

# Manage Data with Delta Lake



# Module Agenda

## Manage Data with Delta Lake

### What is Delta Lake

DE 3.1 – Schemas and Tables

DE 3.2 – Version and Optimize Delta Tables

DE 3.3L – Manipulate Delta Tables Lab

DE 3.4 – Set Up Delta Tables

DE 3.5 – Load Data into Delta Lake

DE 3.6 – Load Data Lab

# What is Delta Lake?



**Delta Lake is an open-source project that enables building a data lakehouse on top of existing storage systems**

# Delta Lake Is Not...

- Proprietary technology
- Storage format
- Storage medium
- Database service or data warehouse

# Delta Lake Is...

- Open source
- Builds upon standard data formats
- Optimized for cloud object storage
- Built for scalable metadata handling

# Delta Lake brings ACID to object storage

- Atomicity
- Consistency
- Isolation
- Durability





# Problems solved by ACID

1. Hard to append data
2. Modification of existing data difficult
3. Jobs failing mid way
4. Real-time operations hard
5. Costly to keep historical data versions





# Delta Lake is the default for all tables created in Databricks