View & Function & Stored Procedures

Views

A view is a virtual table based on the result set of a SQL query

Use cases

-simplify complex queries

-provide security by restricting access to specific data

-present data in a specific format

Characteristics

-Does not store data physically

-Can be used in SELECT, INSERT, UPDATE, and DELETE statements

-Cannot accept parameters ☹

Functions

A function is a database object that performs a calculation or operation and returns single value or table

Use Cases

-encapsulate reusable logic

-perform calculations and return values

Types

-scalar => return single value

-table-valued => return table

Characteristics

-Can accept parameters

-Have to return a value

-Cannot modify database state (cannot perform INSERT, UPDATE, DELETE operations)

Stored Procedures (SP)

A stored procedure is collection of one or more SQL statements that can be executed as a single unit

Use cases

-encapsulate complex business logic

-perform operations on the database

-improve performance by reducing network traffic

Characteristics

-Can accept parameters

-Can return multiple values (using output parameters) or result sets

-Can perform any type of database operation

-Can include control-of-flow statements (IF, WHILE)