**NORMALISATION**

The tables which violate 3NF normalization are person, cities, travel\_agency.

Dependencies in person table are:

Candidate keys are

1)phone number

2)person id

Here door no and street and names of persons can have same names but located in different countries and cities.

In real world we may have two cities with the same name but located in different countries and we may have two different cities with the same name located in the same country.

For same pin code, we can have different streets and different door no.s.

With the pin code, street door no we cannot identify a person uniquely because in the same house we can have two different customers.

Functional dependencies are

Pin code->city, country so (pin code, city, country) form separate table with pincode as primary key.

Dependencies in cities table are:

State->country

Candidate keys are

1)pin code

2)website address

3)city id

City name is not a candidate key we can have two same city names within same state and we can also have two same city names in two different states.

But a country can be uniquely determined by the state.

(State, country) separate table.

Dependencies in travel agency:

Here candidate keys are

1)phone number

2)email address

3)company id

4)door no, street, pin code

In same street we can have different door no, with the street, pin code , door no we can uniquely identify the tuple.

Functional dependency

(pin code->city, country). So separate table (pin code, city, country) is created