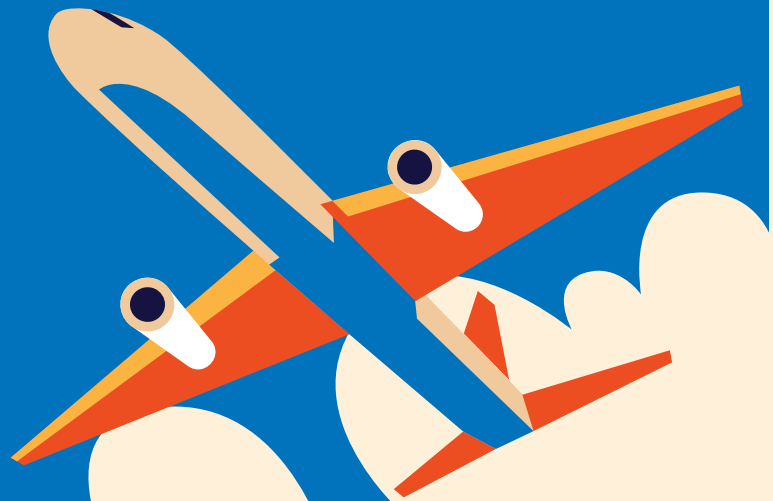
Pick the best times to fly using our application!

Nisha Ramanathan | Kanchan Krishna | Rishit Chatterjee



Introduction

Objective

Users have the ability to search the five worst days to fly each month. After entering the desired month, the system retrieves and displays the top five days with the highest total count of departure delays and cancellations.

Result

Users can make informed decisions, helping them avoid potential disruptions on the specific days of the month.

Database Keyword Search

- User enters a month (1-12)
- Database presents the top five days within the specified month
- Results are presented with the month and day, total number of flights, and the combined count of departure delays and cancellations
- Organized in descending order from combined count, allowing users to quickly find days with the highest potential for travel disruptions

CRUD Operations

Create

Users can create a new rating for an airline by providing their userID, the airline's IATA code, and their userRating

Read

Users can view the IATA code and name of each airline along with the corresponding user ratings

Update

Users can update their rating for a specific airline and the system will adjust the userRating value

Delete

Users can delete their rating for a specific airline and the system will remove the proper record

Advanced Database Program

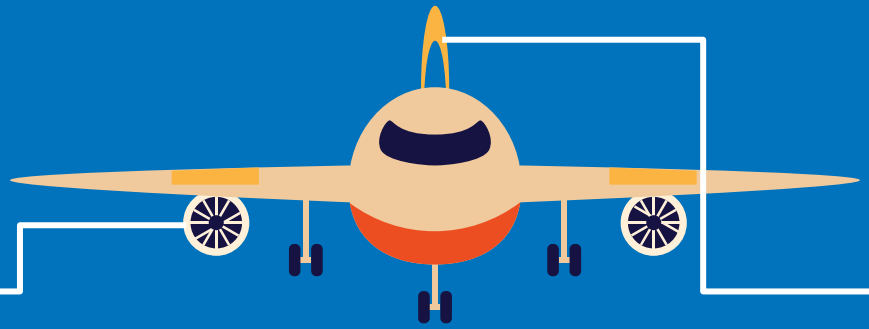
Trigger

Ensures that no duplicate usernames are inserted into the Users table. If a new record is inserted with a username that already exists, the trigger will prevent the insertion and return an error message indicating that the username already exists.

Stored Procedure

Analyzes the flight delay data to rate airports based on their reliability (delay times) and identifies the most reliable destination airport from various origins. This information can be crucial for airlines, airport authorities, and travelers to understand delay patterns and make informed decisions.

Creative Component



Query

Retrieve data related to flight delays and cancellations for a specific user-inputted month

Bar Chart

Bar chart visualizing the results of the query with month on the x-axis and the counts of departure delays and cancellations on the y-axis

DEMO

Database Design & Application Optimization

Data Types

Using DATE or DATETIME types (instead of VARCHAR) ensures that the data is consistently formatted and interpreted

Security

Encrypting passwords during transmission is important and using strong hashing algorithms to store passwords in the database

Error Handling

Including user input validation when handling invalid or unexpected user inputs

Challenges

GCP Failure

Learning Workbench

Uploading Data

Connecting Flask

Database Server Connection

Deadlines

NoSQL Option

- MongoDB
- User Activity Logs: stores user interactions with the system, such as search queries, viewed flights, and other user actions
- User Preferences: records individual user settings and preferences, like preferred seating, meal choices, notification settings, etc

Project Links:

1. Github: https://github.com/cs411-alawini/fa23-cs411-team103-pinkpurple/tree/main
2. Presentation: https://docs.google.com/presentation/d/18dPib7GbwGctzVXWLJ1yR84f1Q-75pSlZvynzL5cYHs/edit?usp=sharing


THANK YOU!