# Module-4 Database

1. What is RDBMS

* RDBMS stands for Relational Database Management System. RDBMS is a program used to maintain a relational database. RDBMS is the basis for all modern database systems such as MySQL, Microsoft SQL Server, Oracle, and Microsoft Access.

1. What is SQL

* SQL stands for Structured Query language. SQL is the standard language for dealing with Relational Databases. SQL can be used to insert, search, update, and delete database records. SQL can do lots of other operations, including optimizing and maintenance of databases.

1. Write SQL Commands

* DDL – Data Definition Language DML – Data Manipulation Language DCL – Data Control Language DQL – Data Query Language

1. What is join?

* JOIN clause is used to combine the records from two or more tables in a database.

1. Write type of joins.

* INNER JOIN
* LEFT JOIN
* RIGHT JOIN
* FULL JOIN

1. How Many constraint and describes it self

* NOT NULL – Ensures a column cannot have NULL values.
* UNIQUE – Ensures all values in a column are unique.
* PRIMARY KEY – A combination of NOT NULL and UNIQUE; uniquely identifies records.
* FOREIGN KEY – Ensures data integrity between two tables.
* CHECK – Enforces a specific condition or rule on the data.
* DEFAULT – Assigns a default value to a column when no value is specified.
* INDEX – Optimizes query performance and can enforce uniqueness (through a unique index).

1. Difference between RDBMS vs DBMS

* DBMS
* DBMS does not support client-server architecture. RDBMS supports client-server architecture.
* DBMS has low software and hardware requirements.
* DBMS stores data as a file.
* DBMS supports single user.
* In DBMS, data redundancy is common
* RDBMS
* RDBMS has higher hardware and software requirements. In DBMS, data redundancy is common
* In RDBMS, key and indexes do not allow data redundancy.
* RDBMS supports client-server architecture.
* RDBMS supports multiple users.
* RDBMS is stored in the form of tables.

1. What is an SQL alias?

* A responsive web design involves creating a flexible web page that is accessible from any device, starting from a mobile phone to a tablet. Furthermore, a responsive web design improves users’ browsing experience.

1. Write a query to create the table in Structured Query Language.

* CREATE TABLE Employees (

Employee ID INT PRIMARY KEY,

FirstName VARCHAR(50) NOT NULL,

Email VARCHAR(100) UNIQUE,

Age INT CHECK (Age >= 18),

HireDate DATE DEFAULT CURRENT\_DATE,

Department VARCHAR(50)

);

1. Write a query to insert data into table

* CREATE TABLE Seller (

seller\_id INT PRIMARY KEY,

seller\_name VARCHAR(100),

contact\_info VARCHAR(100)

);

INSERT INTO Seller (seller\_id, seller\_name, contact\_info)

VALUES

(1, 'ABC Electronics', '1234 Main St'),

(2, 'XYZ Furniture', '5678 Oak St'),

(3, 'TechWorld', '9876 Pine St');

1. Write a query to delete data from table with validations

* IF EXISTS (SELECT 1 FROM Employees WHERE EmployeeID = 1) BEGIN

DELETE FROM Employees

WHERE EmployeeID = 1;.

PRINT 'Employee deleted successfully.';

END

ELSE

BEGIN

PRINT 'Employee not found.';

END

1. Write a query to insert new column in existing table.

ALTER TABLE Employees

ADD MiddleName VARCHAR(50),

DepartmentCode INT;

ADD DateOfBirth DATE DEFAULT '2000-01-01';

);

1. Write a query to drop table and database.

* CREATE TABLE Salary (

employee\_id INT PRIMARY KEY,

employee\_name VARCHAR(100),

salary DECIMAL(10, 2)

);

INSERT INTO Salary (employee\_id, employee\_name, salary) VALUES

(1, 'John Doe', 55000.00),

(2, 'Jane Smith', 62000.00),

(3, 'Alice Johnson', 70000.00);

1. Write a query to find max and min value from table.

* SELECT MAX(salary) AS max\_salary,

MIN(salary) AS min\_salary FROM employees;

FROM employees;

|  |  |
| --- | --- |
| max\_salary | min\_salary |
| 70000 | 40000 |

1. Create two tables named Seller and Product apply foreign key in product table Fetch data from both table using different joins.

* CREATE TABLE Seller (

seller\_id INT PRIMARY KEY,

seller\_name VARCHAR(100),

contact\_info VARCHAR(100)

);

* CREATE TABLE Product (

product\_id INT PRIMARY KEY,

product\_name VARCHAR(100),

price DECIMAL(10, 2),

seller\_id INT,

FOREIGN KEY (seller\_id) REFERENCES Seller(seller\_id)

);

1. What is API Testing

* Application Programming Interface (API) is a software interface that allows two applications to interact with each other without any user intervention.
* API (Application Programming Interface) is a computing interface which enables communication and data exchange between two separate software systems.

1. Types of API Testing

* There are mainly 3 types of API Testing.
* Open APIs
* Partner APIs
* Internal APIs

1. What is Responsive Testing?

* A responsive web design involves creating a flexible web page that is accessible from any device, starting from a mobile phone to a tablet. Furthermore, a responsive web design improves users’ browsing experience.

1. Which types of tools are available for Responsive Testing

* LT Browser
* Lembda Testing
* Google Resizer
* I am responsive
* Pixel tuner

1. What is the full form of .ipa, .apk

* IPA: International Phonetic Alphabet.
* APK: Android Application Package.

1. How to create step for to open the developer option mode ON?

* Step 1: Open mobile setting.
* Step 2: Go to About phone option and click on.
* Step 3: Go to Software information option and click on
* Step 4: Go to Build number option and click multiple time.
* Step 5: then show the message on display “developer option enabled