**What is Zero copy cloning?**

Zero-Copy Cloning, which is generally called cloning, is a Snowflake feature that makes a copy of a database without duplicating the data it contains. The clone operation takes a snapshot of the source data when the clone is created and makes this data available to the cloned object. After this point, the clone is independent of the source, so any subsequent changes made to either the source or the clone aren't reflected in the other.

**Time travel in snowflake?**

Snowflake Time Travel is a very important tool that allows users to access Historical Data which is data that has been updated or removed at any point in time in the past. It is a powerful Continuous Data Protection (CDP) feature that ensures the maintenance and availability of historical data.

**Different types of tables in snowflake?**

**Temporary Tables:**

Snowflake supports creating temporary tables to store transient, non-permanent data. Temporary tables exist only within the session. They are created and persist only for the session remainder. They are not visible to other sessions or users and don’t support standard features like cloning.

**Transient tables:**

Snowflake supports creating Transient tables that continue until dropped explicitly and are available to all the users with the relevant privileges. To maintain transitory data beyond each session, transient tables are designed. Temporary tables are similar to permanent tables with the vital difference in their absence of a Fail-safe period.

* Time Travel of 1 day
* No fail safe
* Available until explicitly deleted.

**Permanent Tables**

Regular tables are the default table type in Snowflake Database. When you create a table without specifying the type, it becomes a regular table. They store data permanently and are suitable for most data warehousing scenarios.

* Time travel of 90 days (for Enterprise and above editions)
* Fail safe (non-configurable 7 days)
* Available until deleted.

**External tables:**

External tables in snowflake provide a unique way of accessing the files in the cloud storage (outside snowflake) without physically bringing to the snowflake.

**What happens in zero copy cloning when the data is modified in source?**

After the clone is created, the clone is independent of the source, so any subsequent changes made to either the source or the clone aren't reflected in the other.

**What are tasks in snowflake?**

A task can execute a single SQL statement or a call to a stored procedure. Tasks can be combined with [table streams](https://docs.snowflake.com/en/user-guide/streams.html?ref=thedataschool.co.uk) for continuous ELT workflows to process recently changed table rows.

**How is performance tuning performed?**

We can increase the performance by using broadcast joins, partitioning or by caching mechanism.