**Datawarehouse**

**What is a Data Warehouse?**

A **Data Warehouse** is a **central storage system** where data from different sources (like sales, marketing, finance, etc.) is collected, cleaned, and organized so that businesses can analyze it and make better decisions.

**🧠 Simple Analogy:**

Think of it like a big library 📚 that stores books (data) from different publishers (systems). The books are organized by topic (business areas) so that readers (analysts) can quickly find what they need.

**🔸 Key Features of a Data Warehouse:**

* ✅ **Centralized**: All your business data in one place
* ✅ **Structured**: Organized for reporting and analysis
* ✅ **Historical**: Stores data over long periods for trend analysis
* ✅ **Read-optimized**: Built for fast queries, not frequent changes

Create a Datawarehouse in fabrics.

Workspace 🡪 new item 🡪 search a warehouse and create. A screenshot of a computer

Description automatically generated A screenshot of a login box

Description automatically generatedWarehouse created successfully A screenshot of a computer

Description automatically generatedCreate table in warehouse

Schema🡪 table 🡪 new table A screenshot of a computer

Description automatically generatedtable got created successfully A screenshot of a computer

Description automatically generatednow insert values in it A screenshot of a computer

Description automatically generatedcheck the table for insertrd records A screenshot of a computer

Description automatically generated **Load data from a Data Warehouse to a Lakehouse dynamically using a pipeline**, where the **metadata (table names, schema, etc.) is stored in the Data Warehouse**.

Create a meta data and insert the table which we wanted to use further A screenshot of a computer

Description automatically generatedNow create a pipeline A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated

**Lookup Activity**

* **What it does**: Reads metadata (like table names, source and destination paths) from the data warehouse.
* **How it's used**:
  + Query a metadata table:

sql

CopyEdit

SELECT \* FROM metadata\_table

* + Returns a list of tables/files you want to process dynamically.

### **A screenshot of a computer Description automatically generated For Each Activity**

* **What it does**: Loops through the output of the Lookup activity.
* **How it's used**:
  + For each item (table) from the Lookup, you’ll perform copy operations.

A screenshot of a computer

Description automatically generatedNow go inside the foreach and drag and drop copy activity

A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generatedSave and run the pipelne

## Pipeline successful A screenshot of a computer Description automatically generated go to one lake and check whether data is transmitted successful or notA screenshot of a computer Description automatically generated A screenshot of a computer Description automatically generated**What is a Shortcut in Microsoft Fabric?**

A **Shortcut** in Fabric is a powerful feature that lets you **create a virtual link** to data stored **outside** your Lakehouse (like in One Lake, ADLS, or another Lakehouse) — **without moving or duplicating the data**.

### 🔹 Why Use a Shortcut?

* ✅ **No duplication** – Saves storage and time
* ✅ **Real-time access** – Data changes reflect instantly
* ✅ **Cross-domain usage** – Use the same data in different workspaces
* ✅ **Unified access** – Treat external data like it's local

To create shortcut to load the data from data warehouse to data lake house

A screenshot of a computer

Description automatically generatedwe can create a connection to everything in one lake to external resource as well.

Now we want to create a connection to warehouse select one lake. A screenshot of a computer

Description automatically generated select warehouse

A screenshot of a computer

Description automatically generated we can select what we want to one table or everything A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generatedA link is created between lake house and ware house , we can see a table in lakehouse without loading them manually

As these are tables in files, they r stored in delta format A screenshot of a computer

Description automatically generated

We can also create a link to store these table in tables and then we can view data in SQL analytics.

We can also create a short cut to external sources, lets create shortcut between lakehouse and external azure datalake gen2 storage account.

As we don’t have any existing connection , we need to create a new connection A screenshot of a computer

Description automatically generatedto get url , go to adls gen2 🡪 setting 🡪endpoint A screenshot of a computer

Description automatically generatedcopy the link and paste it in the fabric link A screenshot of a computer

Description automatically generatedFor authentication kind ,

Go to adls gen2 🡪 security+networking 🡪 shared access signature🡪 allow resource type (object, container and service) and generate the token A screenshot of a computer

Description automatically generatedCopy paste generated SAS token in fabric A screenshot of a computer

Description automatically generatedselect for which we need to create a short cut (container or specific folder) A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generatedA link was created between lakehouse and alds gen2 external resource A screenshot of a computer

Description automatically generatedAnd if we do any changes in this linked container , it will get effected in one lake also

Now lets delete cleaned\_data folder in adlsgen 2A screenshot of a computer

Description automatically generatedit got deleted successfully A screenshot of a computer

Description automatically generatedso let check in lakehouse also A screenshot of a computer

Description automatically generatedit got deleted successfully in lake house also

So connection was successful