Exercises: Introduction to Databases

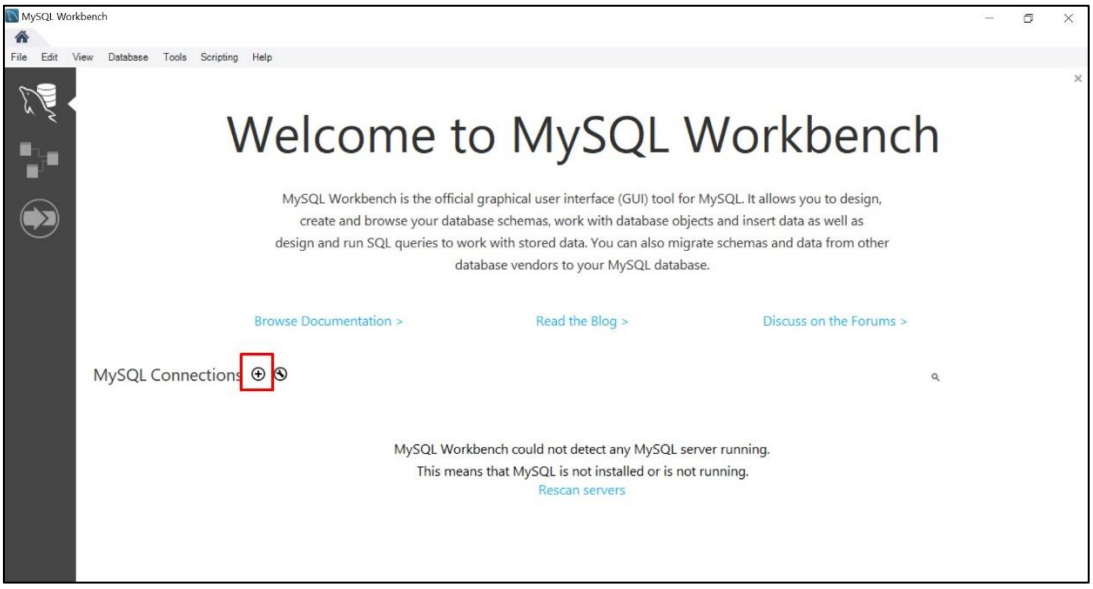
This document defines the **exercise assignments** for the "Databases Basics - MySQL" course @ Software University.
Install MySQL Community Server. Do not install unneeded features of MySQL Community Server.

