

UCS1412: Database Lab Mini Project

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Abstract:

A flight ticket booking application for the model Airline entitled “Akash Airlines” has been designed. Its salient features include:

- Account creation page

- Login page

- Flight ticket booking module

- Flight selection page

- Digital copy of boarding pass

The account creation page allows the user to enter his/her personal details(name, date of birth, sex) and designate a username and password.

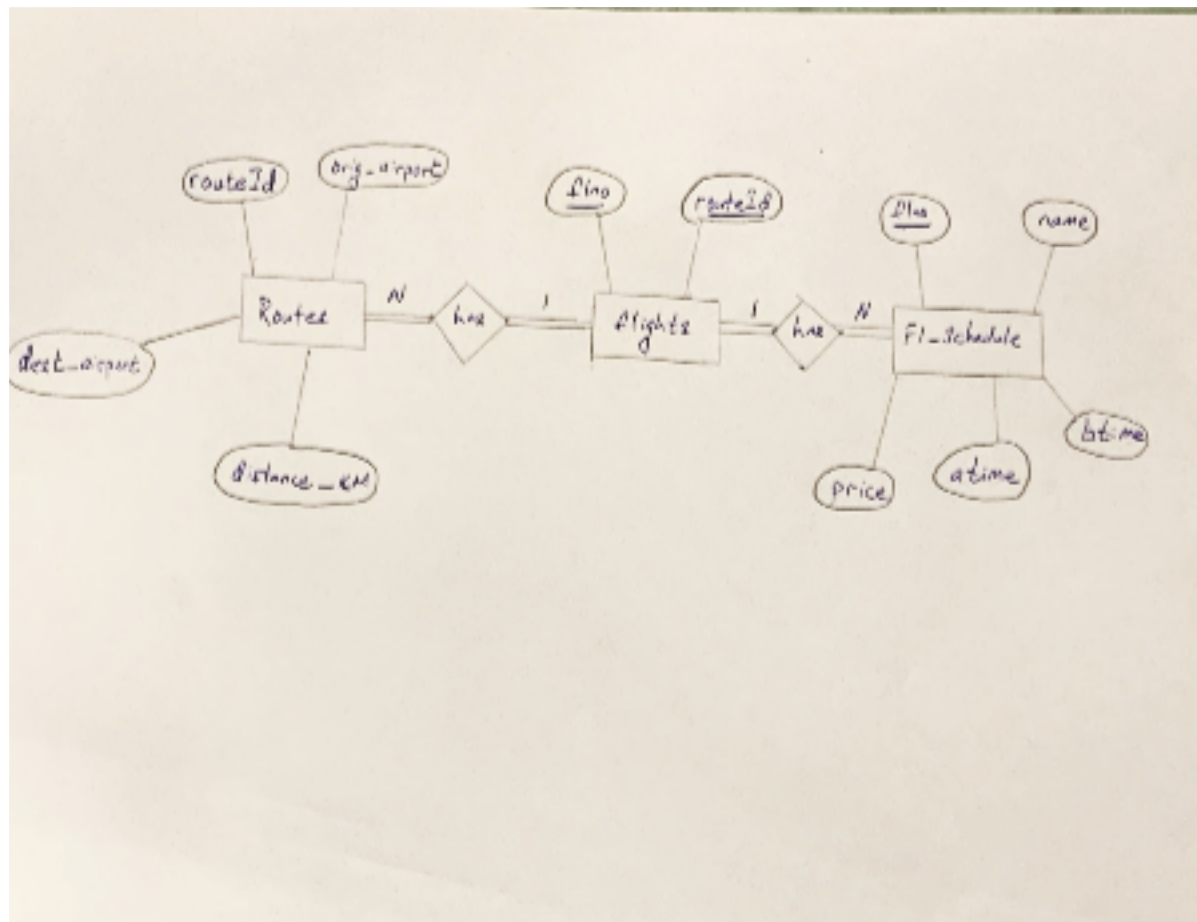
The login page features a field for the username and password to be entered and also offers the option to sign up if the user’s account has not been created yet.

The flight booking module has the options to book a one-way trip or a round trip. It includes the fields of city of departure, destination, and the date of departure and return (as needed). It also includes the number of passengers and fields for special categories of passengers such as armed forces, senior citizens, and students.

