# OTN Developer Day MySQL



#### **Hands on Lab Manual**

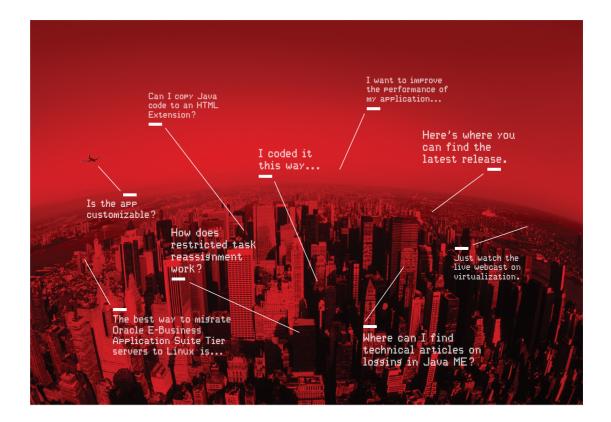
Get the Technical Know-how to Succeed with the World's Most Popular Open Source Database





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# MySQL Workbench Tutorial

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MySQL Workbench is a visual database design tool that integrates SQL development, administration, database design, creation and maintenance into a single, seamless environment for the MySQL database system. —

http://en.wikipedia.org/wiki/MySQL\_Workbench

Docs: http://dev.mysql.com/doc/workbench/en/index.html

Tutorial: http://dev.mysql.com/doc/workbench/en/wb-getting-started-tutorial.html

## Three Tools in One

- SQL Development
  - Execute SQL queries
- DATA Modeling
  - · Create models of your schema
  - Reverse/forward engineer
  - Create tables, columns, indexes, views, triggers, partitions, routines, options & priviledges
- Sever Administration

MySQL Workbench provides a graphical tool for working with MySQL Servers and databases.

MySQL Workbench is available in two editions, the Community Edition and the Standard Edition. The Community Edition is available free of charge. The Standard Edition provides additional Enterprise features, such as database documentation generation, at low cost.

## Install

- Server
- Workbench
- World database files (InnoDB)

To use Workbench you will need a MySQL Server (5.1 or better) either installed locally on your system or available over a TCP/IP connection.

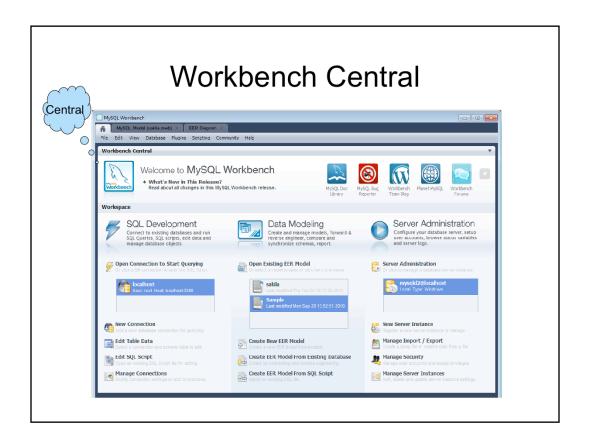
You will also need a copy of the World Database, InnoDB version from

http://dev.mysql.com/doc/index-other.html

Installation of the World database will be part of this demo but please unzip or uncompress the file.



