

# 19 Lecture - CS403

## Important Subjective

### 1. What is functional dependency?

Answer: Functional dependency is a relationship between two attributes or sets of attributes in a database where the value of one attribute determines the value of another.

### What is the difference between a full functional dependency and a partial functional dependency?

Answer: Full functional dependency occurs when an attribute is dependent on the entire primary key, while partial functional dependency occurs when an attribute is dependent on only part of the primary key.

### What is a transitive dependency?

Answer: A transitive dependency occurs when an attribute is dependent on another attribute that is not part of the primary key.

### Why is functional dependency important in database design?

Answer: Functional dependency helps in eliminating data redundancy, improving data integrity, and preventing data anomalies.

### What is a determinant in a functional dependency?

Answer: The determinant in a functional dependency is the attribute that determines the value of another attribute.

### What is the difference between first normal form and second normal form?

Answer: First normal form eliminates repeating groups and creates a relation with atomic values, while second normal form eliminates partial dependencies by removing attributes that are not dependent on the primary key.

### What is a candidate key?

Answer: A candidate key is a set of attributes that can uniquely identify each row in a table.

### How can you identify a functional dependency?

Answer: A functional dependency can be identified by analyzing the data and determining whether the value of one attribute can determine the value of another attribute.

### What is a multivalued dependency?

Answer: A multivalued dependency occurs when there is a relationship between two non-key attributes and a primary key attribute, and the non-key attributes are dependent on each other.

### How does normalization help in managing data?

Answer: Normalization helps in organizing data in a structured manner, eliminating data redundancy, improving data integrity, and preventing data anomalies. It also makes it easier to manage and update the data.