**SQL Assignment 3**

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

* The stored procedure is SQL statements wrapped within the **CREATE PROCEDURE** statement. The stored procedure may contain a conditional statement like IF or CASE or the Loops. The stored procedure can also execute another stored procedure or a function that modularizes the code.
* Create Procedure [Procedure Name] ([Parameter 1], [Parameter 2], [Parameter 3])  
  Begin  
  SQL Queries  
  End
* The name of the procedure must be specified after the **Create Procedure** keyword
* After the name of the procedure, the list of parameters must be specified in the parenthesis. The parameter list must be comma-separated.
* The SQL Queries and code must be written between **BEGIN** and **END** keywords

1. **How to inspect the query’s execution plan?**

* A query execution plan can also be captured in a SQL Server trace and opened in SQL Server Profiler
  1. Start SQL Server Profiler.
  2. In the **File** menu, select **New Trace.**
  3. In the **Events Section** tab, check **Show all events.**
  4. Expand the **Performance** node.
  5. Select **Showplan** XML.
  6. Execute the query you want to see the query plan for.
  7. Stop the trace. This is recommended due to practical reasons – in busy databases, it’s difficult to filter by the event you want to trace.
  8. Select the query plan in the grid.

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

* The maximum degree of parallelism (MAXDOP) is a server configuration option for running SQL Server on multiple CPUs. It controls the number of processors used to run a single statement in parallel plan execution. The default value is 0, which enables SQL Server to use all available processors. This can affect performance and isn’t optimal for most use cases.

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

* A copy of an existing table can be created using a combination of the CREATE TABLE statement and the SELECT statement. The new table has the same column definitions. All columns or specific columns can be selected. When you will create a new table using the existing table, the new table would be populated using the existing values in the old table.
* Syntax:

CREATE TABLE NEW\_TABLE\_NAME AS

SELECT [ column1, column2...column]

FROM EXISTING\_TABLE\_NAME

[ WHERE]

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

* Let us take an example of a customer table. I have updated customer table that contains latest customer details from another source system. I want to update the customer table with latest data. In such case, I will perform join between target table and source table using join on customer ID.
* **SYNTAX:**

**UPDATE** customer\_table **INNER JOIN** Customer\_table ON customer\_table.rel\_cust\_name = customer\_table.cust\_id

**SET** customer\_table.rel\_cust\_name = customer\_table. cust\_name

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **Key Points** | **DELETE** | **TRUNCATE** | **DROP** |
| 1 | Classification | DML (Data Manipulation Language) | DDL (Data Definition Language) | DDL (Data Definition Language) |
| 2 | Use to delete | one or more rows | all the rows | all the data stored in a table along with its structure |
| 3 | WHERE Condition? | Yes | No | No |
| 4 | Uses a lock | Row Lock | Table Lock | Table Lock |
| 5 | Write Transaction log | for each row | for the whole table | for the whole table |
| 6 | Should be Rollback? | Yes | Yes | Yes |
| 7 | Does it reset the auto-increment? | No | Yes | --- |
| 8 | Speed | Slower than TRUNCATE | Faster than DROP | Quick to perform (faster) |