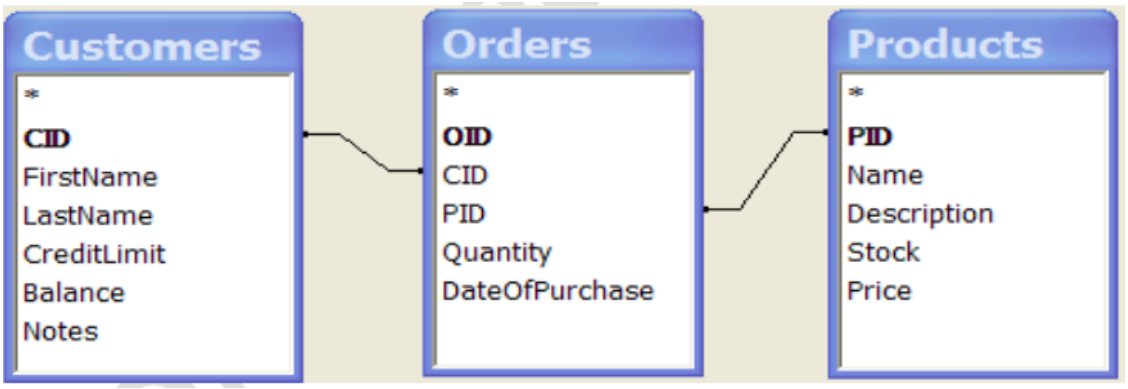
ASSIGMENT :- MODULE 3

Q1. What is RDBMS.

- The software used to store, manage, query, and retrieve data stored in a relational database is called a relational database management system (RDBMS).
- RDBMS stands for **Relational Database Management System**.
- RDBMS is the basis for SQL, and for all modern database systems like MS SQL Server, IBM DB2, Oracle, MySQL, and Microsoft Access.
- A Relational database management system (RDBMS) is a database management system (DBMS) that is based on the relational model as introduced by E. F. Codd.
    - Most of today's databases are relational:
        - database contains 1 or more tables
        - table contains 1 or more records
        - record contains 1 or more fields •
        - fields contain the data
- **So why is it called "relational"?**
    - tables are related (joined) based on common fields

    Example: - Here's a simple database schema for tracking sales 3 tables, related by primary keys (CID, OID, PID)

    • primary keys (in boldface) are unique record identifiers Customer may place order for one product at a time\.



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Q2. What is SQL .

- **SQL** is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in relational database.
- All relational database management systems like MySQL, MS Access, and Oracle, Sybase, Informix, Postgres and SQL Server use SQL as standard database language. Also, they are using different dialects, such as:
    - MS SQL Server using T-SQL, ANSI SQL
    - Oracle using PL/SQL,
    - MS Access version of SQL is called JET SQL (native format) etc.
- Allows users to access data in relational database management systems
- Allows users to define the data in database and manipulate that data.
- Allows users to create and drop databases and tables.
- Allows users to create view, stored procedure, functions in a database.
- Allows users to set permissions on tables, procedures, and views
- SQL is easy to learn
- SQL is written in the form of queries action queries insert, update & delete data

Q3. Write SQL Commands.

- SQL commands are the instructions used to communicate with a database to perform tasks, functions, and queries with data.
- SQL commands can be used to search the database and to do other functions like creating tables, adding data to tables, modifying data, and dropping tables.
- This article will teach us about SQL commands are DDL, DQL, DML.

DDL (Data Definition language)

- DDL changes the structure of the table like creating a table, deleting a table, altering a table, etc.
- All the command of DDL are auto-committed that means it permanently save all the changes in the database.

Here are some commands that come under DDL:

- CREATE
- ALTER
- DROP

Command	Description	Syntax
CREATE	Creates a new table, a view of a table, or other object in database	CREATE TABLE table_name (column1 data_type, column2 data_type, ...);
DROP	Deletes an entire table, a view of a table or other object in the database.	DROP TABLE table_name;
ALTER	Modifies an existing database object, such as a table	ALTER TABLE table_name ADD COLUMN column_name data_type;

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DML(Data Manipulation Language)

- DML commands are used to modify the database. It is responsible for all form of changes in the database.
- The command of DML is not auto-committed that means it can't permanently save all the changes in the database. They can be rollback.

