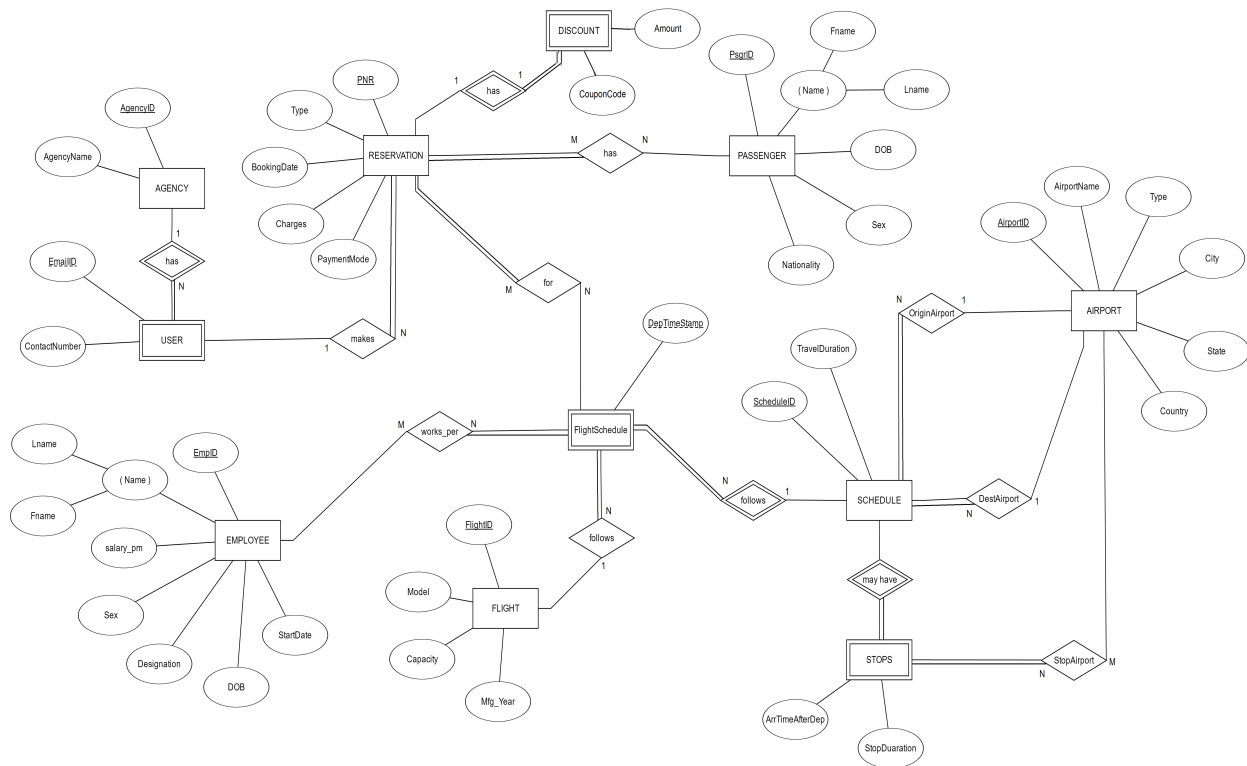


DATABASE MANAGEMENT SYSTEMS IT214

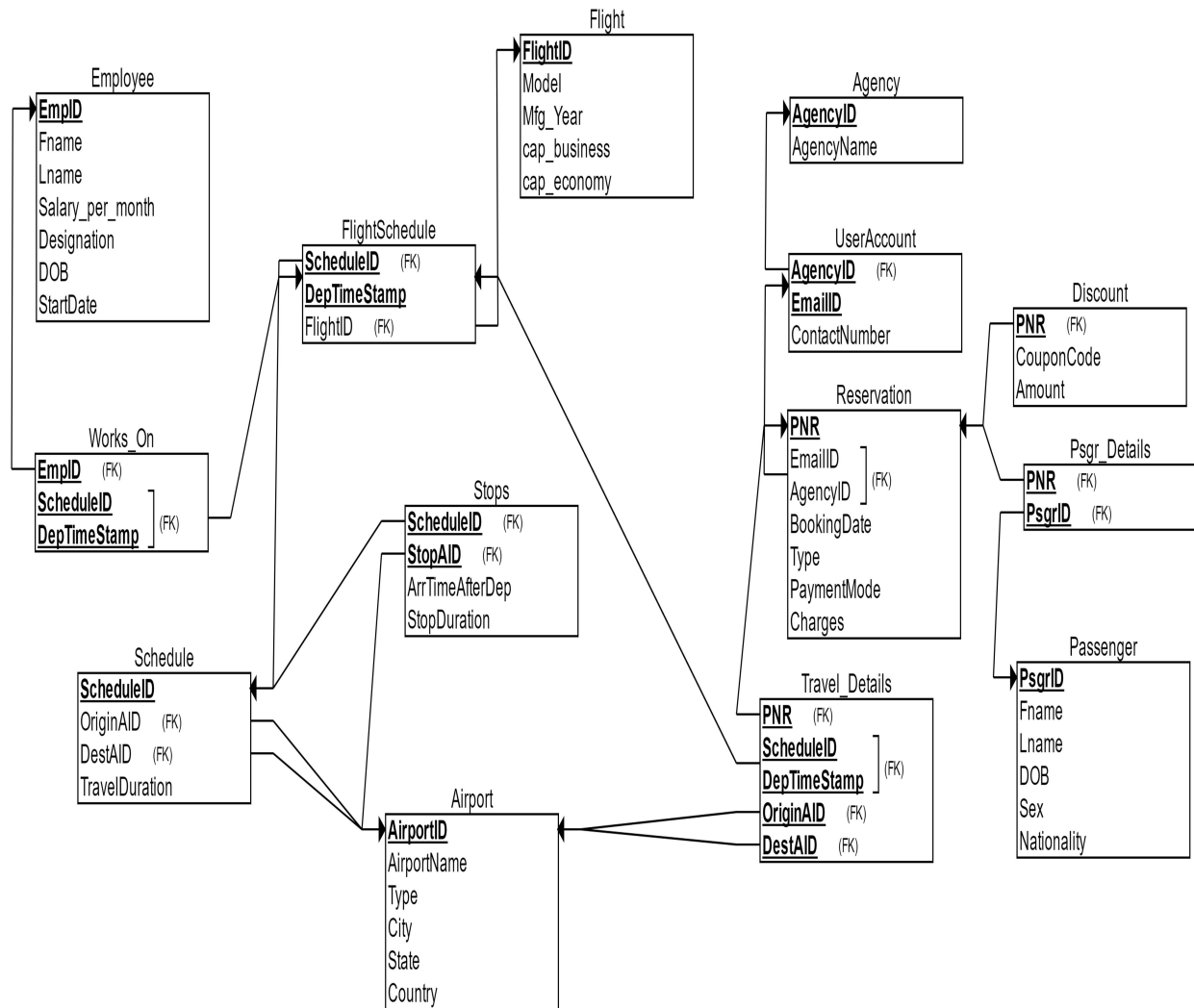
RELATIONAL SCHEMA AND FDs - AIRLINES DATABASE

GROUP : 2G

ERD



SCHEMA DIAGRAM



1. Passenger (PsgID, Fname, Lname, DOB, Sex, Nationality)

FDs:

$\text{PsgID} \rightarrow \text{Fname}$

$\text{PsgID} \rightarrow \text{Lname}$

$\text{PsgID} \rightarrow \text{DOB}$

$\text{PsgID} \rightarrow \text{Sex}$

$\text{PsgID} \rightarrow \text{Nationality}$

Hence, the relation is in **BCNF**.

2. Flight (FlightID, Model, Mfg_Year, cap_business, cap_economy)

FDs:

$\text{FlightID} \rightarrow \text{Model}$

$\text{FlightID} \rightarrow \text{Mfg_Year}$

$\text{FlightID} \rightarrow \text{cap_business}$

$\text{FlightID} \rightarrow \text{cap_economy}$

Hence, the relation is in **BCNF**.

