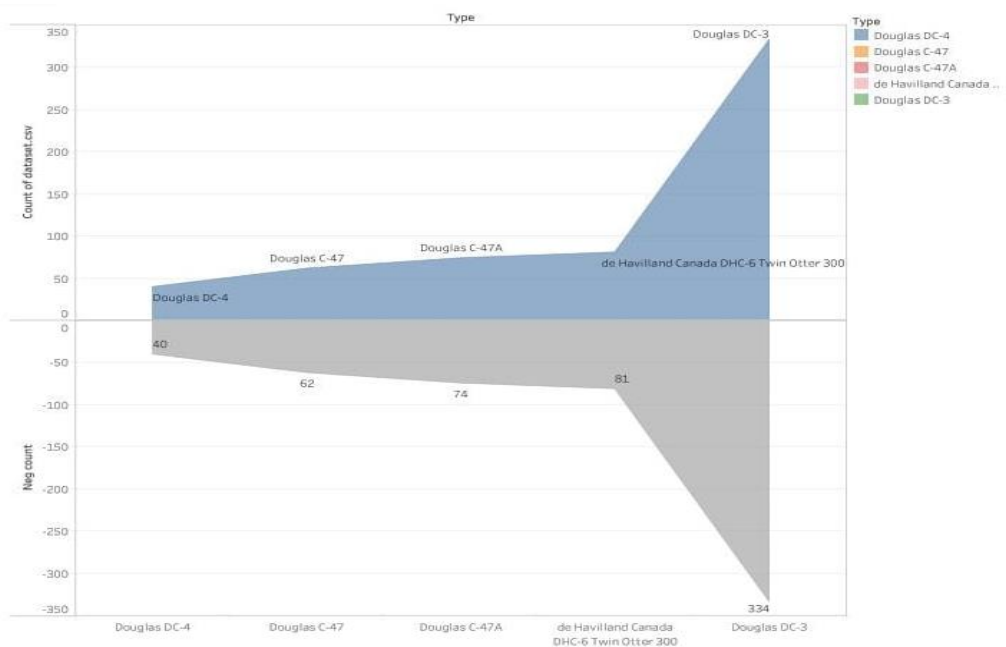
The flight Douglas DC – 3 had made 334 accidents .It is the flight which had made maximum accident history.

- *Accidents based on regions :*

Sheet 7

The no. of accidents in various regions are marked in the sheet and can be identified.

4. ADVANTAGE:

- ❖ Analysing accidents and incidents is necessary for preventing future incidents and legal and regulatory compliance.
- ❖ Allow organizations to continually improve their safety programs.
- ❖ Essential to enhance reputation.
- ❖ Helps to identify the cause of crash and try to prevent the accident.
- ❖ Essential for improving safety in the workplace.

DISADVANTAGES:

- ❖ Airplane crash negatively impact the financial performance of airlines.
- ❖ Affects national economies and overall aviation industry.
- ❖ More polluting than other more sustainable means of transportation.
- ❖ Airplane crash produces an abundance of debris.
- ❖ Physical and psychological effects.

5. APPLICATIONS:

The plan provides for the analysis of crashes according to the nature of the accident, the degree of seriousness of personnel injuries and the amount of damage according to material. Through the use of analysis method allows for analyzing pilot errors and materials failures according to the underlying causes of these errors or failures. It investigates the application of statistical method to the flight, which have been use in science over time to understand complex, physical and mathematical systems. Mathematics was use to explain airplane design and crash frequency. The analysis adds new findings to the knowledge based on causes of crashes by airplane design.

6. FUTURE SCOPE:

Organization must consider the interplay of different types of risk. More automation reduces the risk of human errors. The improvement of airline safety will be done. Improvements in sensors, navigation equipment and traffic control technology. Flight technology becomes more controlled. By identifying areas for improvement, the organization can take corrective actions to prevent future incidents.

7. CONCLUSION:

The data analysis of the airplane crash analyzes the crash trend for over hundred years from the year 1908 to 2008. It is particularly interesting to observe the trend of airplane crashes and the reasons behind them. The maximum accidents occurred based on years and months are identified. Also by which operator the highest number of accidents happened is analyzed. The top 10 locations which had more accidents and the top 3 flights which have maximum accident history are figured in the graph. The number of accidents in different regions are marked.

8. APPENDIX:

In order to better understand the causes and consequences of airplane crashes, various organizations collect and analyze data on crashes around the world. This appendix provides an overview of the methods and data sources used in airplane crash analysis.

❖ Data Sources:

There are several sources of data on airplane crashes, including government agencies, airlines, and international organizations. The National Transportation Safety Board (NTSB) in the United States, the European Aviation Safety Agency (EASA) in Europe, and the International Civil Aviation Organization (ICAO) are among the most important organizations that collect data on airplane crashes.

❖ **Methodologies:**

Airplane crash analysis typically involves a combination of quantitative and qualitative methods. Quantitative methods involve statistical analysis of crash data, while qualitative methods involve the analysis of reports and other documents related to airplane crashes. Some of the key methodologies used in airplane crash analysis include:

❖ **Statistical Analysis:**

This involves analyzing data on airplane crashes to identify patterns and trends. Statistical analysis may involve the use of regression analysis, time series analysis, and other statistical techniques.

❖ **Root Cause Analysis:**

This involves analyzing the causes of airplane crashes to identify the underlying factors that contributed to the crash.

❖ **Human Factors Analysis:**

This involves analyzing the role of human factors in airplane crashes, such as pilot error, crew resource management, and communication breakdowns.

By analyzing airplane crashes, researchers can identify the causes of crashes and develop strategies to prevent future crashes from occurring. Ultimately, the goal of airplane crash analysis is to improve the safety and efficiency of air travel, and to ensure that air travel remains a safe and viable mode of transportation.