**Caching in Snowflake:**

Snowflake improves performance using caching. cache is temporary storage location that stores copies of files or data. so that they can be accessed faster in near future. and it also saves costs and speed up results and its improves query performance.

Snowflake has three levels of caching that speed up queries and reduce costs:

1. **Result Cache**

* Stores results of queries for 24 hours (if underlying data hasn’t changed).
* If the same query is run again → Snowflake returns results instantly without re-executing.
* Use case: Re-running dashboards or reports with same filters.

2. **Metadata Cache**

* Snowflake caches metadata about tables, micro-partitions, statistics.
* Helps the query optimizer decide which partitions to scan (partition pruning).
* Use case: Queries filtering on date ranges can skip irrelevant partitions.

3. **Warehouse Cache (Local Disk Cache)**

* Each virtual warehouse stores recently accessed data in SSD/cache.
* If the same data is queried again while warehouse is running, it pulls from cache instead of cloud storage.
* Use case: Repeated scans of the same tables by multiple users in the same session.