This is the workbench home screen and it has two sections

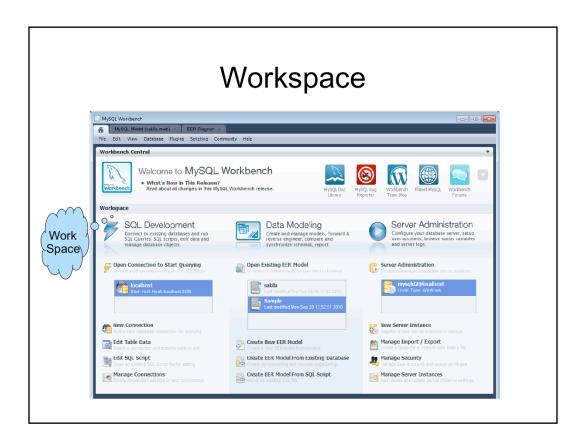


#### At the top is Workbench Central

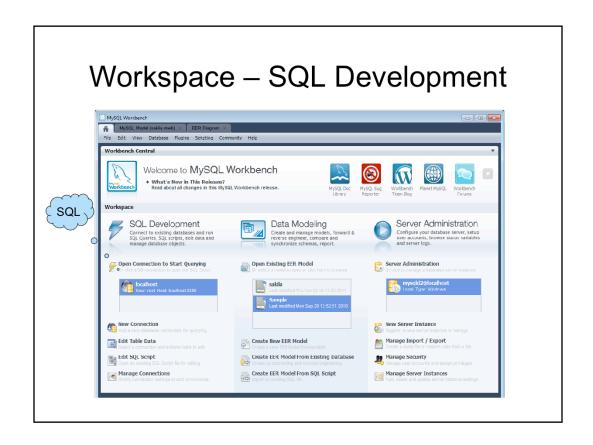
And it can be minimized

The bottom is the Workspace

The Workspace is divided into three sections

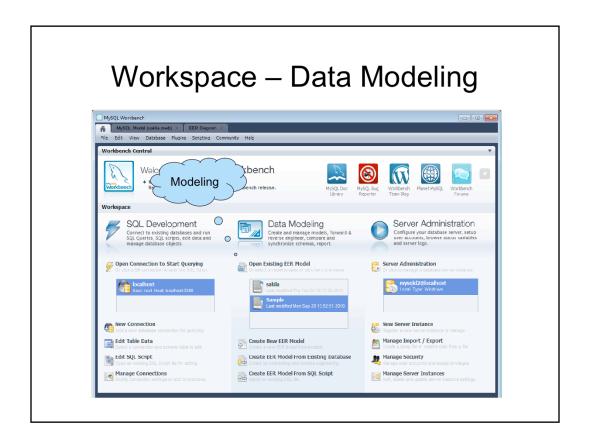


#### The Workspace



This section of the Workspace is for SQL Development

- Connect to databases
- Run SQL Queries or Scripts
- Edit data
- Manage database objects



#### **Data Modeling**

- Create and manage models
- Forward and Reverse engineer schemas
- Compare and synchronize schemas
- Make reports



#### Admin server

- Setup accounts
- Server configuration
- Change status variables
- Monitor logs

#### SQL Development Demo I

- Open connection to local machines
- · Create database world;
- Use world;
- Execute above two
- Execute SQL file
- Import World database
- Create new connection for World database

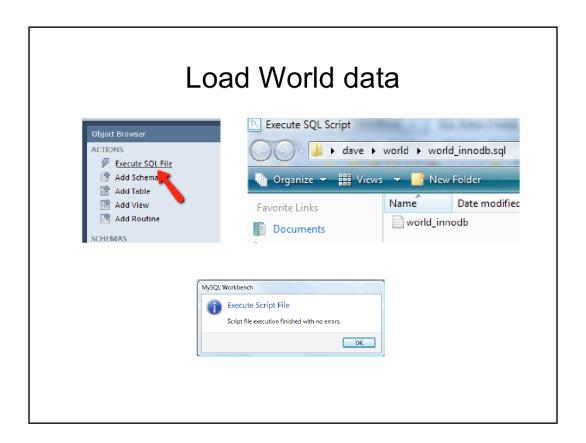
### SQL Development Demo II

- Use new Connection to World
- Three tables city, country, countrylangauge
- Double click on country

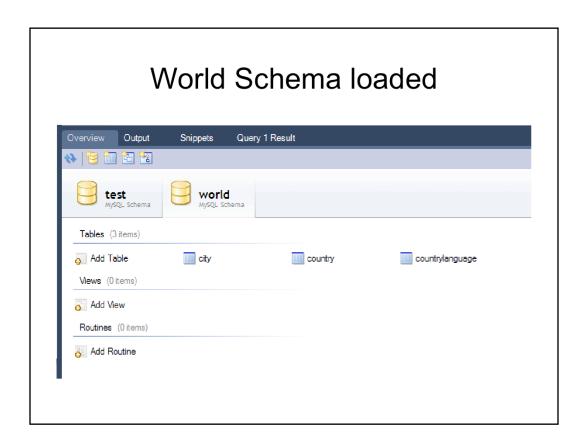


- Type CREATE DATABASE world;
  - Do not forgot ';' at end.
  - CREATE DATABASE not case sensitive
  - 'world' is case sensitive on case sensitive system
- Type USE WORLD;
- · Highlight both lines with your mouse
- Use Lightening Bolt to execute commands

The above creates a database named 'world', tells the server to use that database. The lower image reflects successful completion.



Use Execute SSL file to load your copy of the world\_innodb.sql file. You may ignore warnings about character sets at this time.



