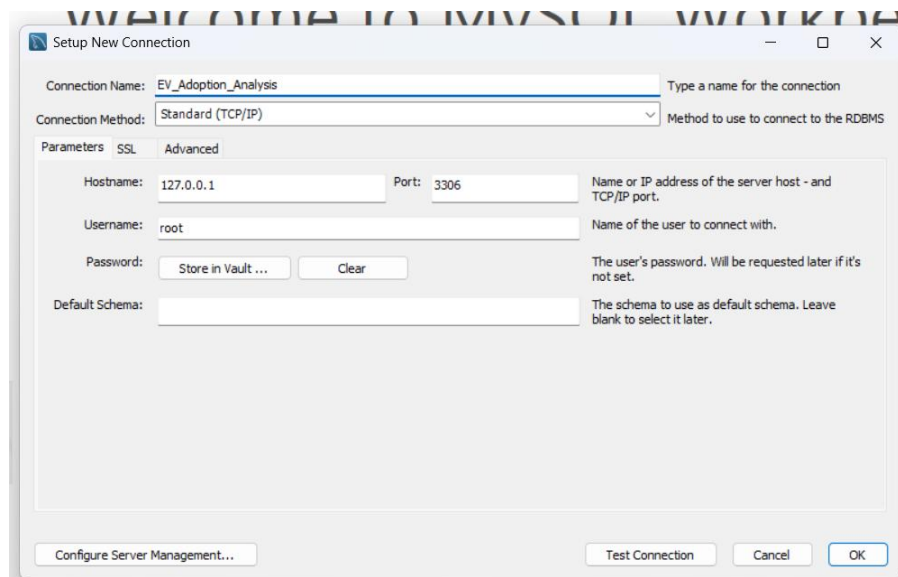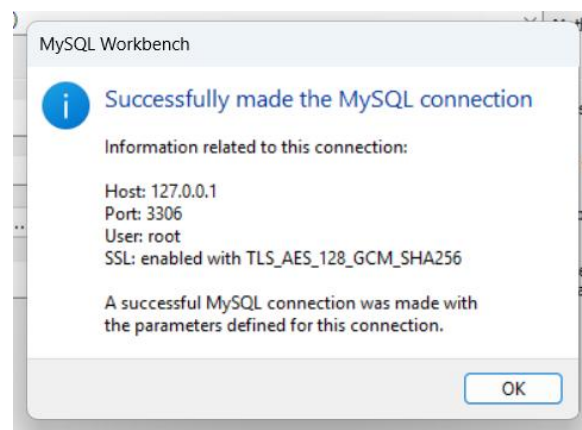Steps involved in the loading of CSV File in MY SQL Workbench :-

1. **Create a new coonection**
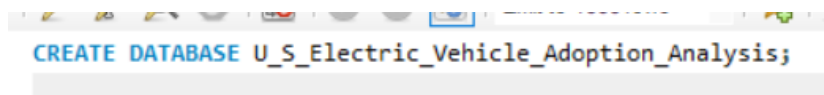

Connection name – EV_Adoption_Analysis

2. **Test Connection**

3. **Create a new Data Base**


```
CREATE DATABASE U_S_Electric_Vehicle_Adoption_Analysis;
```

4. **Prepare the Python Environment**

Database Automation

Automate MySQL workflows using Pandas

```
pip install pandas sqlalchemy pymysql
```

```
Requirement already satisfied: pandas in c:\users\asus\anaconda3\lib\site-packages (2.2.3)
Requirement already satisfied: sqlalchemy in c:\users\asus\anaconda3\lib\site-packages (2.0.39)
Requirement already satisfied: pymysql in c:\users\asus\anaconda3\lib\site-packages (1.1.1)
Requirement already satisfied: numpy>=1.26.0 in c:\users\asus\anaconda3\lib\site-packages (from pandas) (1.26.4)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\asus\anaconda3\lib\site-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\asus\anaconda3\lib\site-packages (from pandas) (2024.1)
Requirement already satisfied: tzdata>=2022.7 in c:\users\asus\anaconda3\lib\site-packages (from pandas) (2023.3)
Requirement already satisfied: greenlet!=0.4.17 in c:\users\asus\anaconda3\lib\site-packages (from sqlalchemy) (3.0.1)
Requirement already satisfied: typing-extensions>=4.6.0 in c:\users\asus\anaconda3\lib\site-packages (from sqlalchemy) (4.11.0)
Requirement already satisfied: six>=1.5 in c:\users\asus\anaconda3\lib\site-packages (from python-dateutil>=2.8.2->pandas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.
```

5. **Write Python code in Jupyter to load CSV into MySQL**

```python
import pandas as pd
from sqlalchemy import create_engine

# MySQL connection info
host = 'localhost'
user = 'root'
password = '0231'
database = 'U_S_Electric_Vehicle_Adoption_Analysis'
table_name = 'ev_trends'

# CSV path (use raw string to handle backslashes and spaces)
csv_file_path = r'E:\Data Analyst 2025\Resume Projects\1. Evolution Insight US EV Trends\EvolutionInsight_US_EV_Trends.csv'

# Load CSV
df = pd.read_csv(csv_file_path)

# Create engine
engine = create_engine(f'mysql+pymysql://{user}:{password}@{host}/{database}')

# Upload DataFrame to MySQL table
df.to_sql(name=table_name, con=engine, if_exists='replace', index=False)

print("Data uploaded successfully!")
```
Data uploaded successfully!

6. **Verify data in MySQL Workbench**

```sql
USE U_S_Electric_Vehicle_Adoption_Analysis;
SHOW TABLES;
SELECT * FROM ev_trends LIMIT 5;
```

7. **Data Loaded from CSV to My SQL Workbench**

VIN (1-10)	County	City	State	Postal Code	Model Year	Make	Model	Electric Vehicle Type	Clean Alternative Fuel Vehicle (CAFV) Eligibility	Electric Range	Base MSRP	Legislative District	
1N4BZ0CP5G	King	Seattle	WA	98125	2016	NISSAN	LEAF	Battery Electric Vehicle (BEV)	Clean Alternative Fuel Vehicle Eligible	84	0	46	3
KNDJX3AEXG	King	Renton	WA	98058	2016	KIA	SOUL	Battery Electric Vehicle (BEV)	Clean Alternative Fuel Vehicle Eligible	93	31950	11	2
5YJ3E1EB2J	King	Seattle	WA	98115	2018	TESLA	MODEL 3	Battery Electric Vehicle (BEV)	Clean Alternative Fuel Vehicle Eligible	215	0	43	1
1C4RJXN64R	Kitsap	Bremerton	WA	98312	2024	JEEP	WRANGLER	Plug-in Hybrid Electric Vehicle (PHEV)	Not eligible due to low battery range	21	0	26	2