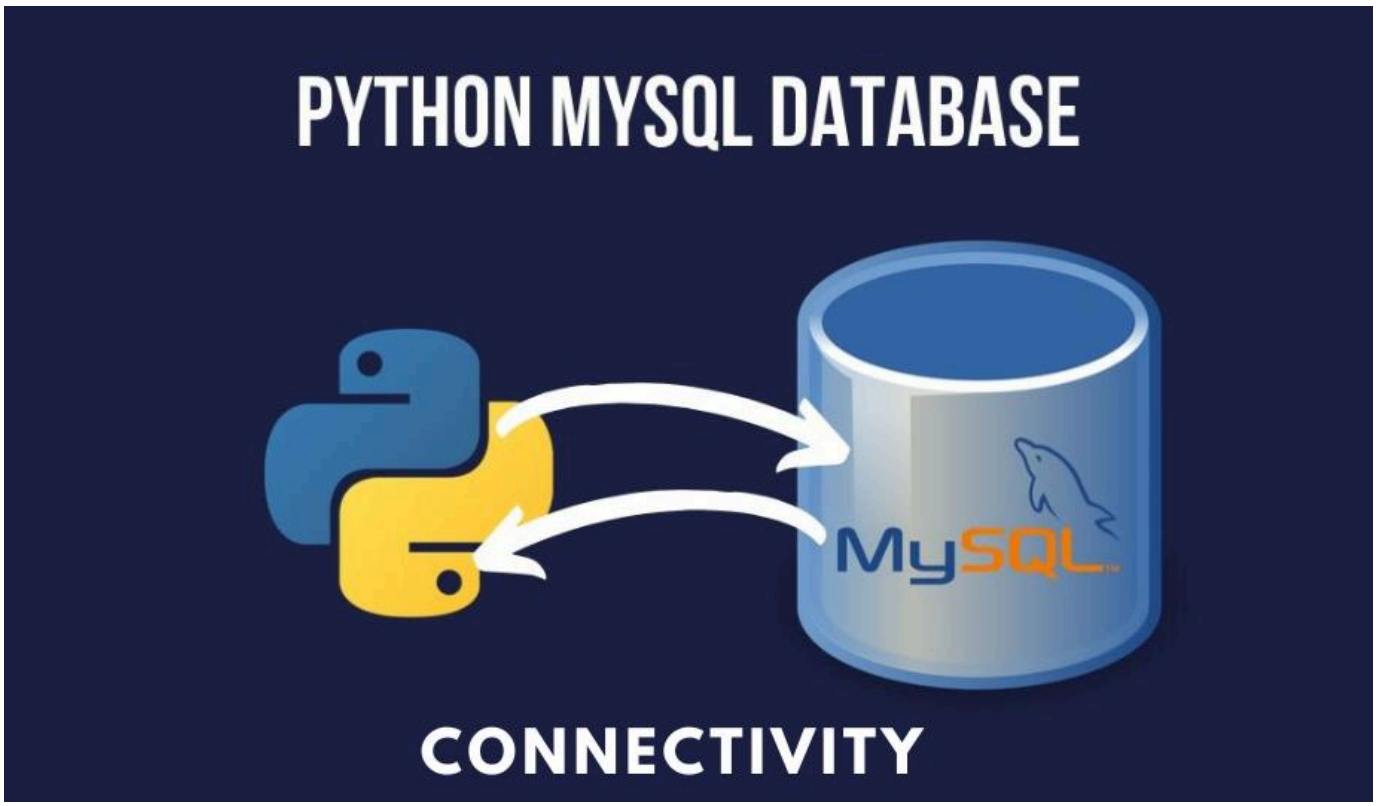
IMPORTING DATA INTO MYSQL DATABASE USING PYTHON



There is a need to pip install some packages for the seamless data import into MySQL which are:

- pandas
- openpyxl
- mysql-connector-python

To do that the next line of code handles that

In [1]:
```
# pip install mysql-connector-python
```

We will be importing five (5) Data into our Schema in the **GlobalMartSales Database** which are:

- Customers
- Dates
- Products
- Orders
- Stores

Now we can carry on with the Data importing.

