Compulsory Task 1

●What is normalisation?
Normalization is a process for evaluating and correcting table structures to minimize data redundancies and reduce the likelihood of data anomalies. Normalization is a method to remove anomalies and bring the database to a consistent state.
Normalization works through a series of stages called normal forms.

●When is a table in 1NF?
A table is in 1NF when:
1. All of the key attributes are defined.
2. There are no repeating groups in the table.
3. All attributes are dependent on the primary key.

●When is a table in 2NF?
Atableisin2NFwhen:
1. It is in 1NF
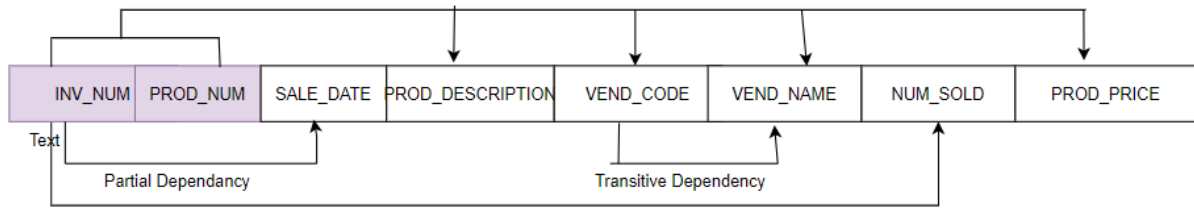2. It includes no partial dependencies; no attribute depends on only a portion of the primary key.

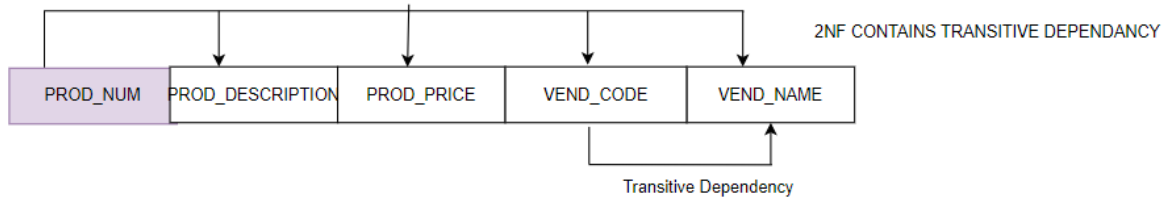●When is a table in 3NF?
A table is said to be in 3NFwhen:
1. It is in 2NF
2. It contains no transitive dependencies.

●Using the INVOICE table given below, draw its dependency diagram and identify all dependencies (including transitive and partial dependencies
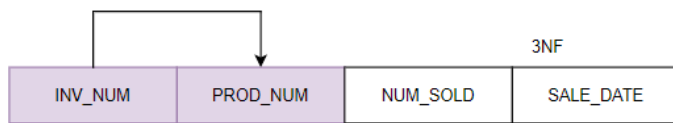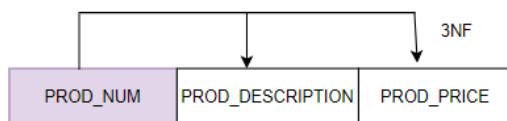
Invoice and Product Table 1st NF

INV_NUM	PROD_NUM	SALE_DATE	PROD_DESCRIPTION	VEND_CODE	VEND_NAME	NUM_SOLD	PROD_PRICE

Text

Partial Dependancy

Transitive Dependency

Product Table 2nd NF

2NF CONTAINS TRANSITIVE DEPENDANCY

PROD_NUM	PROD_DESCRIPTION	PROD_PRICE	VEND_CODE	VEND_NAME

Transitive Dependency

Invoice Table

3NF

INV_NUM	PROD_NUM	NUM_SOLD	SALE_DATE

Product Table

3NF

PROD_NUM	PROD_DESCRIPTION	PROD_PRICE

Vendor Table

VEND_CODE	VEND_NAME

i

⊏