# Using TOM to Create a DirectLake Dataset

This repository contains a Fabric notebook with Python code and a C# console application which can be used to create a DirectLake data model using the Tabular Object Model (TOM).

Steps to completing this demonstration:

1. Create workspace associated with Fabric capacity
   1. Get URL to Workspace Connection
   2. Write down workspace name
2. Create Lakehouse
   1. Get Lakehouse SQL Endpoint
3. Create Lakehouse tables using Pythin code in pre-provided Python notebook
   1. Upload Python notebook named **CreateLakehouseTables.ipynb**
   2. Associate notebook named **CreateLakehouseTables.ipynb** with Lakehouse
   3. Execute code in notebook to copy CSV files from GitHib repository into Lakehouse file system
   4. Execute code in notebook to load CSV files and convert then into delta tables for bronze zone
   5. Execute code in notebook to load bronze tables and reshape/transform data in into delta tables for silver layer
   6. Execute code in notebook to generate calendar table for silver layer
4. Run C# console application to create Power BI DirectLake dataset using Tabular Object Model (TOM)
   1. Create Azure AD application
      1. Create a native/public application with redirect URI of <http://localhost>
      2. Record Application ID for use in console application.
   2. Download C# console application source code and open project in Visual Studio 2022
   3. Open **AppSettings.cs** and updae the following:
      1. ApplicationID of Azure AD application
      2. Workspace Connection
      3. SQL Endpoint
      4. Lakehouse Name
      5. UserID and Password to prevent interactive login
      6. Save changes
   4. Run application
      1. It should run without error
      2. When done, verify you can see new data model and use it to create new report