

ASSUMPTIONS/ DESCRIPTIONS-

We think UserLogin can create many flight reviews, and a review can be created by exactly one User. (Exactly 1 to Many, CustomerReviews)

We think an Airline can have many flight reviews, and a flight review can only be about exactly one airline. (0 to Many - Exactly 1, shown by Grade)

We think an Airport can have 0 to many Airlines, and an Airline can be in 0 to many Airports. (0 to Many - 0 to Many, shown by Services)

We think Airline can manage at least 1 to many Flights, and a Flight can be managed by exactly one Airline. (1 to Many - Exactly 1, shown by Manages)

We think an Airport can be an Origin for 0 to many Flights, and a Flight can be flying out from exactly one Airport. (0 to Many - Exactly 1, shown by Origin)

We think an Airport can be a Destination for 0 to many Flights, and a Flight can be flying in from exactly one Airport. (0 to Many - Exactly 1, shown by Destination)

DESCRIPTION -

UserLogin has a password and Email as the primary key. The authority is going to be used to change Airports, Airlines, and more in the database. Authority is going to be an INT, but will act as a boolean, where 0 means that the user does not have the authority to modify the data while 1 denotes that the user is authorized to modify the airport and flights data.

FlightReview has information about how the flight was and has a ReviewId as the primary key. The ReviewId is going to be created by us as a unique identifier which will be incremented for each flight review. Each of the parameters that are being reviewed can hold real values between 0 to 5. The Recommended and ValueForMoney attributes will hold the values 0 or 1 where 0 signifies that the airline flights are not recommended or does not provide value for money whereas 1 will denote the opposite for both the attributes respectively.

Airline just has the name and an AirlineId as the primary key.

The **Airport** has the name, city, and state of the airport, as well as the AirportId as the primary key. It also has the latitude and longitude for exact location.

A **Flight** has the Date, Scheduled Departure, and FlightNumber all as primary keys. Also has information about the flight such as departure and arrival time, or distance traveled.

RELATIONAL SCHEMA-

UserLogin(

Email VARCHAR(255) PRIMARY KEY,
Password VARCHAR(255),
Authority INT
);

Airports(

AirportId VARCHAR(10) PRIMARY KEY,
AirportName VARCHAR(255),
City VARCHAR(255),
State VARCHAR(255),
Latitude REAL,
Longitude REAL
);

Airline(

AirlineId VARCHAR(5) PRIMARY KEY,
AirlineName VARCHAR(255)
);

Services(

AirportId VARCHAR(10),
AirlineId VARCHAR(5),
PRIMARY KEY(AirportId, AirlineId)
FOREIGN KEY (AirportId) REFERENCES Airports(AirportId),
FOREIGN KEY (AirlineId) REFERENCES Airline(AirlineId)
);

FlightReviews(

ReviewId INT PRIMARY KEY,
AirlineId VARCHAR(5),
ReviewerEmail VARCHAR(255),
ReviewDate DATE,
CustomerReview TEXT,
TravellerType VARCHAR(50),
Cabin VARCHAR(50),
Route VARCHAR(255),
DateFlown VARCHAR(255),
SeatComfort REAL,
CabinService REAL,
FoodBev REAL,
Entertainment REAL,
GroundService REAL,
ValueForMoney REAL,
Recommended VARCHAR(10),
FOREIGN KEY(AirlineId) REFERENCES Airline (AirlineId),
FOREIGN KEY (ReviewerEmail) REFERENCES UserLogin(Email)
);

Flights(

Date DATE,
DayOfWeek INT,
AirlineId VARCHAR(5),
FlightNumber INT,
OriginAirport VARCHAR(10) ,
DestinationAirport VARCHAR(10) ,
ScheduledDeparture VARCHAR(5),
DepartureDelay INT,
Distance REAL,
ScheduledArrival VARCHAR(5) ,
ArrivalDelay INT ,
AirlineName VARCHAR(255),
PRIMARY KEY (Date, FlightNumber, AirlineId),
FOREIGN KEY (OriginAirport) REFERENCES Airport(AirportId),
FOREIGN KEY (DestinationAirport) REFERENCES Airport (AirportId),
FOREIGN KEY (AirlineId) REFERENCES Airline(AirlineId) ON DELETE CASCADE
);