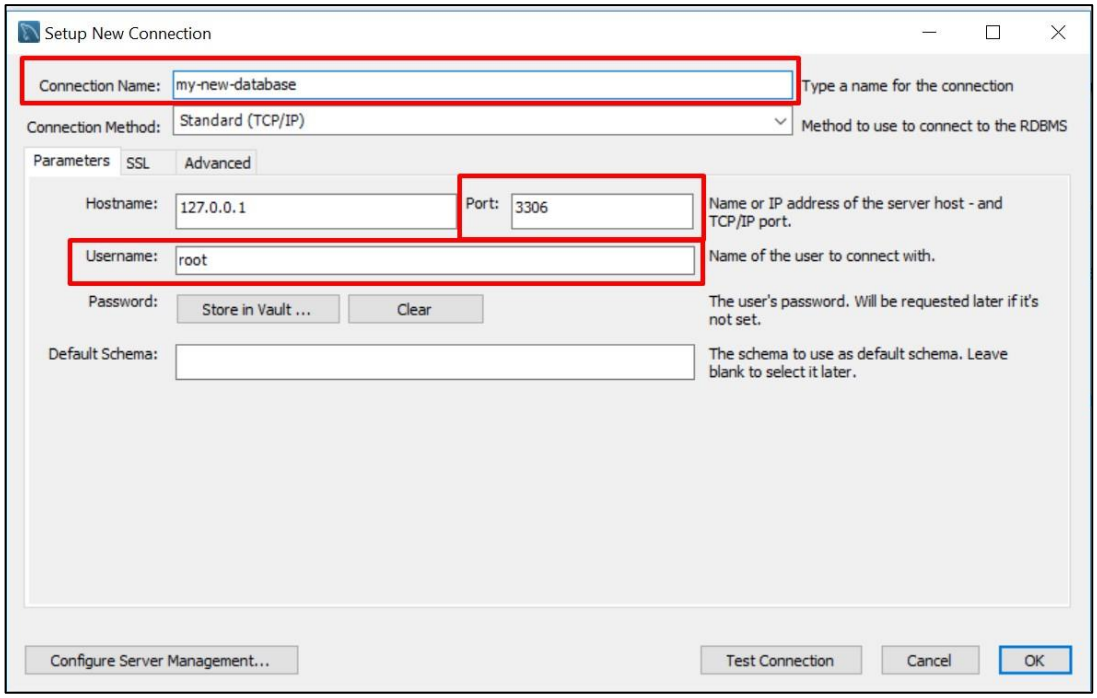
Download and Install MySQL Workbench

Download **MySQL Workbench** from the official page and **install** it.