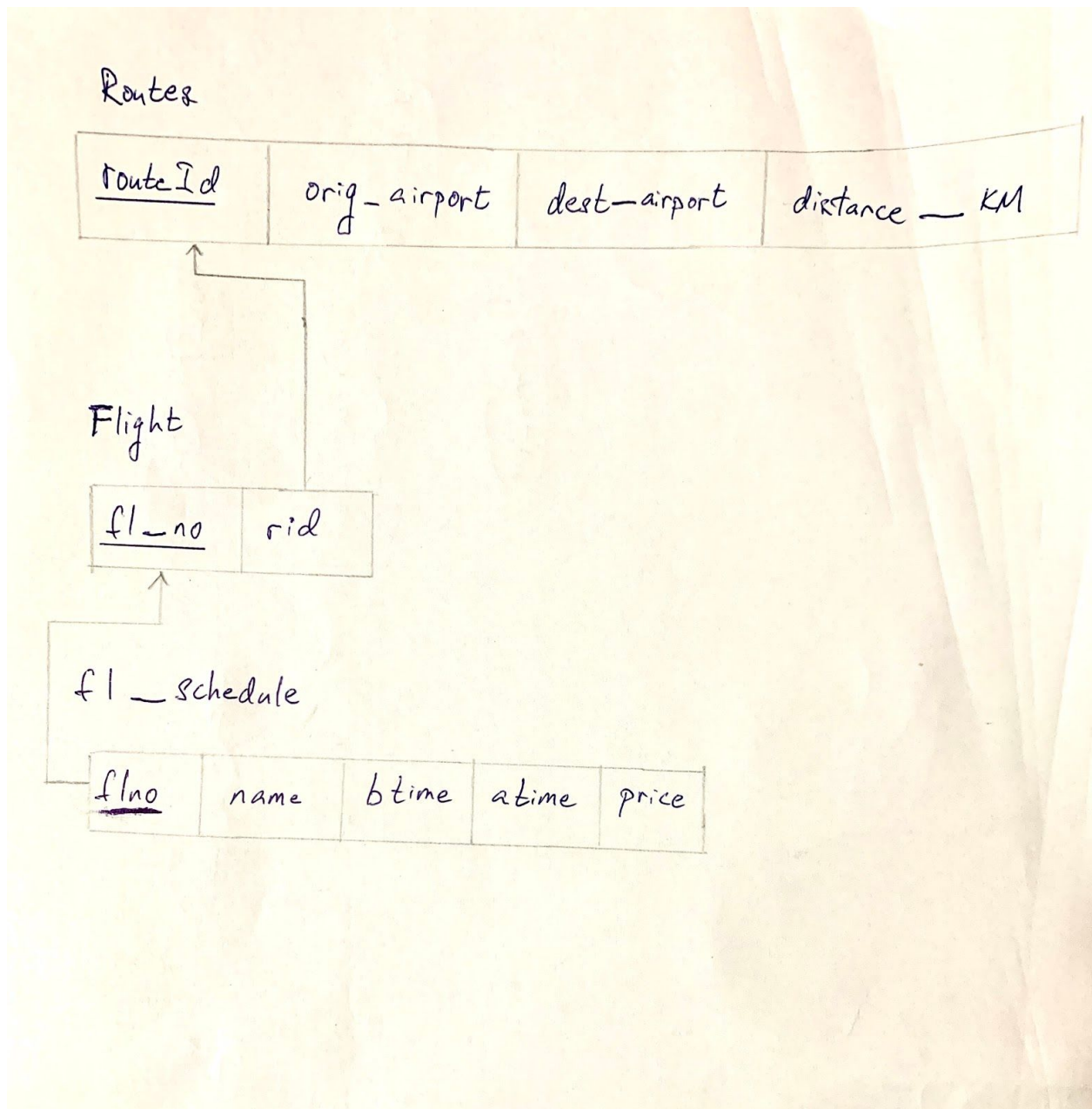
The flight selection page is the returned set of matching data from the queried ticket details. It displays the price of the ticket along with the timings and logistics of the flight.

The boarding pass which is generated upon the ticket being booked contains the confirmed details of the flight which has been booked along with the seating details and class.

