# 17 Lecture - CS101

# **Important Subjective**

#### 1. What is a data model?

**Answer:** A data model is a conceptual representation of the data that is stored in a database. It defines the structure, relationships, and constraints of the data.

### 2. What is the most widely used data model in modern database systems?

Answer: The relational model is the most widely used data model in modern database systems.

#### 3. What is a database management system (DBMS)?

**Answer:** A DBMS is a software system that manages the storage, retrieval, and manipulation of data in a database.

## 4. What is data integrity?

**Answer:** Data integrity refers to the accuracy and consistency of the data in a database. It is maintained through a set of constraints that ensure that the data meets certain standards.

#### 5. What is a primary key constraint?

**Answer:** A primary key constraint ensures that each record in a table is uniquely identified by a specific attribute or set of attributes.

#### 6. What is a foreign key constraint?

**Answer:** A foreign key constraint ensures that the relationship between two tables is maintained, by requiring that a record in one table must exist in another table.

#### 7. What is a check constraint?

**Answer:** A check constraint ensures that the data in a table meets a specific set of criteria, such as a range of values or a pattern.

#### 8. What is data normalization?

**Answer:** Data normalization is the process of organizing data in a database to reduce redundancy and improve data consistency.

# 9. What is a first normal form (1NF)?

**Answer:** In the first normal form, each table has a primary key, and all attributes in the table are atomic, meaning they cannot be further broken down.

# 10. What is third normal form (3NF)?

**Answer:** In third normal form, each attribute in a table is dependent only on the primary key, and not on any other attributes in the table.