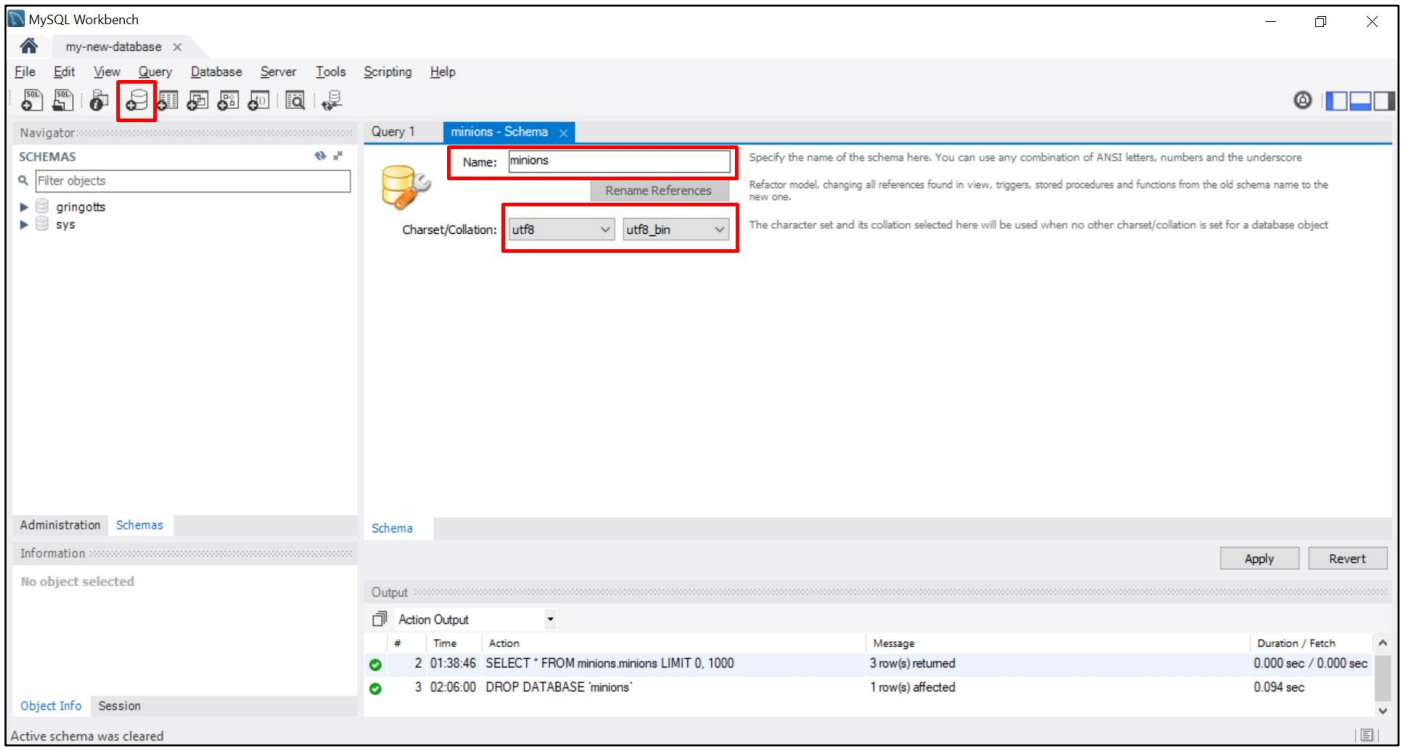
1. Create New Database

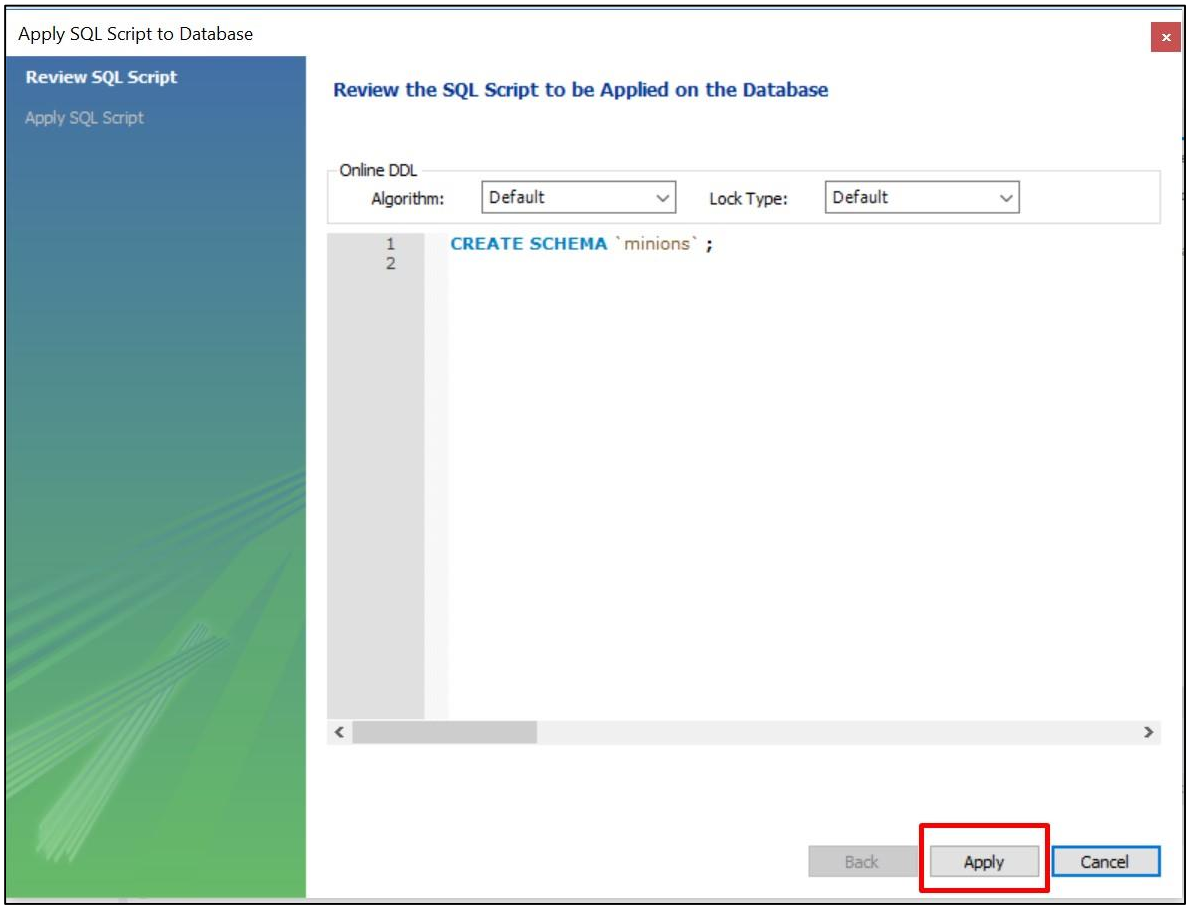
Connect to MySQL Server with user **root** and the password you set up earlier.