Here are some commands that come under DML:

- INSERT
- UPDATE
- DELETE

Command	Description	Syntax
INSERT	It is used to insert data into the row of a table.	INSERT INTO TABLE_NAME VALUES (value1, value2, value3, ... valueN);
UPDATE	Deletes an entire table, a view of a table or other object in the database.	DROP TABLE table_name;
DELETE	Modifies an existing database object, such as a table	ALTER TABLE table_name ADD COLUMN column_name data_type;

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DQL (Data Query language)

- DQL is used to fetch the data from the database
- It uses only one command:
  - SELECT

Command	Description	Syntax
SELECT	It is This is the same as the projection operation of relational algebra. It is used to select the attribute based on the condition described by WHERE clause. used to insert data into the row of a table.	SELECT expressions FROM TABLES WHERE conditions;

ASSIGMENT :- MODULE 3

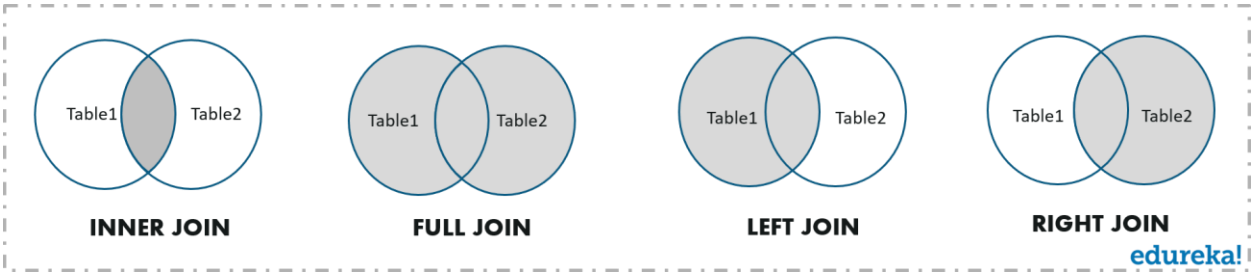
Q4. What is join?

- As the name shows, JOIN means *to combine something*. In case of SQL, JOIN means **"to combine two or more tables"**.

Q5. Write type of joins.

SQL Join Types

- **INNER JOIN**: returns rows when there is a match in both tables.
  - SELECT TableName1.columnName1, TableName2.columnName2 FROM TableName1 LEFT OUTER JOIN TableName2 ON TableName1.ColumnName = TableName2.ColumnName;
- **LEFT JOIN**: returns all rows from the left table, even if there are no matches in the right table.
  - SELECT table1.column1, table2.column2...FROM table1LEFT JOIN table2ON table1.common_filed = table2.common_field;
- **RIGHT JOIN:** returns all rows from the right table, even if there are no matches in the left table.
  - SELECT table1.column1, table2.column2...FROM table1RIGHT JOIN table2ON table1.common_filed = table2.common_field;
- **FULL JOIN:** returns rows when there is a match in one of the tables. DDL - Data Definition Language
  - SELECT table1.column1, table2.column2...FROM table1FULL JOIN table2ON table1.common_filed = table2.common_field;



Q6. How many constraints and describes itself.

- Constraints can be specified when the table is created with the CREATE TABLE statement, or after the table is created with the ALTER TABLE statement.

  Syntax

  CREATE TABLE *table_name* (
  column1 datatype constraint,
  column2 datatype constraint,
  column3 datatype constraint,
  ....
  );

The following constraints are commonly used in SQL:

- **NOT NULL –**
  - Ensures that a column cannot have a NULL value
- **UNIQUE** –
  - Ensures that all values in a column are different
- **PRIMARY KEY** –
  - A combination of a NOT NULL and UNIQUE. Uniquely identifies each row in a table
- **FOREIGN KEY** –
  - Prevents actions that would destroy links between tables
- **CHECK –**
  - Ensures that the values in a column satisfies a specific condition
- **DEFAULT** -
  - Sets a default value for a column if no value is specified
- **CREATE INDEX –**
  - Used to create and retrieve data from the database very quickly

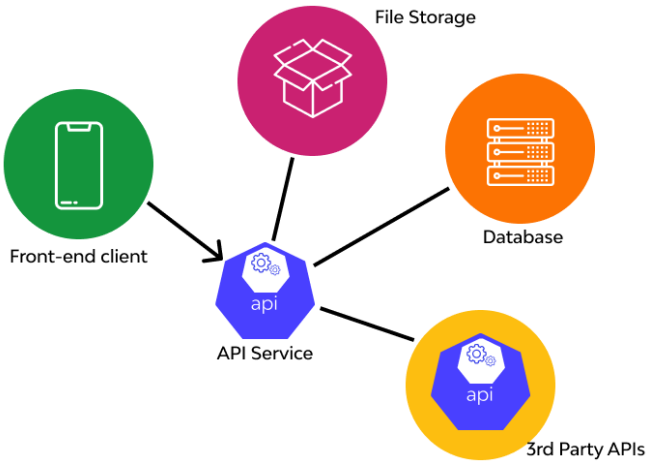
ASSIGMENT :- MODULE 3

Q7 Difference between RDBMS vs DBMS.

