**DATAWARE HOUSING AND DATA MINING**

**Quiz No:2**

Name: Muhammad Bilal Ahmed

Roll No: FA20-BCS-041

**Q1)**

**Answer:**

**Normalization**

A table is said to be in first normal form if its has no multivalued attributes.

**1st Normal Form**

Product id, Purchase id, Purchase date, Supplier id, Supplier name, Purchase Price,

Purchase quantity, Customer id, Customer name, Product id , Product name, Sale Price

**2nd Normal Form**

Orders -> Order ID, Product Id, Orderdate, Ordered Quantity

Products-> Product id, Product name

Order line -> Orderline id, Customer id, Customer name,

Purchase -> Purchaseid, Product id, Purchase date

Purchase details -> purchase detail id, Supplier id, Supplier name

Partial dependencies are removed.

**3rd Normal Form**

Orders -> Order ID, Product Id, Orderdate,

Products-> Product id, Product name

Order line -> Orderline id, Order id, Price, Ordered Quantity

Customers-> Customer id, Customer name,

Purchase -> Purchaseid, Product id, Purchase date

Purchase details -> purchase detail id, Purchase Price, Purchase quantity

Supplier -> Supplier id, Supplier name

Transitive dependencies are removed.

**Q2)**

**Answer:**

We can optimize our fact and dimension queries by

1. Using wildcards at the end of a phase only
2. Avoid too many joins
3. Avoid using using SELECT DISTINCT
4. Use SELECT fields instead of SELECT \*
5. Use TOP to sample query results