**Airline Reservation System**

* **Introduction**

The Airline Reservation System to be Database driven with MySQL Workbench. Its goal is to simplify and automate the process of making arrangements for air travel. This platform is very convenient for managing flights, passengers, seat control and booking details. The intention with the project is to replicate a real-life scenario where administrators and users ought to be able to handle bookings with little or no automation.

* **Abstract**

This project focuses on building a relational database to manage the core functionalities of an airline reservation system. It includes designing normalized tables as well for flights, customers, seats, bookings, implementing constraints and triggers for the integrity check for the data. Queries are used to retrieve for flight availability, booking summary, or any such dynamic information. The resulting system is designed in user friendly manner to be as close to real airline operations as possible.

* **Tools Used**

1. **MySQL Workbench –** for database design and execution.
2. **SQL –** for schema creation, data manipulation, and queries.
3. **ER Diagrams** (optional) – for visualizing table relationships.

* **Steps Involved in Building the Project**

1. **Schema Design:** Designed the tables Flights, Customers, Seats and Bookings.
2. **Normalization:** 3NF was chosen to remove repeating data and to limit inconsistencies.
3. **Insert the Data:** Inserted sample data for Flights, Customers, Seats and Bookings.
4. **SQL Query:** Developed queries to verify status of flight and booking records.
5. **Triggers:** Added triggers on seat status update for booking and cancellation.
6. **Views:** Created a flight availability view to list non-sold seats by flights.

* **Conclusion**

The Airline Reservation System is a website to handle the flight Booking System from handling tickets to destinations and seat reservation. It helps to understand the basic things including database normalisation, relation strength and how we can implement queries and using triggers give automation to the process. This is just the beginning, and the model will be only the tip of a much larger model iceberg that will span everything from payment processing to user interfaces, to airline analytics.