Task 3: Database Migration from MySQL to PostgreSQL

Step 1: Install Applications

- Installed **MySQL** and **PostgreSQL** database management systems on the system.

- Installed required tools for migration:

  - **ODBC 64-bit Driver** for connecting and transferring data between databases.

Step 2: Create Database and Tables

- Created the same database and tables in both MySQL and PostgreSQL to ensure schema compatibility.

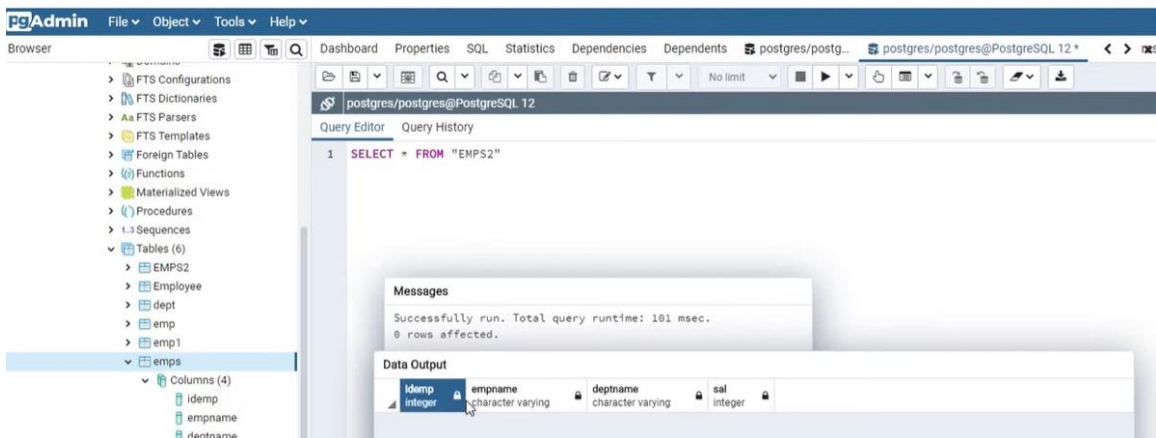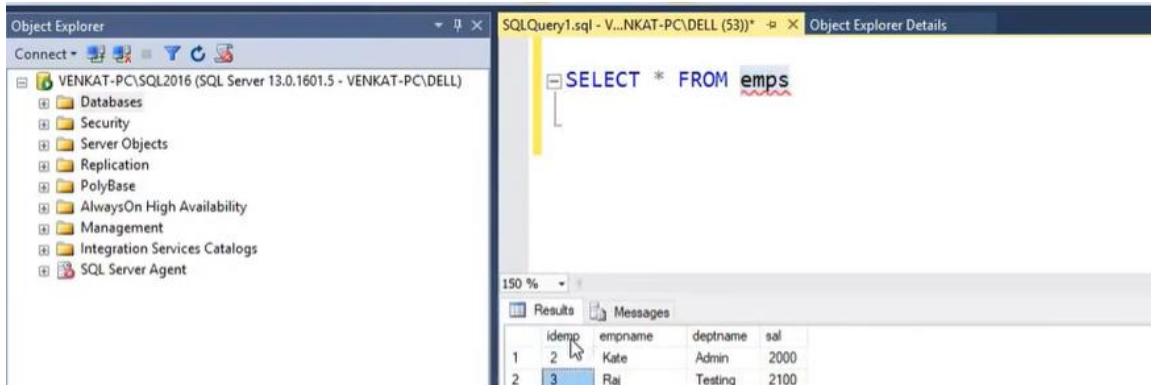**Example SQL Queries for Table Creation and Data Insertion:**

```
-- MySQL/PostgreSQL: Create Database
CREATE DATABASE SampleDB;

-- Use the Created Database
USE SampleDB;

-- Create Emps4 Table
CREATE TABLE Emps4 (
    IdEmp INT PRIMARY KEY,
    EmpName VARCHAR(100),
    DeptName VARCHAR(50),
    Sal INT
);

-- Insert a Single Data Record into the Table
INSERT INTO Emps4 (IdEmp, EmpName, DeptName, Sal) VALUES
(1, 'Kate', 'Admin', 2000);

-- Select Query to Verify Data
SELECT * FROM Emps4
```

