Airport Management System - Database Project Report

1. Objective:

The Airport Management System project aims to design and implement a database that manages airport operations, including employees, passengers, airlines, flights, tickets, and their relationships. The project utilizes Oracle SQL for database creation and management, including tables, procedures, functions, and triggers.

2. Features:

• Relational database design for managing airport operations.

• Implementation of 10+ tables with proper relationships (Primary & Foreign Keys).

• Stored procedures for adding new airports and airlines.

• Triggers for enforcing data integrity (e.g., trimming inputs).

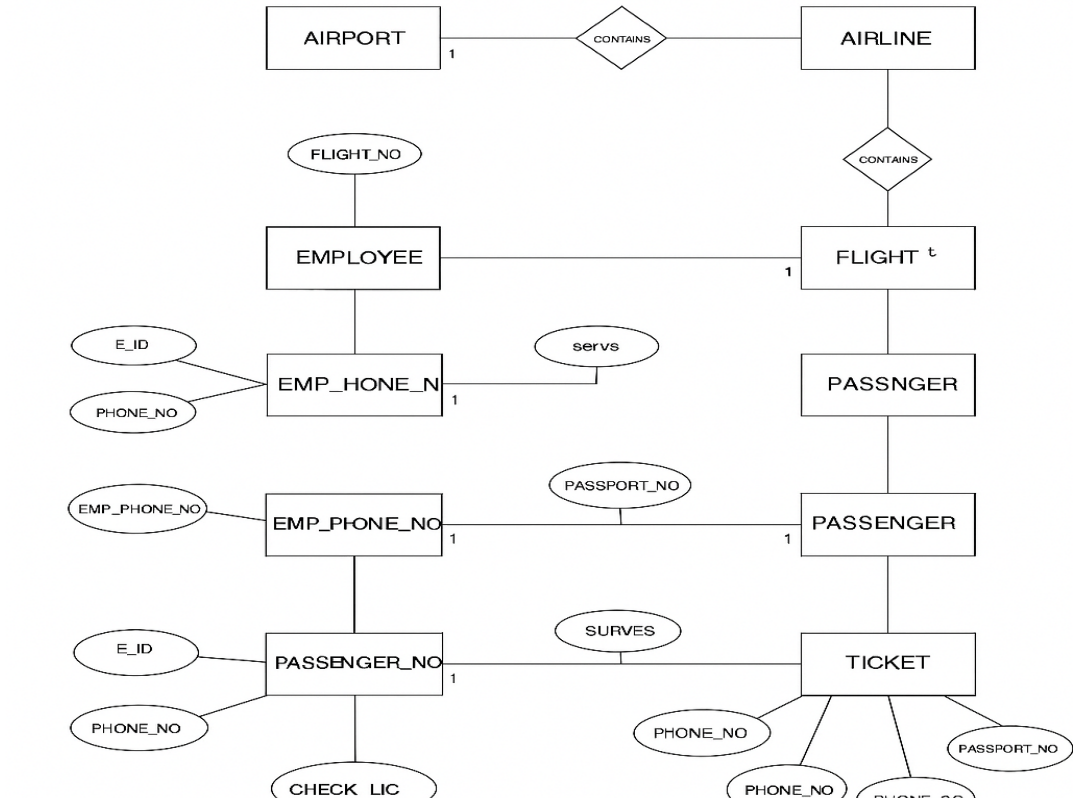
• User-defined function to calculate the number of employees at an airport.

• ER Diagram illustrating the database schema.

• Sample queries for real-world use cases (e.g., retrieving employees, flights, passengers).

3. Entity-Relationship Diagram (ERD):

The ERD illustrates entities such as Airport, Airline, Flight, Employee, Passenger, Ticket, and their relationships.



4. Database Schema:

The database includes the following tables: AIRPORT, AIRLINE, CONTAINS, FLIGHT, EMPLOYEE, EMP_PHONE_NO, PASSENGER, PASSENGER_PHONE_NO, TICKET, and SERVES. Each table is normalized to maintain data integrity and avoid redundancy.

5. How to Run:

1. Open Oracle Live SQL (https://livesql.oracle.com).
2. Copy and paste the code from airport_management_system.sql into the worksheet.
3. Run the script to create the database and insert sample data.
4. Execute queries from sample_queries.sql to test functionality.
5. Use the stored procedures and functions for additional operations.

6. Conclusion:

This project demonstrates a comprehensive database solution for managing complex airport operations. It incorporates advanced SQL features such as triggers, procedures, and functions, making it suitable for academic and professional portfolio purposes.