DBMS	RDBMS
DBMS stands for ”Database Management System”	DBMS stands for “ Relational Database Management System”
It stores data as file.	It stores data in tabular form.
It deals with small quantity of data.	It deals with large amount of data.
It supports single user.	It supports multiple users.
It have high data redundancy.	It have low data redundancy.
It difficult to modify data.	It is easy to modify the data.
EX:-Microsoft access, Libra office, dBase	EX:-MSSQL,MYSQL,oracal

Q.8 What is API Testing?

- Application programming interface (API) is a software interface that allows two applications to interacts with each other without any user intervention.
- Another definition, APF (application programming interface) is a computing interface. Which enables communication and dates exchange between two software system.
- The purpose of API testing is to check the functionality, reliability, performance and security of the programming interface.
- In API testing, instead of using standard user inputs(key bords) and outputs you use software to send calls to the API get output and note down the systems response.
- API tests are very different from GUI tests and wont concentrate on the look and feel of an application.



Q.9 Types of API Testing?

There are mainly 3 types of API testing.

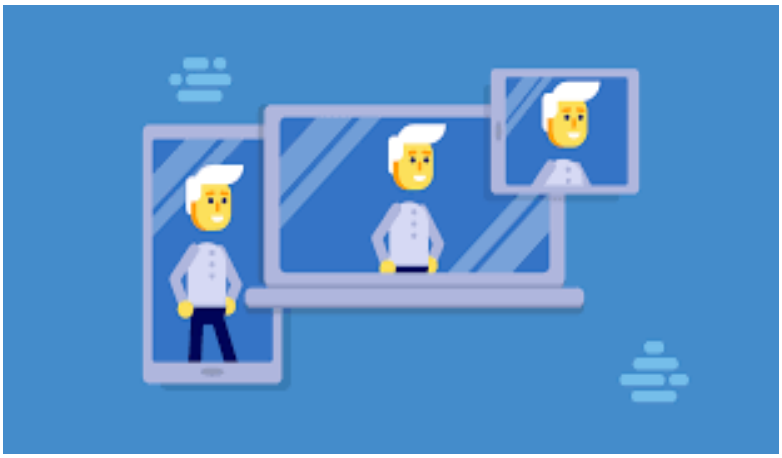
- **Open APIs:** these types of APIs are publicly available to use like 0autn APIs from google. It has also not given any restriction to use them, So, they are also known as public APIs.

- **Partner APIs:** Specific rights or licences to access these types of API because they are available to the public.

- **Internal APIs:** Internal or private these APIs are developed by companies to use in their internal systems. It helps you to enhance to productivity of your teams.

Q10.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.
- Further more, a responsive web design improves users browsing experience.
- Considering this from a quality assurance perspective, a responsive web design requires thorough evaluation using a variety of device before it is ready to go live.
- Responsive software is software that adapts to different devices, screen sizes, orientations, and user interactions. It is essential for creating a positive user experience and reaching a wider audience



Q.11 Which types of tools are available for Responsive Testing?

Responsive testing tools are:-

- LT Browser
- Lambda testing
- Google resizes
- I am responsive
- Pixel tuner
- Ui.dev/am I responsive

Q.12 What is the full form of. ipa, .apk?

- **IPA:** iOS package App Store
- **APK:** Android Application Package

(Q.13) How to create step for to open the developer option mode ON?

Step 1: Go to Settings > About phone.

Step 2: Scroll down to Build number.

Step 3: Tap Build number seven times. ...

Step 4: Once developer options are activated, you will see a message that reads, you are now a developer.

Step 5: Go back to the *settings* pane and head to *System*, where you will now Find *Developer options* as an entry.

Step 6: Tap it and toggle the switch on if it is not already, and from there, you can proceed to make adjustments to your phone.