**SQL Assignment 4**

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

**Ans - Views in SQL** are a kind of virtual table. A view also has rows and columns like tables, but a view doesn’t store data on the disk like a table.

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| **SYNTEX** | **EXAPMLE** |
| **CREATE VIEW** view\_name AS **SELECT** column1, column2..... **FROM** table\_name **WHERE** condition; | **CREATE VIEW** DetailsView **AS** **SELECT** NAME, ADDRESS **FROM** StudentDetails **WHERE** S\_ID < 5; |

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

| **Function** | **Stored**  **Procedure** |
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| Functions always return a value after the execution of queries. | Here we create some sql codes, which we use in the queries, but need not to write it everytime  There are 2 procedures- IN and OUT means Input and Output |
| In SQL, those functions having a DML statement can not be called from SQL statements. But autonomous transaction functions can be called from SQL queries. | A procedure can not be called using SQL queries |
| A function used only to read data. | A procedure can be used to read and modify data. |
|  | delimiter &&  create procedure top\_players()  begin  select player\_name, country, goals from players where goals > 6;  end &&  delimiter ; |

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

**Ans- SQL Indexes** are special lookup tables that are used to speed up the process of data retrieval. They hold pointers that refer to the data stored in a database, which makes it easier to locate the required data records in a database table.

**Types of Indexes**

There are various types of indexes that can be created using the CREATE INDEX statement. They are:

* Unique Index
* Single-Column Index
* Composite Index
* Implicit Index

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

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

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

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

* + CREATE DATABASE SPLIT\_A\_STRING
  + USE SPLIT\_A\_STRING
  + CREATE TABLE INPUTS\_STR (STRINGS VARCHAR(50)
  + INSERT INTO INPUTS\_STR VALUES ‘Stephen’ , ‘peter’ , ‘berry’, ‘Olivier’, ‘caroline’

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

A temporary table is a base table that is not stored in the database but instead exists only while the database session in which it was created is active.

A variable table is an object that groups multiple variables. All the global parameters (now named variables) that you use in workload scheduling are contained in at least one variable table.