Project Proposal: Airline Route Analysis

# **Group Number -03**

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# Project Title:

Airline Route Analysis: Understanding Trends in Airline Operations

# Introduction:

Airlines are essential for transportation, connecting different countries and regions. Analyzing airline routes can help us understand how airlines operate, how efficient they are, and how well they connect different places. This project will focus on analyzing airline routes, especially those that include Bangladesh, to find important trends and help improve airline operations.

# Objectives:

The main goals of the project are:  
 - To look at airline routes that involve Bangladesh.  
 - To find out which routes are the busiest and identify major airports.  
 - To study how efficient the airline routes are.  
 - To create visual maps and charts to show the connections between airports.  
 - To learn about passenger and cargo movement, if the data is available.

# Procedure:

1. Data Collection and Preparation:  
 2. Data Analysis:  
 3. Visualization:  
 - Use tools like Matplotlib to create:  
 - Maps of route networks.  
 - Bar charts to show traffic volumes.

# Tools and Technologies:

Data Analysis: Python, Pandas, NumPy  
 Data Visualization: Matplotlib, Seaborn, Geopandas (for mapping routes)  
 Dataset Storage and Processing: Jupyter Notebook, CSV files

### ****Data Sources:****

**Transport Operational Data of International Biman** ([Kaggle](https://www.kaggle.com/datasets/firozkabir1/transport-operational-data-of-bangladesh-biman))

# Expected Outcomes:

- Identify the busiest routes involving Bangladesh, both domestic and international.  
 - Create visualizations showing route networks and traffic patterns.  
 - Provide insights on improving route planning and efficiency.  
 - Produce a report with findings and visualizations.

# Conclusion:

This project will help us understand airline routes involving worldwide. By analyzing and visualizing the data, we can find trends and make suggestions to improve airline operations and connectivity.