

**Student Name - Roli Pathak**

**Class - SQL ITFdn130 Winter 2025**

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**Github link -** [https://github.com/rolipathak/DemoAssignment06\\_SQL\\_Views.git](https://github.com/rolipathak/DemoAssignment06_SQL_Views.git)

**Assignment: Assignment 06:**

Write one or more pages to articulate answers to the following questions. Use at least one well-formed paragraph per question. Using only a sentence or two is fine, but it must make sense and be well-formed.

*1. Explain when you would use a SQL View.*

Views are a way to store a query such that it can be reused (without having to rewrite large or complex queries again and again). Views are a reporting tool in SQL and are used to save complex queries. Views act like a virtual table, simplifying complex queries and provide a streamlined way to access data. Views save time but also makes queries easier to read and maintain. Views are also a way to add an abstraction layer on top of the underlying tables thus adding Security to database structures. Views are most useful when we need to simplify access to data or provide a reusable, read-only snapshot of data.

*2. Explain are the differences and similarities between a View, Function, and Stored Procedure*

**View:** A View is a virtual table based on the result set of a SQL query. It does not store data physically but provides a way to simplify complex queries, enforce security, and abstract the underlying table structure.

**Function:** A Function is a reusable SQL routine that performs calculations and returns a value when called or executed. Functions can accept parameters and are often used for computations or transformations.

**Stored Procedure:** A Stored Procedure is a precompiled collection of SQL statements that can perform complex operations, including data manipulation (insert, update, delete), and can return results or output parameters. Stored procedures can accept input parameters and are often used for business logic like business rules or batch processing.

Feature	View	Function	Stored Procedure
Purpose	Simplifies data access, provides a virtual table	Performs calculations or returns values	Executes complex operations or modifies data
Data Modification	Cannot modify data	Cannot modify data	Can modify data

Parameters	No parameters	Can accept parameters	Can accept parameters
Return Type	Virtual table (result set)	Scalar value or table	No return value (optional output)
Performance	Depends on underlying query	Lightweight for calculations	Precompiled, good for complex tasks
Reusability	Reusable as a virtual table	Reusable for calculations	Reusable for complex logic
Security	Can restrict access to data	Limited security use	Can enforce business rules
Abstraction	help abstract complex logic or database schema from end users.	help abstract complex logic or database schema from end users.	help abstract complex logic or database schema from end users.