LAB 8 PART2

Key	Trigger	Stored proc
Basic	trigger is a stored procedure that runs automatically when various events happen (eg. update, insert, delete)	Stored procedures are a piece of the code in written in SQL to do some specific task
Running Methodology	It can execute automatically based on the events	It can be invoked explicitly by the user
Parameter	It cannot take input as parameter	It can take input as a parameter
Transaction statements	we can't use transaction statements inside a trigger	We can use transaction statements like begin transaction, commit transaction, and rollback inside a stored procedure
Return	Triggers cannot return values	Stored procedures can return values

2- Stored function vs function

Key	function	Stored proc
1	Always returns a single value; either scalar or a table.	Can return zero, single or multiple values.
2	Functions are compiled and executed at run time.	Stored procedures are stored in parsed and compiled state in the database.
3	Only Select statements. DML statements like update & insert are not allowed.	Can perform any operation on database objects including select and DML statements.
4	Allows only input parameters. Does not allow output parameters.	Allows both input and output parameters
5	Cannot call a stored procedure from a function.	Can call a function from a stored procedure.
6	Functions can be used in JOIN clauses.	Stored procedures cannot be used in JOIN clauses

3- Drop and delete statements

Key	Drop	delete	truncate
1	The DROP command is Data Definition Language Command.	The DELETE command is Data Manipulation Language Command.	The TRUNCATE command is a Data Definition Language Command.
2	The DROP Command drops the complete table from the database	The DELETE command deletes one or more existing records from the table in the database.	The TRUNCATE Command deletes all the rows from the existing table, leaving the row with the column names.
3	We cannot get the complete table deleted from the database using the ROLLBACK command.	We can restore any deleted row or multiple rows from the database using the ROLLBACK command.	We cannot restore all the deleted rows from the database using the ROLLBACK command.
4	The Integrity Constraints get removed for the DROP command.	The Integrity Constraints remain the same in the DELETE command.	The Integrity Constraints will not get removed from the TRUNCATE command.
5	DROP TABLE table_name;	DELETE FROM table_name WHERE condition;	TRUNCATE TABLE table_name;

4- select and select into

Key	select	Select into
1	SELECT column1, column2, ... FROM table_name;	SELECT column1 ,column2...ColumnN INTO New_table FROM tables [Where conditions];
2	The SELECT statement is used to select data from a database.	SELECT INTO creates a new table and fills it with data computed by a query. The data is not returned to the client, as it is with a normal SELECT. The new table's columns have the names and data types associated with the output columns of the SELECT.

5- DDL,DML,DQL and DCL

Key	DDL	DML	DCL	DQL
1	Data Definition Language	Data Manipulation Language	Data Control Language	Data Query Language
2	consists of the SQL commands that can be used to define the database schema.	commands that deals with the manipulation of data present in the database belong to DML	deal with the rights, permissions, and other controls of the database system	statements are used for performing queries on the data within schema objects
3	Create ,drop , alter and truncate	Insert, update, delete and merge	Grant , dent , revoke	select

6-table valued and multi-statement function

Key	table valued	multi-statement
1	You simply state RETURNS TABLE and the return table's definition will be based on the function's SELECT statement. No need to specify the structure of the return table.	Your RETURNS syntax explicitly specifies the structure of the return table. This is done by declaring a TABLE variable that will be used to store and accumulate the rows that are returned as the value of the function.
2	faster	slower
3	Use begin – end syntax	Des not use begin – end syntax

7-varchar (50) and varchar(max)

Key	varchar (50)	Varchar (max)
1	means the maximum number of bytes a data type will take up 50 bytes.	data type is similar to the VARCHAR data type in that it supports variable-length character data. VARCHAR(MAX) is different from VARCHAR because it supports character strings up to 2 GB (2,147,483,647 bytes) in length.

8-sql and windows authentication

Key	Sql authentication	windows authentication
1	SQL Server authentication mode is independent of Windows user accounts. Login and password are created and stored in the syslogins table in the master database. Passwords are not stored as plain text.	Windows authentication is the default authentication mode and is more secure than SQL Server authentication. It is also referred to as integrated security. Users who are already authenticated with Windows and need not provide any additional credentials while connecting to SQL Server. It is also called a trusted connection. The user account is confirmed by Windows.
2	Help in protection of server from any external user that may harm the machine by using windows authentication	Any external user may use the windows authentication to launch attack so its better to create a user to limits his access on database using sql authentication

9-inline function and view

Key	inline function	view
1	User defined function	Is a select statement, specify user view of data
2	return one table and contain only on statement, takes parameters	hide database objects, has no parameters, can have join

10-identity and unique constrains

Key	Identity	unique
1	An identity is simply an auto-increasing column.	The UNIQUE constraint ensures that all values in a column are different. As a result from unique there is non clustered index.
2	It generates values based on predefined seed (Initial value) and step (increment) value.	A PRIMARY KEY constraint automatically has a UNIQUE constraint.