**SQL Assignment 4**

1. Explain different types of views. Demonstrate with suitable examples.

There are 2 types of Views in SQL: **Simple View and Complex View**.

Simple views can only contain a single base table.

Complex views can be constructed on more than one base table

Simple View:-

CREATE TABLE table2 (column1 INT, column2 INT, column3 VARCHAR (100))

INSERT INTO table2 (column1, column2, column3)

SELECT 1, 21, 'TWO-ONE'

UNION ALL

SELECT 11, 22, 'TWO-TWO'

UNION ALL

SELECT 21, 23, 'TWO-THREE'

UNION ALL

SELECT 31, 24, 'TWO-FOUR'

select \* from table2

create view col3 as

select \* from table2 where column3='TWO-ONE';

select \* from col3

Complex View:-

create table Employee\_Test

(

Emp\_ID int ,

Emp\_Name varchar(55),

Emp\_Technology varchar(55),

Emp\_Sal decimal (10,2),

Emp\_Designation varchar(20)

)

select \* from employee\_test

Insert into Employee\_Test values (1,'Amit','PHP',12000,'SE');

Insert into Employee\_Test values (2,'Mohan','ASP.NET',15000,'TL');

Insert into Employee\_Test values (3,'Avin','C#',14000,'SE');

Insert into Employee\_Test values (4,'Manoj','JAVA',22000,'SSE');

Insert into Employee\_Test values (5,'Riyaz','VB',18000,'TH');

create VIEW vw\_Employee\_Test

AS

Select Emp\_ID ,Emp\_Name ,Emp\_Designation

From Employee\_Test

select \* from Employee\_test

create table Personal\_Info

(

Emp\_Name varchar(55),

DOB varchar(55),

Address varchar(55),

Mobile int,

State varchar(55)

)

select \* from Personal\_Info

DROP table personal\_info

Insert into Personal\_Info values ('G.Chaudary','22-10-1985','Ghaziabad',96548922,'UP');

Insert into Personal\_Info values ('B.S.Chauhan','02-07-1986','Haridwar',96548200,'UK');

Insert into Personal\_Info values ('A.Panwar','30-04-1987','Noida',97437821,'UP');

Insert into Personal\_Info values ('H.C.Patak','20-07-1986','Rampur',80109747,'UP');

Insert into Personal\_Info values ('M.Shekh','21-10-1985','Delhi',96547954,'Delhi');

Create VIEW vw\_Employee\_Personal\_Info

As

Select e.Emp\_ID, e.Emp\_Name,e.Emp\_Designation,p.DOB,p.Mobile

From Employee\_Test e INNER JOIN Personal\_Info p

On e.Emp\_Name = p. Emp\_Name

Select \* from vw\_Employee\_Personal\_Info

1. What is the difference between function and stored procedure? Write syntax for creating functions and stored procedures.

Function is used to calculate something from a given input. Hence it got its name from Mathematics. While procedure is the set of commands, which are executed in a order

Syntax for stored Procedures:-

CREATE PROCEDURE procedure\_name  
AS  
sql\_statement  
GO;

syntax for creating functions:-

REATE FUNCTION [schema\_name.]

function\_name ( [ @parameter [ AS ] [type\_schema\_name.] datatype [ = default ] [ READONLY ] ,

@parameter [ AS ] [type\_schema\_name.]

1. What is an index in SQL? What are the different types of indexes in SQL?

Indexes are special lookup tables that the database search engine can use to speed up data retrieval. Simply put, an index is a pointer to data in a table. An index in a database is very similar to an index in the back of a book.

Indexes are used to speed-up query process in SQL Server, resulting in high performance.

There are two types of Indexes in SQL Server: Clustered Index. Non-Clustered Index.

1. Showcase an example of exception handling in SQL stored procedure.

An error condition during a program execution is called an exception and the mechanism for resolving such an exception is known as exception handling. In this article, we will learn how to implement exception handling in SQL Server. SQL Server provides TRY, CATCH blocks for exception handling. We can put all T-SQL statements into a TRY BLOCK and the code for exception handling can be put into a CATCH block. We can also generate user-defined errors using a THROW block.

SQL Server contains the following two types of exceptions:

1. System Defined
2. User Defined

1. Create a SQL function to split strings into rows on a given character?

Input String: Stephen;peter;berry;Olivier;caroline;

|  |
| --- |
| Stephen |
| Peter |
| Berry |
| Oliver |
| Caroline |

1. What is a temporary and a variable table? Write suitable syntax to create temporary tables and variable tables.

Temporary Tables are physically created in the tempdb databaseTable Variable acts like a variable and exists for a particular batch of query execution. It gets dropped once it comes out of batch. It is created in the memory database but may be pushed out to tempdb