Airline Database Management

Airline industry is one of the largest and ever-growing businesses in the world. It caters to a vast majority of the population. These airlines are committed to provide a wonderful user experience. The aircrafts are equipped with modern day technologies which not only guarantee a safe flight, but also a comfortable journey to the passengers.

The Airlines offers certain kinds of discounts, based on the person- such as discounts for children and senior citizens and early booking of flights. Using a database, it becomes easier to keep track of the discounts.

Also, online reservations can be done for reservation of seats which are secure and allows customers the flexibility of booking seats from the convenience of their homes. Having a computerized database system to manage all the transactions of customers, along with keeping track of all the employees of the organization would be much easier.

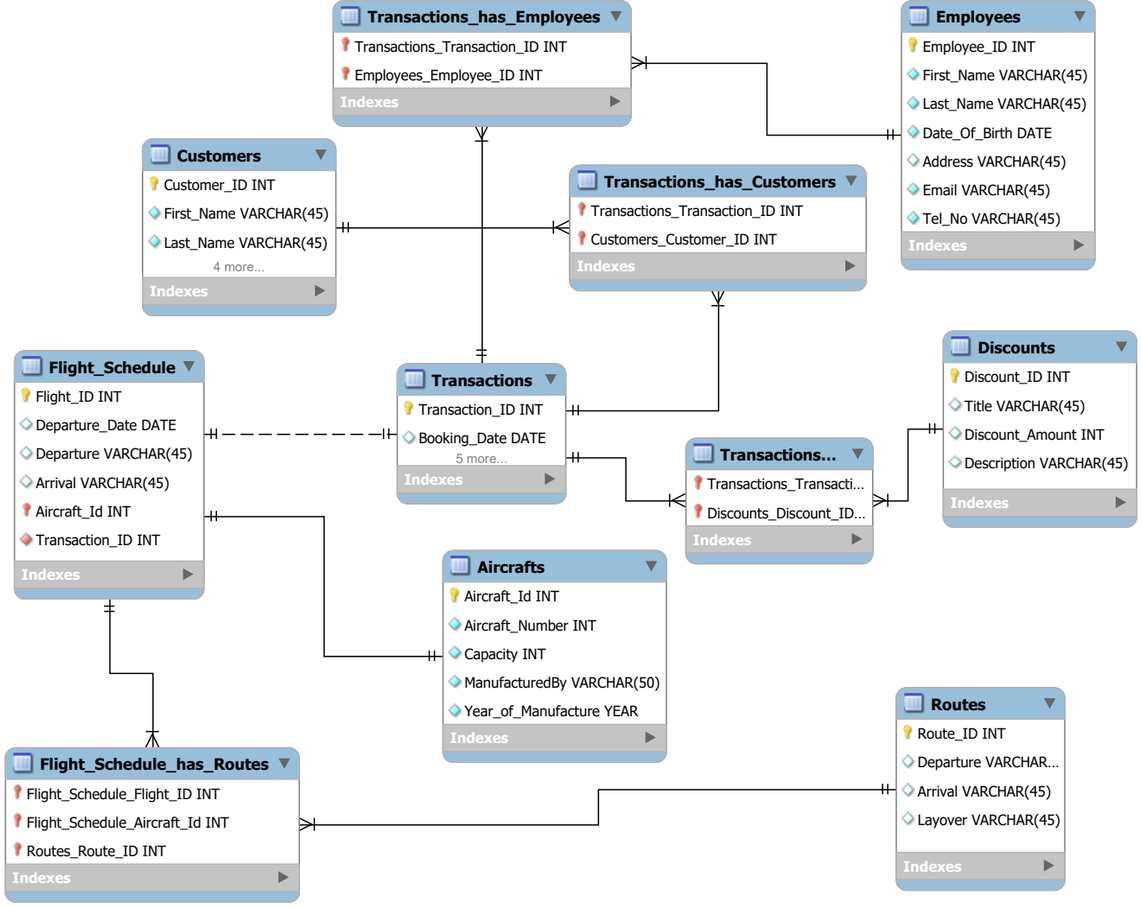
In this project I will be using stored procedures and transactions for adding customers or booking the seats on a flight. In case of cancellations, based on certain factors, the refund would be given to the customer.

Main Entities:

- **Aircrafts**: Contains the details of the aircrafts owned by the airline.
- **Customers**: Contains the details of the customers.
- **Employees**: Contains the details of the employees working for the airline.
- **Routes**: Each flight will have a route, based on the departure and arrival locations.
- **Flight Schedule**: This contains the date time, departure, arrival of each flight.
- **Transactions**: Contains the transaction details such as booking a seat by customers.
- **Discounts**: Contains the discount details based on certain factors.

Relationships:

- There will be a one-to-one relationship between the flight schedule and aircrafts.
- There will be a many-to-many relationship between customers and transactions.
- There exists a many-to-many relationship between the flight schedule and routes.


Transactions_has_Employees
Transactions_Transaction_ID INT
Employees_Employee_ID INT
Indexes
Employees
Employee_ID INT
First_Name VARCHAR(45)
Last_Name VARCHAR(45)
Date_Of_Birth DATE
Address VARCHAR(45)
Email VARCHAR(45)
Tel_No VARCHAR(45)
Indexes
Customers
Customer_ID INT
First_Name VARCHAR(45)
Last_Name VARCHAR(45)
4 more...
Indexes
Transactions_has_Customers
Transactions_Transaction_ID INT
Customers_Customer_ID INT
Indexes
Flight_Schedule
Flight_ID INT
Departure_Date DATE
Departure VARCHAR(45)
Arrival VARCHAR(45)
Aircraft_Id INT
Transaction_ID INT
Indexes
Transactions
Transaction_ID INT
Booking_Date DATE
5 more...
Indexes
Transactions...
Transactions_Transacti...
Discounts_Discount_ID...
Indexes
Discounts
Discount_ID INT
Title VARCHAR(45)
Discount_Amount INT
Description VARCHAR(45)
Indexes
Aircrafts
Aircraft_Id INT
Aircraft_Number INT
Capacity INT
ManufacturedBy VARCHAR(50)
Year_of_Manufacture YEAR
Indexes
Flight_Schedule_has_Routes
Flight_Schedule_Flight_ID INT
Flight_Schedule_Aircraft_Id INT
Routes_Route_ID INT
Indexes
Routes
Route_ID INT
Departure VARCHAR...
Arrival VARCHAR(45)
Layover VARCHAR(45)
Indexes