|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr No**. |  | **Temporary Table** | **View** | **Materialized View** | **Common Table Expression (CTE)** |
| 1. | Definition | A table that is created temporarily and is available only during the session or transaction. | A virtual table that represents the result of a stored query. It does not store data physically. | A view that stores the result of the query physically. It can be refreshed periodically or on-demand. | A temporary result set that is defined within the execution scope of a single SELECT, INSERT, UPDATE, or DELETE statement. |
| 2. | Scope | Limited to the session or transaction that created it. | Available until explicitly dropped. | Available until explicitly dropped. | Limited to the statement it is defined in. |
| 3. | Persistence | Automatically deleted when the session or transaction ends. | Exists until dropped but does not store data permanently. | Stores data physically and can be refreshed. | Exists only for the duration of the statement. |
| 4. | Use Cases | Useful for storing intermediate results temporarily during complex queries. | Simplifies complex queries, provides data security, and presents data in a specific format. | Useful for improving query performance by storing pre-computed results. | Simplifies complex queries by breaking them into smaller, manageable parts. |
| 5. | Syntax | CREATE TEMPORARY TABLE temp\_table\_name (  column1 datatype,  column2 datatype,  ...  ); | CREATE VIEW view\_name AS  SELECT column1, column2, ...  FROM table\_name  WHERE condition; | CREATE MATERIALIZED VIEW mv\_name AS  SELECT column1, column2, ...  FROM table\_name  WHERE condition; | WITH cte\_name AS (  SELECT column1, column2, ...  FROM table\_name  WHERE condition  )  SELECT column1, column2, ...  FROM cte\_name  WHERE condition; |