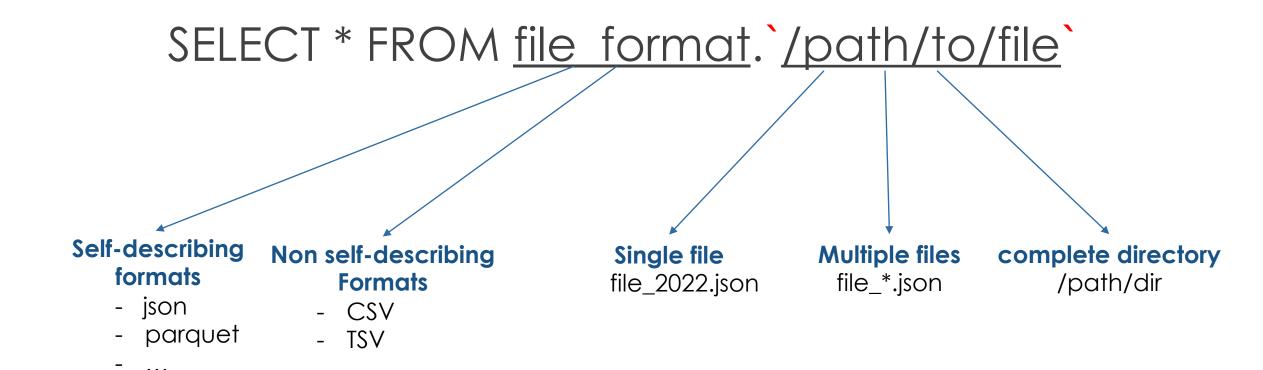
Querying Files

Learning Objectives

- Querying data files directly
- Extract files as raw contents
- ► Configure options of external sources
- Use CTAS statements to create Delta Lake tables

Querying Files Directly



Example: JSON

SELECT * FROM json. \ /path/file_name.json \

Raw data

- Extract text files as raw strings
 - Text-based files (JSON, CSV, TSV, and TXT formats)
 - SELECT * FROM text.`/path/to/file`
- Extract files as raw bytes
 - Images or unstructured data
 - SELECT * FROM binaryFile.`/path/to/file`

CTAS: Registering Tables from Files

- CREATE TABLE table_name
 - AS SELECT * FROM file_format.`/path/to/file`
- Automatically infer schema information from query results
 - ▶ Do Not support manual schema declaration.
 - Useful for external data ingestion with well-defined schema
- ▶ Do Not support file options

Registering Tables on External Data Sources

```
    CREATE TABLE table_name
        (col_name1 col_type1, ...)
    USING data_source
        OPTIONS (key1 = val1, key2 = val2, ...)
    LOCATION = path
```

- External table
- ▶ Non-Delta table!

Example: CSV

Example: Database

Limitation

▶ It's Not Delta table!

We can not expect the performance guarantees associated with Delta Lake and Lakehouse

▶ Having a huge database table

Solution

CREATE TEMP VIEW temp_view_name (col_name1 col_type1, ...)
USING data_source
OPTIONS (key1 = val1, key2 = val2, ...)
LOCATION = path

➤ CREATE TABLE table_name
AS SELECT * FROM temp_view_name