Step 3: Set Source and Destination

- Set MySQL as the **source** database and PostgreSQL as the **destination** database.
- Saved the MySQL database in a sample folder to ensure proper data handling.
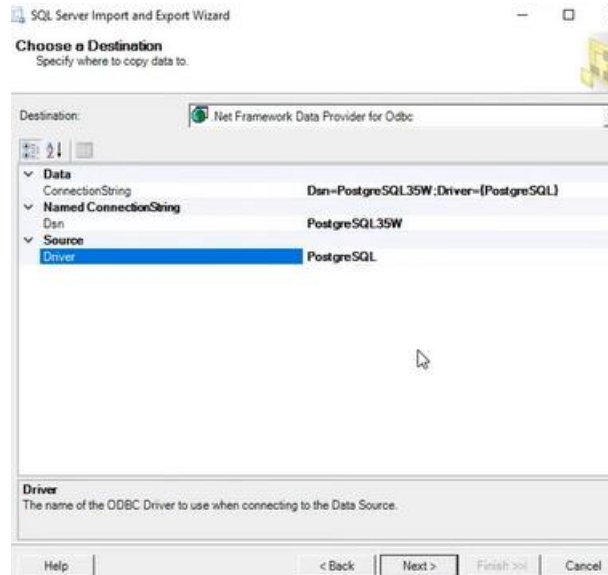
Step 4: Use Export Data Option in MySQL

- Opened **SQL Server Management Studio** and:
    1. Right-clicked on the database (e.g., SampleDB).
    2. Selected the **Tasks** option.
    3. Clicked on **Export Data** to start the migration process.

Step 5: Configure Data Source

- In the Export Data Wizard:

  1. Selected **MySQL ODBC Driver** as the data source.

  2. Provided connection details such as server name, username, password, and database name.

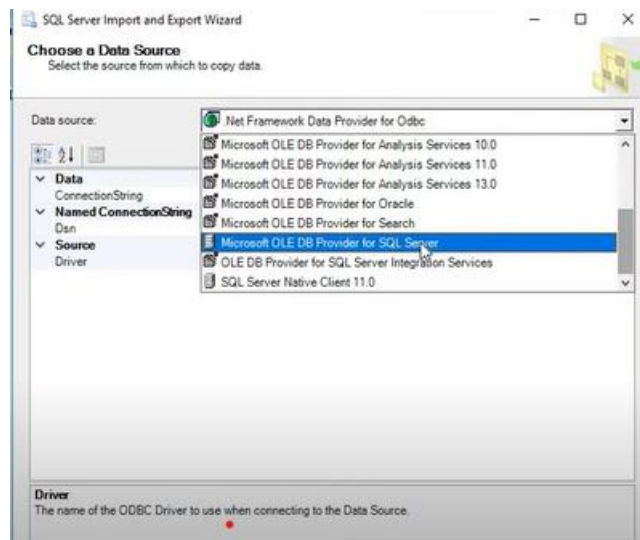# Step 6: Configure Data Destination

- Selected **PostgreSQL** as the destination.

- Filled in connection details, including:

  o PostgreSQL server name.

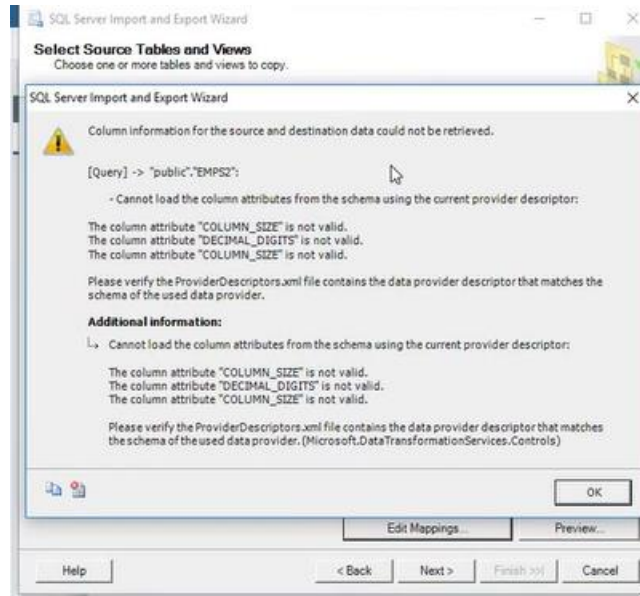 o Username and password.