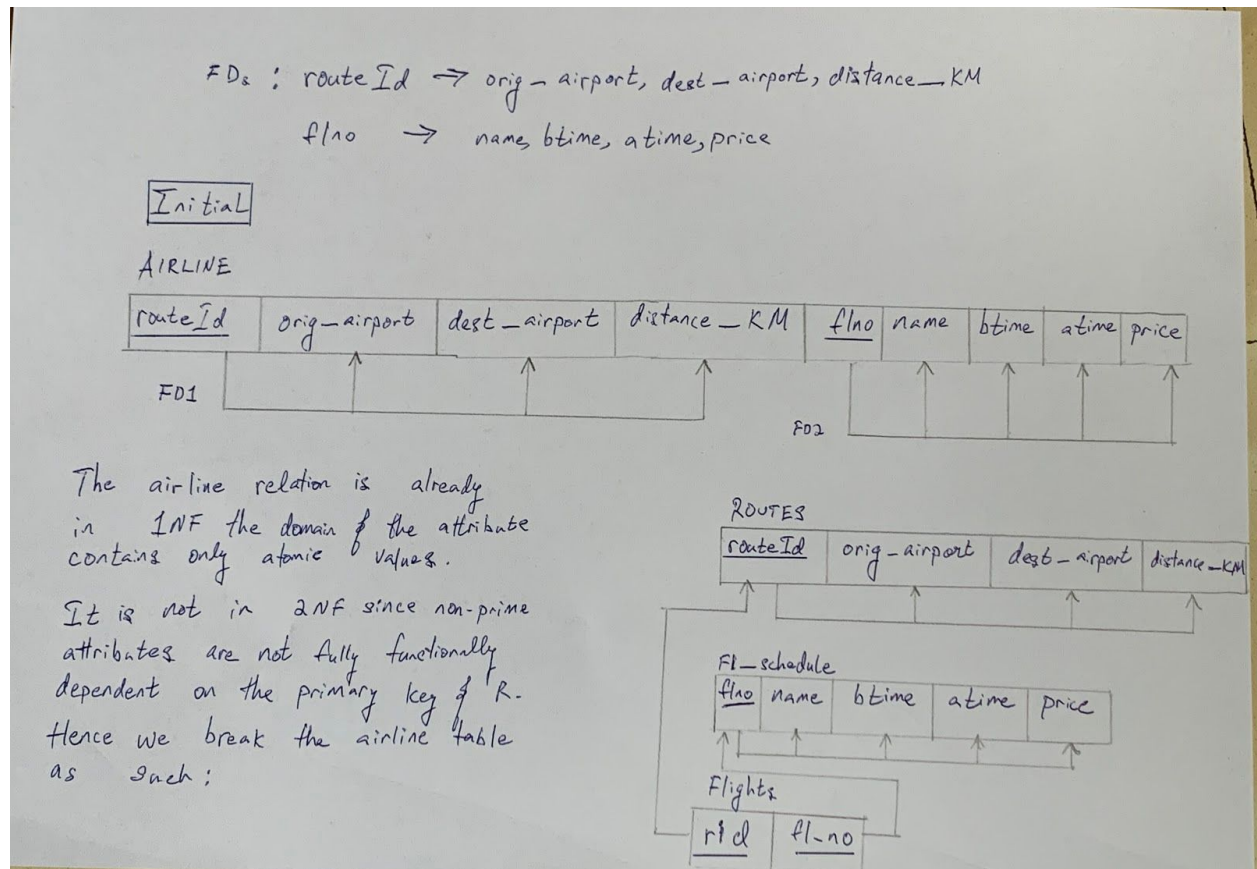
ER Diagram



ER to Relational Mapping



Normalization



Finding candidate key:

Closure of fd1: $(\text{routeId})^+ \rightarrow \{\text{orig_airport}, \text{routeId}, \text{dest_airport}, \text{distance_KM}\}$

Closure of fd2: $(\text{flno})^+ \rightarrow \{\text{name}, \text{flno}, \text{btime}, \text{atime}, \text{price}\}$

Closure of fd3: $(\text{routeId}, \text{flno})^+ \rightarrow \{\text{routeId}, \text{orig_airport}, \text{dest_airport}, \text{distance_KM}, \text{flno}, \text{name}, \text{btime}, \text{atime}, \text{price}\}$

Hence the candidate key is $(\text{routeId}, \text{flno})$.