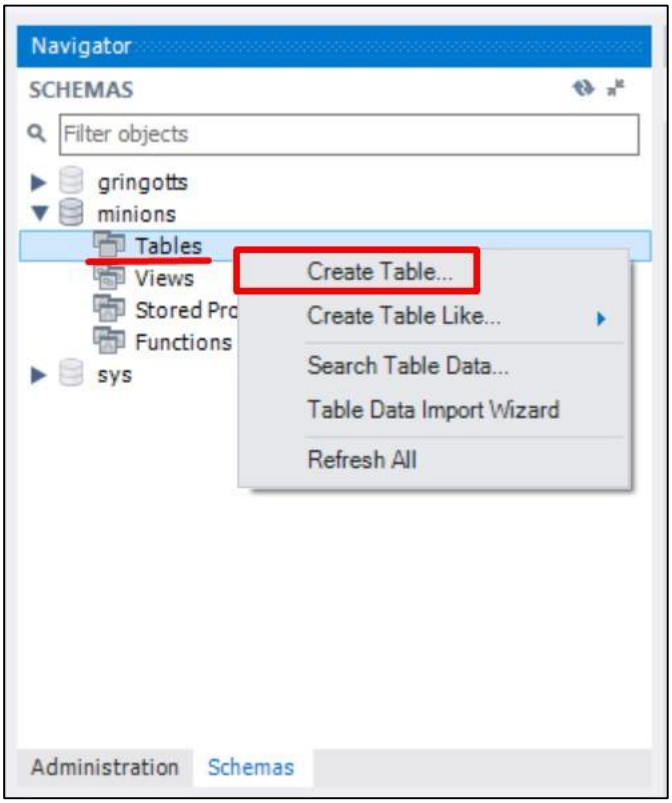
Create new database. Type the name of the database and click OK. This will create your database.

