## **Documentation: Connecting MySQL Workbench to Excel Using ODBC**

### **Requirements:**

1. **MySQL Server** (Ensure that MySQL is installed and running).
2. **MySQL Workbench** (Used to interact with the database).
3. **MySQL ODBC Connector** (Used to create the ODBC connection).
4. **Microsoft Excel** (Where data will be pulled).

### **Step 1: Install MySQL ODBC Driver**

* **Download the MySQL ODBC Connector**:
  + download the MySQL ODBC Connector (version compatible with your system).
  + Choose the appropriate version (32-bit or 64-bit) depending on your Excel version.
* **Install the ODBC Connector**:
  + After downloading, run the installer and follow the instructions to complete the installation.

### **Step 2: Configure ODBC Data Source**

* **Open ODBC Data Source Administrator**:
  + In Windows, search for **"ODBC Data Sources"** and open the correct version (32-bit or 64-bit) based on your Excel version.
* **Add a New ODBC Connection**:
  + In the **ODBC Data Source Administrator** window, go to the **"User DSN"** or **"System DSN"** tab (use **System DSN** if you want the connection to be accessible to all users).
  + Click on **"Add"** to create a new data source.
* **Select MySQL ODBC Driver**:
  + From the list, select **"MySQL ODBC 8.0 Unicode Driver"** (or whatever version you installed), then click **"Finish"**.
* **Configure the ODBC Data Source**:
  + In the **MySQL Connector/ODBC Data Source Configuration** window:
    - **Data Source Name**: Give it a name (e.g: MathernalHealthConnection").
    - **TCP/IP Server**: Enter the MySQL server address (localhost or IP address of your MySQL server. Eg: localhost or 127.0.0.1 or whatever IP address you can use).
    - **Port**: Default is 3306 (unless configured otherwise).
    - **User**: Enter your MySQL username. Ex: root
    - **Password**: Enter your MySQL password.
    - **Database**: (Optional) Specify the database name if you want to limit access to a specific database.
  + Click **Test** to ensure the connection works.
  + If the test is successful, click **OK** to save the connection.

### **Step 3: Connect Excel to MySQL via ODBC**

* **Open Excel**:
  + Launch Microsoft Excel.
* **Go to Data Tab**:
  + In Excel, navigate to the **"Data"** tab.
* **Get Data from ODBC Source**:
  + In the **"Get & Transform Data"** section, click **"Get Data"** > **"From Other Sources"** > **"From ODBC"**.
* **Select ODBC Data Source**:
  + In the **ODBC Data Source** window, choose the ODBC data source you created (e.g., "MathernalHealthConnection").
  + Click **OK**.
* **Enter Credentials**:
  + If prompted, enter your MySQL username and password.
* **Select the Database and Tables**:
  + You will see a list of databases and tables available through the ODBC connection. Ex: “MathernalHealthConnection” which is the one I have created
  + Select the tables or views you want to import into Excel.
* **Load Data**:
  + After selecting your tables, click **"Load"**.
  + The data will be imported into Excel and displayed in the selected sheet.

### **Step 4: Refreshing Data**

* **Refresh Data in Excel**:
  + After loading the data, you can refresh it anytime by clicking on **"Refresh All"** in the **"Data"** tab.
  + This will update the data in Excel based on any changes in the MySQL database.

### **Step 5: Troubleshooting**

* **Invalid DSN error**: Ensure you are using the correct 32-bit or 64-bit ODBC driver based on your Excel version.
* **Connection failed**: Verify the MySQL server address, port, and login credentials.
* **Data format issues**: Check MySQL data types and ensure Excel can handle them correctly.

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