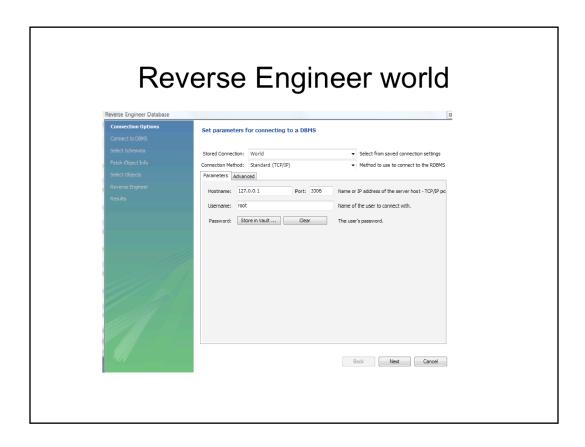
Please note that there are three tables in the world database – city, country, and countrylanguage.

#### **Data Modeling**

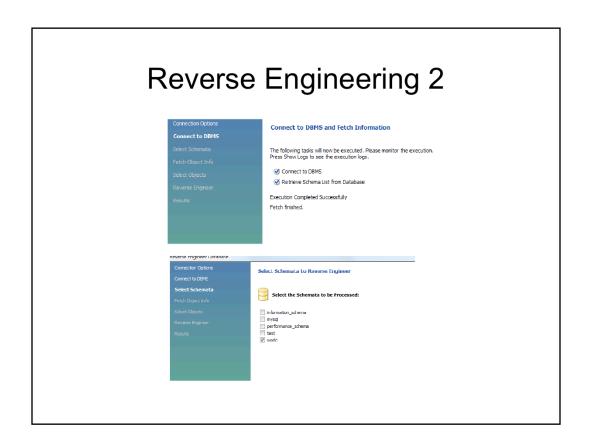
- Create New EER Model
- Create EER Model From Existing Database
- Create EER Model from SQL Script

We will create an EER model for the world database – back to the Workspace

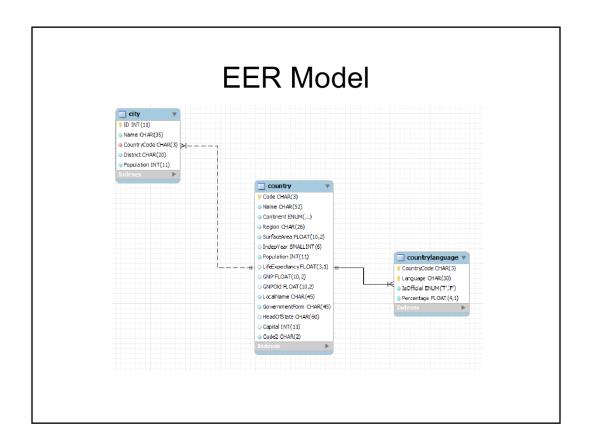
Click on the 'Home' icon and select Create EER Model From Existing Database from bottom center of page



Select 'world' in the Stored Connection pull-down, then click Next



Click next on the Connect to DBMS page, select world and click next on Select Schema, and next on the following two pages.



This is the enhanced entity-relationship (EER) model of the world database. Highlight the connection line to see how the keys correspond between tables.

http://en.wikipedia.org/wiki/Enhanced\_Entity-Relationship\_Model

#### Server Administration

- Create connection
- Server status
- Walk though of menus

This will be a quick showing of the various tabs for administration.

#### Create a new table

- Back to SQL development
- Edit table data
- Create a new table
- Enter data

This is where you will learn to create your own table. We will use the world database and create a table.

Table Description
ID\_Nbr Integer
FirstName char(20)
LastName char(20)
ShoeSize decimal(2,1)
ShoeWidth char(4)

#### Other Exercises

#### Find:

- 1. Largest/smallest country by population, surface area, GNP, and life expectancy.
- 2. All the countries by content, countries where the local name is the same as the common name?
- 3. Group countries by continent. Group by independence year.

These exercises are option and will require a little SQL skill.

## DOCS

http://dev.mysql.com/doc/workbench/en/index.html

## Q/A

- The question you are hesitant to ask now is the one your boss will ask when you return to your office!
- The very shy can email
   <u>David.Stokes@Oracle.com</u> or ask their friendly local Oracle sales staff.
- http://Forums.MySQL.Com has <u>7</u> sections to aid you