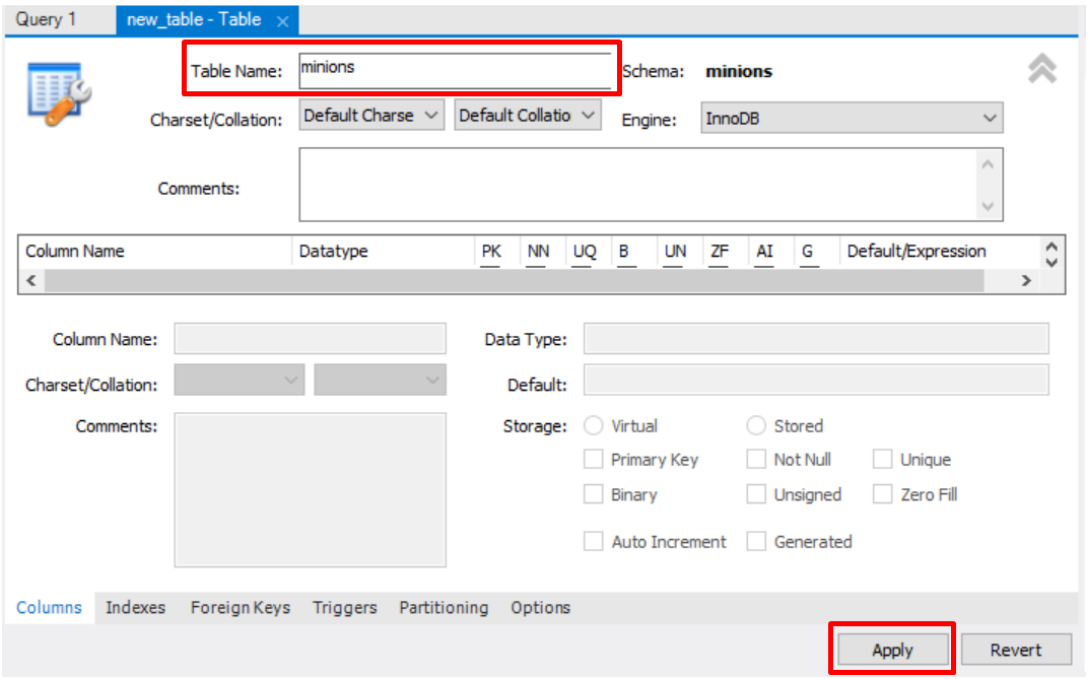




2. Create Table

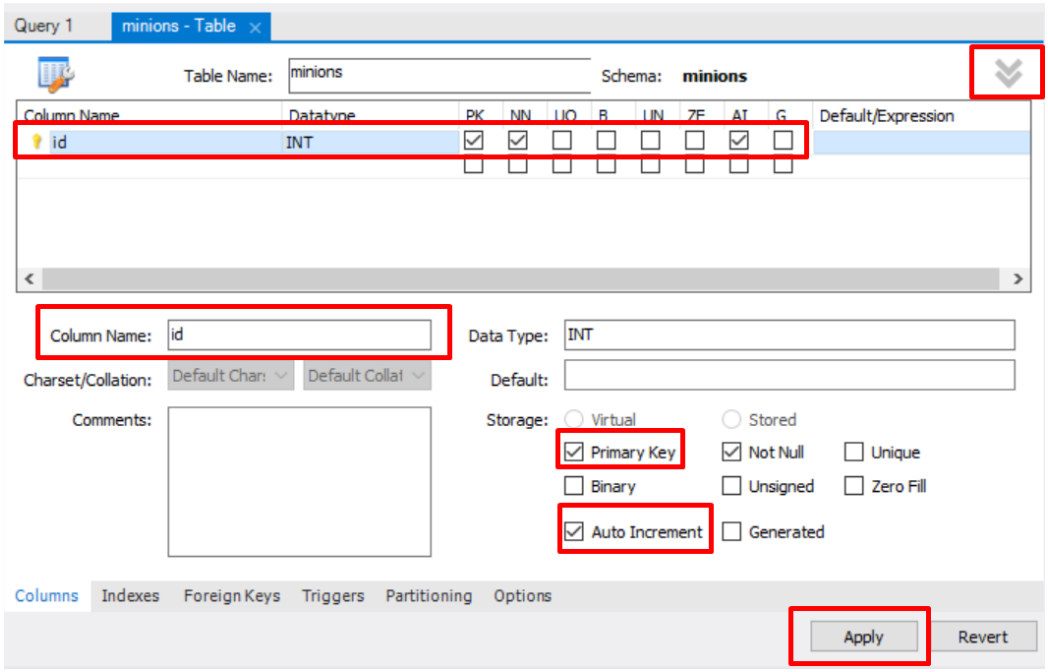
Create **table Minions**





