Muhammad Izham Bin Norhamadi
B032020039
S2G1

Lab 6 Exercise Normalization

1) a)

Insertion Anomaly

- Insertion anomaly creates a dummy data problem. When a new employee needed to be registered in the system the entry immediately needs a contract, meaning that there can never be employee on standby.

Modification Anomaly

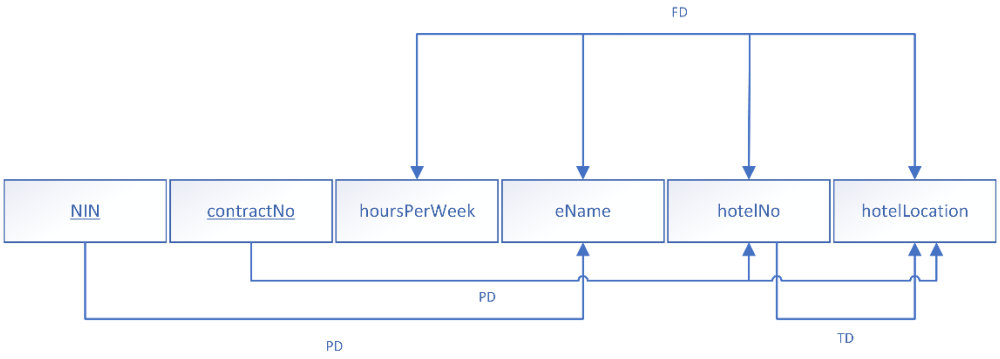
- Modification anomaly creates redundancy of updating multiple rows of same data. When the system needs to update an employee name, it also requires to update every row that occupies the name.

Deletion Anomaly

- Deletion anomaly forces unwanted data to be deleted with wanted data. If an employee quits their job, deleting the employee data will delete contracts aswell.

b)

1NF



2NF

Table name: EMPLOYEE

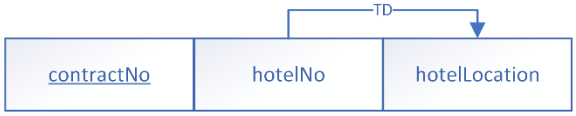


Table name: CONTRACT

Table name: ASSIGNMENT

3NF

Table name: EMPLOYEE

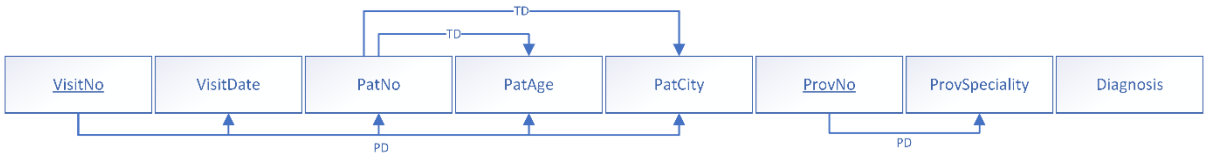
Table name: CONTRACT

Table name: ASSIGNMENT

Table name: HOTEL

2)

1NF



2NF

Table name: VISIT

Table name: PROVIDER

Table name: DIAGNOSIS

3NF

Table name: VISIT

Table name: PROVIDER

Table name: DIAGNOSIS

Table name: PATIENT

Table name: CITY

3) a)

Insertion Anomaly

- When more than one course served for a dinner the primary key of Dinner Num will repeat itself.

Modification Anomaly

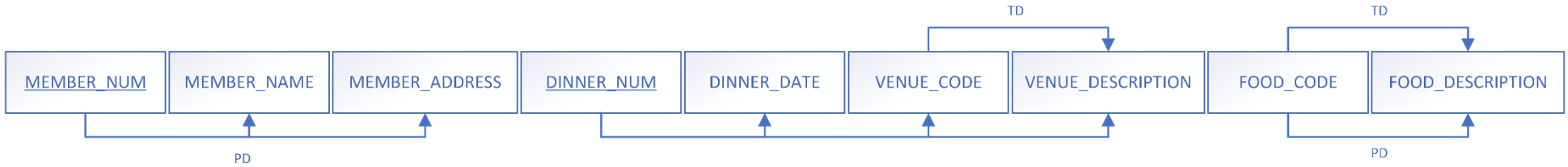
- Changing a venue description will force changes to every venue with the same name.

Deletion Anomaly

- Deleting a member entry will also deletes other data such as dinner information

b)

1NF


TD
TD
MEMBER_NUM
MEMBER_NAME
MEMBER_ADDRESS
DINNER_NUM
DINNER_DATE
VENUE_CODE
VENUE_DESCRIPTION
FOOD_CODE
FOOD_DESCRIPTION
PD
PD

2NF

Table name: MEMBER

Table name: DINNER

Table name: FOOD

Table name: RESERVE

3NF

Table name: MEMBER

Table name: DINNER

Table name: FOOD

Table name: RESERVE

Table name: VENUE