Project

MC 212 – Database Management System

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Table Name : USER

Functional Dependency:

- Email ID → {Name}
- Email ID → {Contact Number}

R(Email ID , Name , Contact Number)

Candidate Key : Email ID

Prime Attribute : Email ID

Non Prime Attribute : Name , Contact Number

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x→y, x is a super key. So this is in BCNF.

Table Name : Travel Agent

Functional Dependency:

- Company ID → {Company Name}
- Agent ID → {Agent Name }

Candidate Key : {Company ID, Agent ID}

Prime Attribute : Company ID, Agent ID

Non Prime Attribute : Company Name, Agent Name

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Flight Trip

Functional Dependency:

- Journey ID → {Arrival Time , Departure Time , flight trip , number of travellers}
- Journey ID → {Email ID , Company ID , Agent ID}

Candidate Key : {Journey ID }

Prime Attribute : Journey ID

Non Prime Attribute : All except Journey ID

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Traveller

Functional Dependency:

- Traveller ID → {Name, Address , Contact Number}

Candidate Key : { Traveller ID }

Prime Attribute : Traveller ID

Non Prime Attribute : All except Traveller ID

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Fare

Functional Dependency:

- Journey ID, Company ID → {Taxes, Currency, Amount, Final Fare}

Candidate Key : { Journey ID, Company ID }

Prime Attribute : Journey ID, Company ID

Non Prime Attribute : All except Journey ID, Company ID

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Airline Company

Functional Dependency:

- Company ID → {Company Name}

Candidate Key :{ Company ID }

Prime Attribute : Company ID

Non Prime Attribute : All except Company ID

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Seat

Functional Dependency:

- Seat Number, Class → {Seat Type, Availability }

Candidate Key : { Seat Number, Class }

Prime Attribute : Seat Number, Class

Non Prime Attribute : All except Seat Number, Class

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Airplane

Functional Dependency:

- Airplane ID → {Seat Capacity }

Candidate Key : { Airplane ID }

Prime Attribute : Airplane ID

Non Prime Attribute : seat capacity

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Airport

Functional Dependency:

- Airport Code → { Airport Name }

Candidate Key : { Airport Code }

Prime Attribute : Airport Code

Non Prime Attribute : Airport Name

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Airport Address

Functional Dependency:

- Airport Code → {Location,country,state,city }

Candidate Key : { Airport Code }

Prime Attribute : Airport Code

Non Prime Attribute : All except Airport Code

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

Table Name : Junction

Functional Dependency:

- Junction Code → {Junction Name, Arrival Airport, Departure }
- Airplane ID,Junction Code, Airport code → {waiting time at junction, arrival time ,departure time}

Candidate Key :{ Airplane ID,Junction Code, Airport code }

Prime Attribute : Airplane ID,Junction Code, Airport code

Non Prime Attribute : All except Airplane ID,Junction Code, Airport code

Table is in 1 NF.

All Prime Attribute derives non – prime attributes. So, Table is in 2NF.

Prime →Non prime attributes. So this is in 3NF

For x->y, x is a super key. So this is in BCNF.

NOTE:

TABLES:{Booked by, Journey plan of traveller, Access, with do not have any functional dependency}

Do not have any Functional Dependency !