Here are **examples** of each type of metadata (**technical**, **process**, and **business**) to help clarify their differences:

**1. Technical Metadata**

Technical metadata describes the structure and technical details of data. Examples include:

* **Table names** in a database (e.g., Customers, Orders).
* **Column names** and data types (e.g., CustomerID as an integer, CustomerName as a string).
* **Database schemas** (e.g., the structure of tables and relationships between them).
* **Indexes** and keys (e.g., primary keys, foreign keys).
* **File formats** (e.g., CSV, JSON, Parquet).
* **Data storage locations** (e.g., file paths, database names).
* **Data lineage** (e.g., where data originated and how it was transformed).

**Example**: In a database, technical metadata might include:

* Table: Employees
  + Columns: EmployeeID (int), FirstName (varchar), LastName (varchar), HireDate (date).

**2. Process Metadata**

Process metadata tracks the operations and workflows related to data processing. Examples include:

* **Job execution times** (e.g., when a data pipeline started and ended).
* **Data movement logs** (e.g., data copied from a source system to a data warehouse).
* **Error logs** (e.g., failed data loads or transformations).
* **System performance metrics** (e.g., CPU usage, disk space, query execution times).
* **User activity logs** (e.g., who accessed the data and when).

**Example**: In a data pipeline, process metadata might include:

* ETL Job: Load\_Customer\_Data
  + Start Time: 2023-10-01 10:00:00
  + End Time: 2023-10-01 10:15:00
  + Rows Processed: 10,000
  + Status: Success.

**3. Business Metadata**

Business metadata provides context and meaning to data for business users. Examples include:

* **Data definitions** (e.g., what a column represents, such as Revenue meaning "total sales in USD").
* **Data ownership** (e.g., which department owns the data, such as Sales or Finance).
* **Business rules** (e.g., how data should be interpreted, such as CustomerType being either Retail or Wholesale).
* **Data source descriptions** (e.g., where the data comes from, such as CRM System or ERP System).
* **Data usage guidelines** (e.g., who can access the data and for what purpose).

**Example**: For a business user analyzing sales data, business metadata might include:

* Column: TotalSales
  + Definition: "Total revenue generated from sales transactions."
  + Source: Sales Database.
  + Business Rule: "Excludes returns and discounts."
  + Owner: Sales Department.

**Summary of Examples:**

* **Technical Metadata**: Database schemas, column types, file formats.
* **Process Metadata**: ETL job logs, system performance metrics, error logs.
* **Business Metadata**: Data definitions, business rules, data ownership.

These examples illustrate how metadata serves different purposes, from technical details to business context, enabling effective data management and usage.