3. Airport (AirportID, AirportName, Type, City, State, Country)

FDs:

$\text{AirportID} \rightarrow \text{AirportName}$

$\text{AirportID} \rightarrow \text{Type}$

$\text{AirportID} \rightarrow \text{City}$

$\text{AirportID} \rightarrow \text{State}$

$\text{AirportID} \rightarrow \text{Country}$

Hence, the relation is in **BCNF**.

4. Agency (AgencyID, AgencyName)

$\text{AgencyID} \rightarrow \text{AgencyName}$

Hence, the relation is in **BCNF**.

5. UserAccount (EmailID, AgencyID, ContactNumber)

or UserAccount (ContactNumber, AgencyID, EmailID)

FDs:

$\{\text{EmailID}, \text{AgencyID}\} \rightarrow \text{ContactNumber}$

$\{\text{ContactNumber}, \text{AgencyID}\} \rightarrow \text{EmailID}$

Hence, the relation is in **BCNF**.

6. Reservation (PNR, EmailID, AgencyID, BookingDate, Type, PaymentType, Charges)

FDs:

$\text{PNR} \rightarrow \text{EmailID}$

$\text{PNR} \rightarrow \text{AgencyID}$

$\text{PNR} \rightarrow \text{BookingDate}$

$\text{PNR} \rightarrow \text{Type}$

$\text{PNR} \rightarrow \text{PaymentType}$

$\text{PNR} \rightarrow \text{Charges}$

Hence, the relation is in **BCNF**.

7. Discount (PNR, PromoCode, Amount)

FDs:

$\text{PNR} \rightarrow \text{PromoCode}$

$\text{PNR} \rightarrow \text{Amount}$

Hence, the relation is in **BCNF**.

8. Psgr_Details (PNR, PsgrID)

FDs:

There are no FDs.

Hence, the relation is in **BCNF**.

9. Schedule (ScheduleID, OriginAID, DestAID, TravelDuration)

FDs:

$\text{ScheduleID} \rightarrow \text{OriginAID}$

$\text{ScheduleID} \rightarrow \text{DestAID}$

$\text{ScheduleID} \rightarrow \text{TravelDuration}$

Hence, the relation is in **BCNF**.

10. Stops (ScheduleID, StopAID, ArrTimeAfterDep, StopTime)

FDs:

$\{\text{ScheduleID}, \text{StopAID}\} \rightarrow \text{ArrTimeAfterDep}$

$\{\text{ScheduleID}, \text{StopAID}\} \rightarrow \text{StopTime}$

Hence, the relation is in **BCNF**.

11. Travel_Details (PNR, ScheduleID, DepTimeStamp, OriginAID, DestAID)

FDs:

There are no FDs.

Hence, the relation is in **BCNF**.

12. FlightSchedule (DepTimeStamp, ScheduleID, FlightID)

FDs:

$\{\text{DepTimeStamp}, \text{ScheduleID}\} \rightarrow \text{FlightID}$

Hence, the relation is in **BCNF**.

13. Employee (EmpID, Fname, Lname, SalaryPM, Designation, DOB, StartDate)

FDs:

$\text{EmpID} \rightarrow \text{Fname}$

$\text{EmpID} \rightarrow \text{Lname}$

$\text{EmpID} \rightarrow \text{SalaryPM}$

$\text{EmpID} \rightarrow \text{Designation}$

$\text{EmpID} \rightarrow \text{DOB}$

$\text{EmpID} \rightarrow \text{StartDate}$

Hence, the relation is in **BCNF**.

14. WorksOn (EmpID, ScheduleID, DepTimeStamp)

FDs:

There are no FDs.

Hence, the relation is in **BCNF**.

GROUP MEMBERS:

1. 201401072 - N. Srisai Karthik
2. 201401075 - Deepit Patel
3. 201401080 - P. Pranay Kumar
4. 201401081 - Geolangsat Narzary