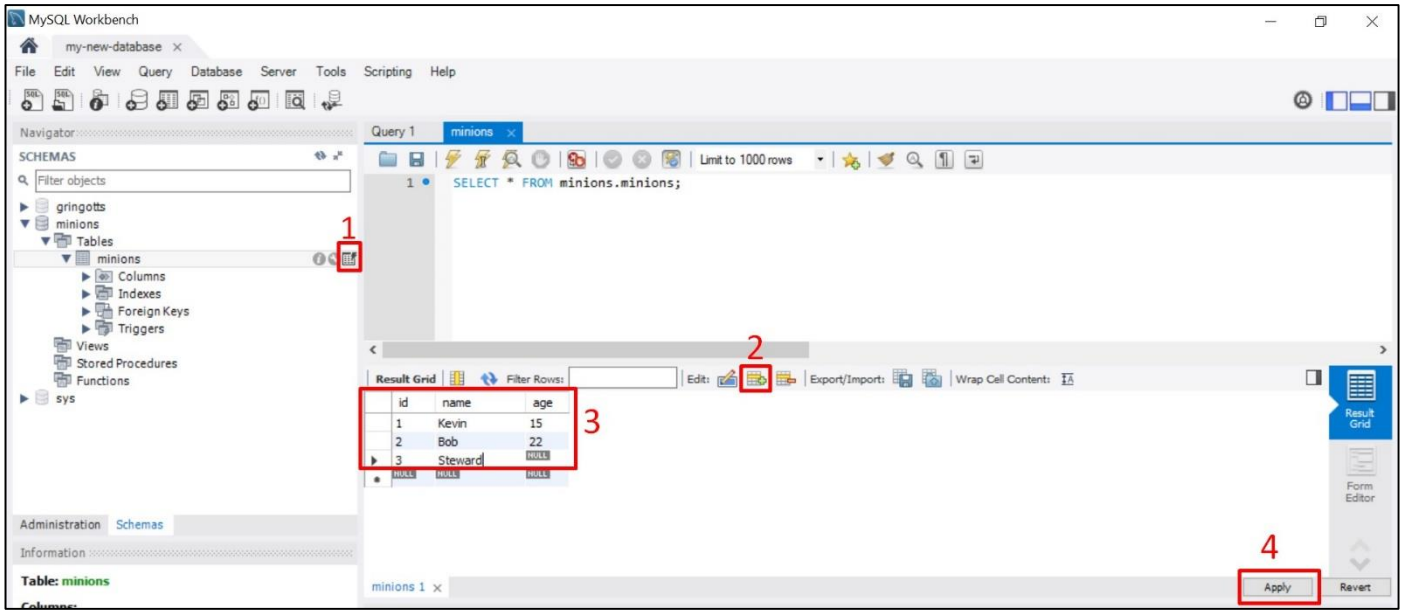
Create columns **id, name, age**. Id and name are **required**; Age should **allow null values**.