In [2]:

```python
# Required Libraries
import pandas as pd
import mysql.connector

# Step 1: Load the Excel file without altering datetime format
df = pd.read_excel("structured_Customers.xlsx")  # Ensure this file is in your current working directory

# Step 2: Connect to MySQL database
conn = mysql.connector.connect(
    host='localhost',
    user='root',
    password='Ayobami12345',
    database='globalmartsales'
)
cursor = conn.cursor()

# Step 3: Insert data row-by-row (preserve datetime format)
# Insert data with correct column names (with backticks)
for _, row in df.iterrows():
    sql = """
    INSERT INTO Customers (
        `Full Name`, `Date of Birth`, Company, Email, Address, Country,
        `Country Code`, Telephone, `Join Date`, `User UUID`
    ) VALUES (%s, %s, %s, %s, %s, %s, %s, %s, %s, %s)
    """
    values = (
        row['Full Name'], row['Date of Birth'], row['Company'], row['Email'],
        row['Address'], row['Country'], row['Country Code'], row['Telephone'],
        row['Join Date'], row['User UUID']
    )
    try:
        cursor.execute(sql, values)
    except Exception as e:
        print(f" Error inserting row: {e}")

conn.commit()
cursor.close()
conn.close()

print(" Data inserted successfully into Customers table.")
```

```
 Data inserted successfully into Customers table.
```

In [3]:

```
import pandas as pd
import mysql.connector

# Load Excel, force convert all date columns using Excel's format
df = pd.read_excel("structured_Dates.xlsx", engine='openpyxl')

# Fix Excel serial dates by parsing explicitly
date_columns = ['Date', 'StartOfYear', 'StartOfQuarter', 'StartOfMonth', 'StartOfWeek']
for col in date_columns:
    df[col] = pd.to_datetime(df[col], errors='coerce').dt.date  # Convert to date only

# MySQL connection
conn = mysql.connector.connect(
    host='localhost',
    user='root',
    password='Ayobami12345',
    database='globalmartsales'
)
cursor = conn.cursor()

# Insert data row-by-row
for _, row in df.iterrows():
    sql = """
    INSERT INTO Dates (
        `Date`, `StartOfYear`, `StartOfQuarter`, `StartOfMonth`, `StartOfWeek`,
        `Quarter`, `MonthNumber`, `Year`, `DayOfTheWeek`, `MonthName`
    ) VALUES (%s, %s, %s, %s, %s, %s, %s, %s, %s, %s)
    """
    values = (
        row['Date'], row['StartOfYear'], row['StartOfQuarter'], row['StartOfMonth'],
        row['StartOfWeek'], row['Quarter'], row['MonthNumber'], row['Year'],
        row['DayOfTheWeek'], row['MonthName']
    )
    try:
        cursor.execute(sql, values)
    except Exception as e:
        print(f" Error inserting row: {e}")

conn.commit()
cursor.close()
conn.close()

print(" All dates converted & inserted successfully into `Dates` table.")
```

```
 All dates converted & inserted successfully into `Dates` table.
```

In [4]:

```
import pandas as pd
import mysql.connector

# Load the Excel file
products_df = pd.read_excel("structured_Products.xlsx")

# Optional: convert date_added to proper date format
products_df['date_added'] = pd.to_datetime(products_df['date_added'], errors='coerce').dt.date

# Connect to MySQL
conn = mysql.connector.connect(
    host='localhost',
    user='root',     # <-- Replace with your MySQL username
    password='Ayobami12345', # <-- Replace with your MySQL password
    database='globalmartsales'
)
cursor = conn.cursor()

# Insert data row-by-row
for _, row in products_df.iterrows():
    sql = """
    INSERT INTO Products (
        `Description`, `Sale Price`, `Category`, `EAN`, `date_added`, `product_uuid`,
        `Availability`, `Product Code`, `Cost Price`, `Weight`, `Weight Kilograms`,
        `Clean weight values`, `Weight Units`, `Profit Per Item`
    ) VALUES (%s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s)
    """
    values = (
        row['Description'], row['Sale Price'], row['Category'], row['EAN'], row['date_added'],
        row['product_uuid'], row['Availability'], row['Product Code'], row['Cost Price'],
        row['Weight'], row['Weight Kilograms'], row['Clean weight values'],
        row['Weight Units'], row['Profit Per Item']
    )
    try:
        cursor.execute(sql, values)
    except Exception as e:
        print(f" Error inserting row: {e}")

# Finalise
conn.commit()
cursor.close()
conn.close()

print(" Products data inserted successfully into MySQL.")
```

```
 Error inserting row: 1054 (42S22): Unknown column 'nan' in 'field list'
 Products data inserted successfully into MySQL.
```