Target database name (e.g., SampleDB).

Step 7: Select Data Source Table
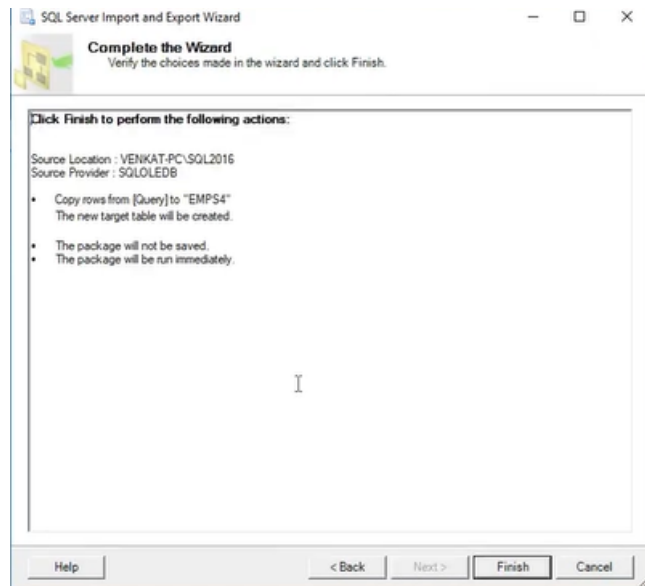
- Chose the Emps4 table from the source database.

Step 8: Map Source and Destination

- Clicked on the **Edit Mapping** option in the wizard.

- Ensured that the data types and column names were correctly mapped between MySQL and PostgreSQL.

- Made necessary changes to match column mappings and clicked **OK**.
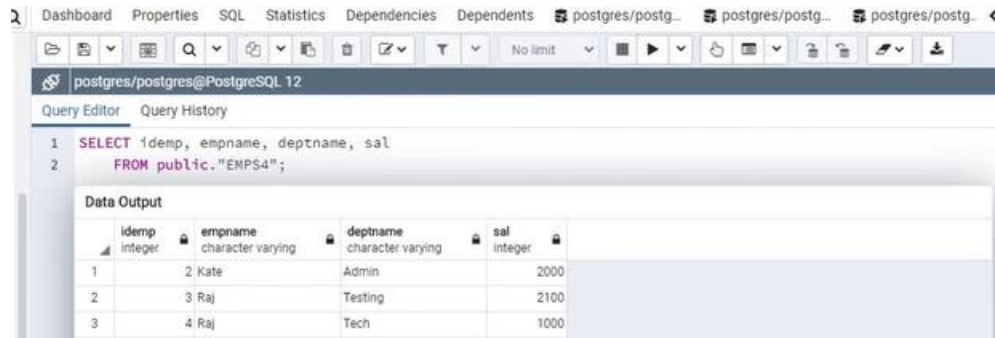

Step 9: Complete Data Transfer

- Continued with the wizard steps by clicking **Next** repeatedly.

- Clicked **Finish** to start the data transfer process.

Step 10: Verify Data in PostgreSQL

1. Opened **pgAdmin** or another PostgreSQL tool.

2. Refreshed the database to load the imported data.

3. Ran the following query to verify the data:

4. SELECT * FROM Emps4;

5. Confirmed that the data matched the original data in MySQL.

Outcome

-   Successfully migrated the data from MySQL to PostgreSQL.

-   Ensured data integrity by verifying the data in the destination database.