LESSON - 4
INTRODUCTION TO DBMS

Fill in the blanks:

1. **Database Management System** is the full form of DBMS.
2. To control the database, **Database Administrator** is responsible.
3. After processing, data is converted into **information**.
4. Information associate with each other is making **database**.
5. **Primary Key** is a uniqe key.

Full forms:

1. **DBA** : DataBase Administrtor
2. **DBMS** : DataBase Management System
3. **SQL** : Structured Query Language
4. **RDBMS** : Relational DataBase Management System

Short Answer Type Questions

Question 1: What is Database?

Answer: Database is prepared from information related to each other. It is expressed in tabular form. Database is a proper arrangement of information. Database is a collection of a large amount of data. Software which is used to create database, is known as Database Management System.

Question 2: What are the different types of relationships?

Answer: Relationship allows relational database to split and store data in different tables.

Types of Relationship:

1. One-to-One
2. One-to-many
3. Many-to-Many

Question 3: Write the names of different DBA.

Answer: DBA stands for database administrator. DBA should be a person or bunch of persons. Different types of DBA's are as follow:

1. Administrative DBA
2. Development DBA
3. Architect DBA
4. Data warehouse DBA

Question 4: What is SQL?

Answer: SQL stands for Structure Query Language. SQL is a high level language which is used to store, control and amend the database. It is based on the concept that how much data is needed by a programmer

Question 5: Name the different types of Keys?

Answer: Keys are very important part of database management system. They are used to establish and identify relation between tables.

Types of Keys:-

1. Super Key
2. Candidate Key
3. Primary Key
4. Composite Key
5. Foreign Key.

Long Answer Type Questions

Question 1: Describe Normalization. How many types of Normalization?

Answer: Normalization is a scientific way in which difficult table is make quit simple in term of understanding by user. It is used to reduce redundancy from tables and to reduce

inconsistency in database. To implement Normalization concept various normal forms are used. Tables are always is in normal form. Commonly used Normal forms are as follows:

1. First Normal Form (1NF)
2. Second Normal Form (2NF)
3. Third Normal Form (3NF)
4. Fourth Normal Form (4NF)
5. Boyce Coded Normal Form

Question 2: What do you mean by DBMS? Describe its advantages and disadvantages.

Answer: The full name of DBMS is *Data Management System.* To overcome all drawbacks of *File Processing System,* a new system called *Database Management System* was developed. A *Database Management System* (DBMS) is System Software for creating and managing databases. The DBMS provides users and programmers a systematic way to create, retrieve, update and manage data. The DBMS essentially serves as an interface between the database and end users.

Advantages of DBMS:-

1. Redundancy is being controlled in DBMS.
2. Data is shared by multiple applications or by multiple users in DBMS.
3. DBMS providing Backup and Recovery.
4. In DBMS, there is Restricting Unauthorized Access to the database.
5. In DBMS, Data Model can be developed.

Disadvantages of DBMS:-

1. It is Complex you must have to get training to use the database
2. An extra hardware is needed.
3. Higher impact of a failure so there is every possibility of damaging the data.
4. Conversion cost is very high of the DBMS.

Question 3: What do you mean by data models? Write the parts of it?

Answer: Data model means it is a way to give us information about the structure of database. Means it is used to describe data, relationship to data, and consistency of data etc. It has been divided into mainly three parts that are as follows:

Object Oriented logically model: It is used to describe data line by line. It is of five types:

- Binary model
- Functional Model
- Entity relationship model
- Object oriented model
- Symantic data model

Record Base Logical Model: It is also used to describe data line by line but a format is used in it permanently. Each record has its own attributes and fields that are used under fixed access. It is of three types:

- Network model
- Relational Model
- Heirachical Model

Physical Data Model: It has been used to describe data at lowest level of the database. Some parts of it are as follows:

- Entity
- Attribute
- Relationship
- Entity Set
- Relationship Set