In [5]:

```
import pandas as pd
import mysql.connector

# Load and clean the Excel file
orders_df = pd.read_excel("structured_Orders.xlsx")
orders_df = orders_df.loc[:, ~orders_df.columns.str.contains('^Unnamed|nan', na=True)]

# Convert date and time fields to proper formats
orders_df['Order Date'] = pd.to_datetime(orders_df['Order Date'], errors='coerce').dt.date
orders_df['Shipping Date'] = pd.to_datetime(orders_df['Shipping Date'], errors='coerce').dt.date
orders_df['Order Time'] = pd.to_datetime(orders_df['Order Time'], errors='coerce').dt.time
orders_df['Shipping Time'] = pd.to_datetime(orders_df['Shipping Time'], errors='coerce').dt.time

# Connect to MySQL
conn = mysql.connector.connect(
    host='localhost',
    user='root',     # <-- Replace this
    password='Ayobami12345', # <-- Replace this
    database='globalmartsales'
)
cursor = conn.cursor()

# Insert each row
for _, row in orders_df.iterrows():
    sql = """
    INSERT INTO Orders (
        `User ID`, `Store Code`, `Product Code`, `Product Quantity`,
        `Order Date`, `Order Time`, `Shipping Date`, `Shipping Time`
    ) VALUES (%s, %s, %s, %s, %s, %s, %s, %s)
    """
    values = (
        row['User ID'], row['Store Code'], row['Product Code'], row['Product Quantity'],
        row['Order Date'], row['Order Time'], row['Shipping Date'], row['Shipping Time']
    )
    try:
        cursor.execute(sql, values)
    except Exception as e:
        print(f" Error inserting row: {e}")

# Finalise
conn.commit()
cursor.close()
conn.close()

print(" Orders data inserted successfully into MySQL.")
```

```
 Orders data inserted successfully into MySQL.
```

In [6]:
```
import pandas as pd
import mysql.connector

# Load and clean the Excel file
stores_df = pd.read_excel("structured_Stores.xlsx")
stores_df = stores_df.loc[:, ~stores_df.columns.str.contains('^Unnamed|nan', na=True)]
stores_df['Date Opened'] = pd.to_datetime(stores_df['Date Opened'], errors='coerce').dt.date

# Connect to MySQL
db = mysql.connector.connect(
    host='localhost',
    user='root',       # <-- Replace this
    password='Ayobami12345',   # <-- Replace this
    database='globalmartsales'
)
cursor = db.cursor()

# Insert each row
for _, row in stores_df.iterrows():
    sql = """
    INSERT INTO Stores (
        `Store Code`, `Staff Numbers`, `Date Opened`, `Store Type`, `Country Code`,
        `World Region`, `Country Region`, `Latitude`, `Longitude`, `Country`, `Full Region`
    ) VALUES (%s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s)
    """
    values = (
        row['Store Code'], row['Staff Numbers'], row['Date Opened'], row['Store Type'], row['Country Code'],
        row['World Region'], row['Country Region'], row['Latitude'], row['Longitude'], row['Country'], row['Full
    )
    try:
        cursor.execute(sql, values)
    except Exception as e:
        print(f" Error inserting row: {e}")

#  Finalise
db.commit()
cursor.close()
db.close()

print(" Stores data inserted successfully into MySQL.")
```

```
 Error inserting row: 1054 (42S22): Unknown column 'nan' in 'field list'
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 Stores data inserted successfully into MySQL.
```

Now that we are done with populating our schema in the preferred Database, we proceed to connecting MySQL and Power BI together.