# MODULE-5 DATABASE

## Q.1 What do you understand by database?

## Answer:

**Database is one kind of managing system to manage the huge amount of data.**

**It's called database management system.**

**Database system is comprised of two things first one is database another one is DBMS.**

**Database is collection of related data.**

**Simply database means where a lot of data is collected.**

**Database management system is software that provide user to store data.**

**Example of DBMS is MYSQL, ORACLE, etc.**

## 2 what is normalization?

## Answer:

**Normalization is the process of organizing the data in the database.**

**Normalization is used to minimize the redundancy from a relational or set of relational.**

**It helps in remove duplicate information.**

**Help to keep data consistent.**

**Make data easier to manage.**

## Q.3 Difference between DBMS and RDBMS.

**DBMS : Stands for database management system.**

- **Stores data as a file.**
- **Normalization is not present.**
- **It allows one user at a time.**
- **DBMS does not any type of security with regards to data manipulate(access, store, update )**
- **It deals with small data and single user.**
- **Ex : File system, xml etc..**

**RDBMS : Relational database management system.**

- **Store data as a table form.**
- **Normalization is present.**
- **It allows one or more user at a time.**
- **It deals with large amount of data and support multiple user.**
- **Ex : MYSQL, ORACLE etc..**

## Q.4 What is MF Code Role of RDBMS System ?

## Answer:

**In relational database management system , data organization is crucial for efficiency and scalability.**

**What is mf code?**
**Mf code rules refers to the multivalued, first second and third normal forms.**
**they are with proper designing database.**

**Role of MF code in RDBMS:**

1. Data consistency
2. Scalability
3. Data integrity

## Q 5 What do you understand by data redundancy?

## Answer:

**Data redundancy ensures an organization can provide continued operation or service in the event something**

**happens to its data-for ex. In the case of data corruption or data loss.**

**Data redundancy can occur within an organization intentionally or accidentally.**

**This data is often used for backups or disaster recovery.**

**Redundant information that is unneeded or duplicate.**

## Q 6 What is DDL interpreter ?

## Answer:

**DDL stands for data definition language.**

**It used to define the schema or structure of database.**

**DDL is set of commands which are used to create, update or delete structure of data base.**

| COMMAND | DESCRIPTION |
|---|---|
| CREATE | Create a new table, a view of table, or other objects in database. |
| ALTER | Modifies an existing database object, such as a table. |
| DROP | Delete an entire table. |

## Q 7 What is DML compiler in SQL ?

## Answer:

**DML stands for data manipulation language.**

**DML is set of commands which are used to Insert, update or delete structure of records in a database.**

| COMMAND | DESCRIPTION |
|---|---|
| INSERT | Creates a record. |
| UPDATE | Modifies records. |
| DELETE | Delete records. |
| | |

## 8 What is SQL key constrains writing an example of SQL key constrains.

**SQL key constrains are rules applied to columns in a database table to enforce data integrity and ensure the uniqueness or integrity of data.**

**There is different type of key constrains.**

**1.Primary key :**

**This constrains uniquely identifies each record in a table. It must contain unique values and cannot contain NULL values.**

**Example :**

```
CREATE TABLE employee
(  Emp_Id INT PRIMARY key,
Firstname VARCHAR(50), lastname VARCHAR(50)
);
```

**2. Unique key :**

**Similar to primary key constrains, but it allows for NULL values. It ensure that all values in a column are unique.**

**Example :**

```
CREATE TABLE students
( studentID INT UNIQUE,
Firstname VARCHAR(50), lastname VARCHAR (50)
);
```

**3. Foreign key constrains :**

**Ensures referential integrity by enforcing a link between in two tables. The foreign key column in one table must match a primary key value in another table, or be NULL if allowed.**

```
CREATE TABLE order
```

( order_id INT PRIMARY key,

Product_id INT, quantity INT, FOREIGN key (product_id) REFERENCE products (product_id)

);

## 9 What is save point? How to create a save point write a query?

## Answer:

SAVEPOINT is a one type of transaction control.

A SAVE POINT is a point in a transaction when you can roll the transaction back to a certain point without rolling back the entire transaction.

SYNTAX: SAVEPOINT SAVEPOINT_ NAME ;

These commands only in the certain of a SAVEPOINT among all the transactional statements. The ROLLBACK command is used to undo a group of transaction.

## 10 What is trigger and how to create a trigger in sql ?

## Answer:

A trigger is a stored procedure in a database which automatically invokes whenever a special event in the database occur.

**Trigger can invoked when a row is insert into a specified table.**

**Trigger can be defined on the table, view, schema or database which the event is associated.**

**Syntax :**

**Create trigger [ trigger_name ] [before | after]**

**{ insert | update | delete} on [table_name] [for each row][trigger_body]**