SQL Assignment 3

---

1. **Create a function and then call another function from within it. What is this process called?**

   Ans-

   - Creating a function and then calling, another function is a process of **Stored Procedure**

     Let us see an example of it:-

     Creating a stored procedure:-

```
CREATE PROCEDURE GetProductDesc
AS
BEGIN
SET NOCOUNT ON
SELECT P.ProductID, P.ProductName, PD.ProductDescription  FROM
Product P
INNER JOIN ProductDescription PD ON P.ProductID=PD.ProductID

END
```

     Then call function:-

```
 EXEC GetProductdesc
```

2. **How to inspect the query's execution plan?**

   Ans-

   - The execution plan in SQL Server Management Studio is a graphical representation of the various steps that are involved in fetching results from the database tables.
   - Once a query is executed, the query processing engine quickly generates multiple execution plans and selects the one which returns the results with the best performance. There are two types of execution plans to be specific –
     - ***Estimated Execution Plan*** – This type of execution plan is just a guess by the query processor about how the specific steps that are to be involved while returning the results. It is often generated before the query has been executed.
     - There are several ways to get an estimated execution plan.
     - **1st** Once the query is written completely, you can hit "**Ctrl + L**"
     - **2nd** right-click on the query window and select "**Display Estimated Execution Plan**" from the context menu that appears.
     - **3rd** Directly click the "**Display Estimated Execution Plan**" icon which is available on the SQL toolbar.
     - ***Actual Execution Plan*** – The Actual Execution Plan is generated after the query has been executed. It shows the actual operations and steps involved while executing the query. This may or may not differ from the Estimated Execution Plan

SQL Assignment 3

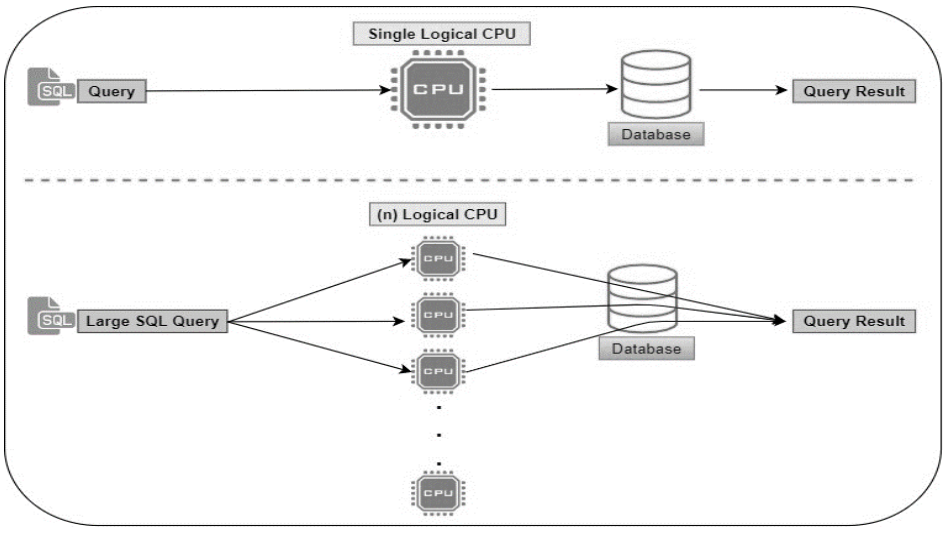
- **1st** Once the query is written completely, you can hit "**Ctrl + M**"
- **2nd** right-click on the query window, and select **Display Actual Execution Plan**" from the context menu that appears.
- **3rd** Directly click the "**Display Actual Execution Plan**" icon which is available on the SQL toolbar.

- **We can distinguish the execution plan into the following five steps:**
  1. Clustered Index Scan
  2. Data Flow from Clustered Index Scan (*Arrow*)
  3. Sort Operator
  4. Data Flow from Sort Operator (*Arrow*)
  5. Select Operator

3. What is the purpose of the MAXDOP and recompiling keywords in SQL queries?

Ans-

- The purpose of the MAXDOP(Max Degree of parallelism), is to limit the use of the processor or CPU for running several SQL queries.
- SQL Server runs on a computer with more than one processor or CPU, it detects the best degree of parallelism, that is the number of processors employed to run a single statement, for each query that has a parallel execution plan.
- The max degree of parallelism option to limit the number of processors to use for parallel plan execution and to prevent run-away queries from impacting SQL Server performance by using all available CPUs.
- SELECT * FROM Production.Product WHERE ProductID = 319 OPTION(MAXDOP 4)



4. How to build DDL statements from an existing database table, and write steps for it?

Ans- I dint get the question.

SQL Assignment 3

---

5. **How to update data in a table using an inner join, write an example?**

   Ans-

   - Lets create two table and than use join to update table:-

     ```
     CREATE DATABASE Test
     USE Test
     ```

   - **TABLE -1**

     ```
     CREATE TABLE Test.Person(
        BusinessEntityID INT NOT NULL ,
        FirstName NVARCHAR(50),
        LastName NVARCHAR(50),
        City NVARCHAR(30),
        PostalCode NVARCHAR(15),
        PRIMARY KEY (BusinessEntityID)
      );
     ```

   - **TABLE -2**

     ```
     CREATE TABLE Test.PersonAddress(
        BusinessEntityID INT,
        AddressID INT,
        City NVARCHAR(30),
        PostalCode NVARCHAR(15),
        FOREIGN KEY(AddressID) REFERENCES Test.Person
        (BusinessEntityID)
      );
     ```

   - **Here i update address id by using inner join**

     ```
     SELECT p.BusinessEntityID, a.AddressID, a.City, a.PostalCode
     FROM Person.Person AS p
     INNER JOIN Person.Address AS a ON p.BusinessEntityID = a.AddressID
     ORDER BY BusinessEntityID;
     ```

6. **Differentiate between truncate, delete, and drop with a suitable example.**

   Ans-

Truncate	Delete	Drop
DDL	DML	DDL
It is used to remove all the records from a table.	It is used to delete existing records from an existing	is used to delete existing database objects.

SQL Assignment 3

	table or all record.	
It deletes all the records from an existing table but not the table itself. The structure or schema of the table is preserved.	It delete a single record or multiple records depending on the condition specified in the query.	It can be used to delete databases, tables, views, triggers, etc.
If we want to delete all the records of a table, it is preferable to use TRUNCATE in place of DELETE as the former is faster than the latter.	The conditions are specified in the WHERE clause of the DELETE statement. If we omit the WHERE clause then all of the records will be deleted and the table will be empty.	DROP command deletes the data of the table as well as removes the entire schema/structure of the table from the database.
TRUNCATE is a DDL command so it can not be rolled back.	DELETE is a DML Command so it can be rolled back.	DROP is a DDL Command. Objects deleted using DROP are permanently lost and it cannot be rolled back.
Ex:- **TRUNCATE TABLE Employees;** This query will remove all the records from the table Employees. **TRUNCATE TABLE Company.Employees;** This query will remove all the records from the table Employees in the database Company.	Ex:- **DELETE FROM Employees WHERE Emp_Id = 7;** This query will delete the record(s) from Employees table where field Emp_Id has a value 7. **DELETE FROM Employees;** This query will delete all the records from Employees table as WHERE clause and conditions are not specified.	Ex:- **DROP TABLE Employees;** This query will remove the whole table Employees from the database. **DROP DATABASE Company;** This query will delete the database Company.