Set the **`id`** as **Primary Key** and **Auto Increment**.



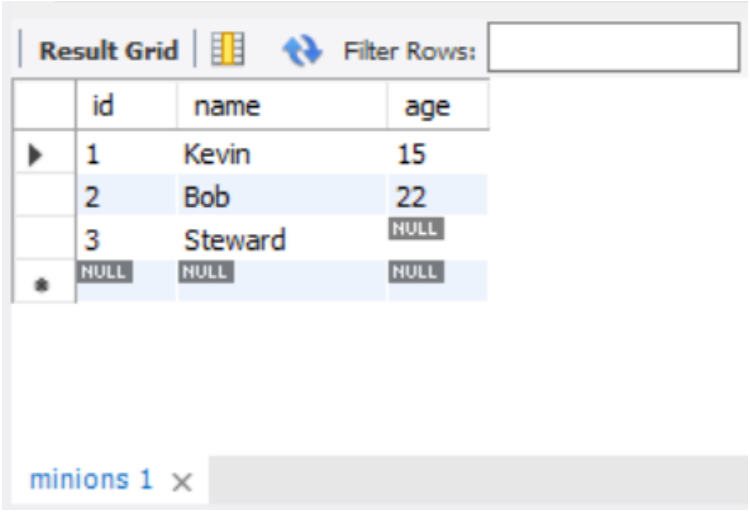
3. Insert Data in the Table

Insert data in the table as it's shown on the picture

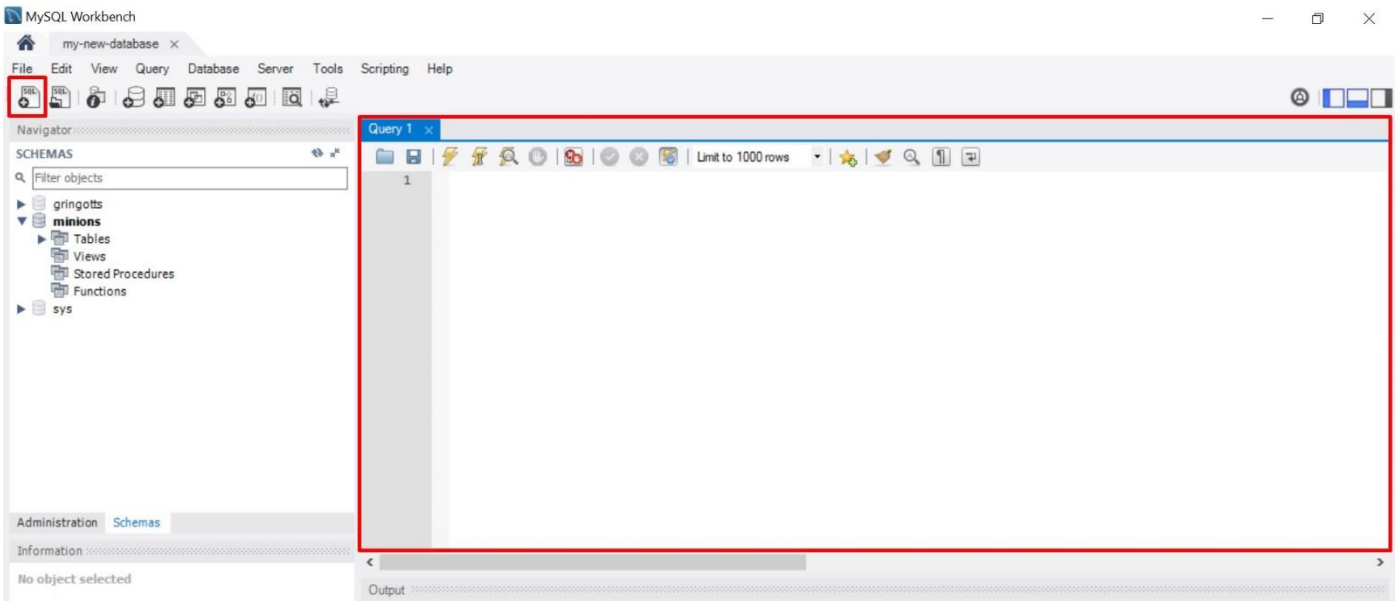


4. Select Data from Table

Select **all columns** from the Minions table.



- Open Query tab and write the SQL.
  - Select **only names** from Minions table.
  - **Order** them **ascending by name**



5. Update One Record

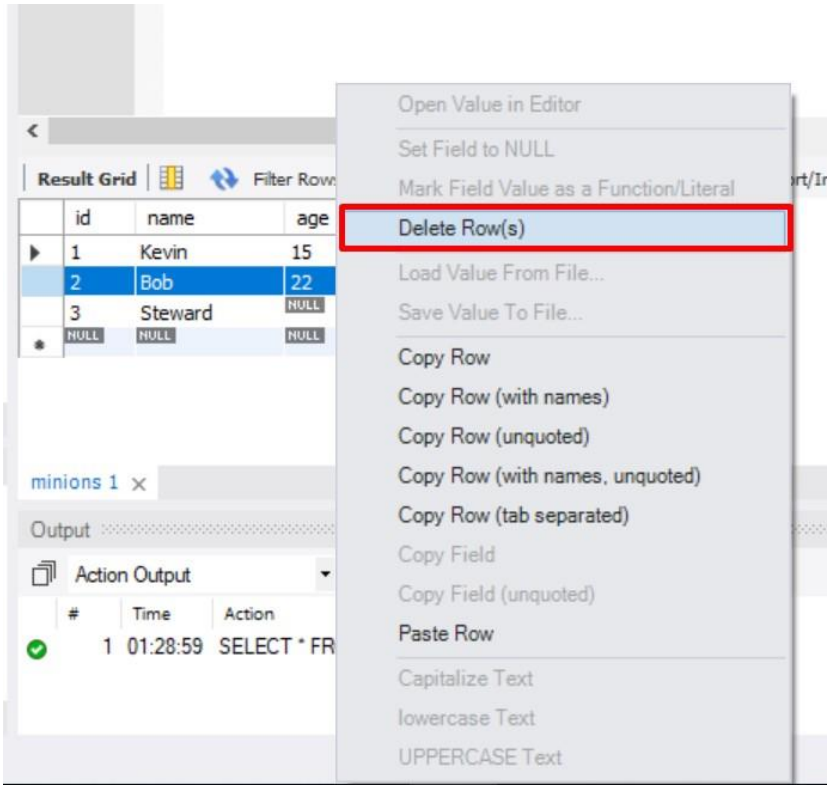
Change **Stuart's age** from **NULL** to **10**

6. Update All Records

Change all the Minions age to be + 1 years.

7. Delete Record

Open Data tab for the table, **right click** on the row where **Bob** is situated and delete it.



8. Create New Table

Create new table **towns**. Every town has **id (int)** and **name (text)**. Make the **id** column **primary key**.

9. **Connect Tables

Now let's make a connection (or relationship) between our two tables. First we need modify our minions table. Add column **town_id** in it **(IMPORTANT: The type of the column must be the same as the type of the column id of the towns table)**.

10. Create New Database

Now on your own create a new database **school**. Add a few tables to the database: **students (id, name, age, phone_number)**, **classes (id, name, max_students), teachers(id, name, class)**. Add columns for the tables. Populate the tables with random content. Then delete and make changes in some records.

11. *Generate SQL Script

Generate SQL script from the **school** database. View the script file and try to understand different commands. Execute the script.