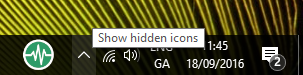
# Data Centric RAD

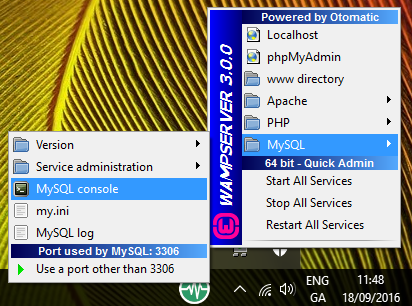
## Lab 1 MySQL Review

### Part 1

* Get superheroes.sql from Moodle.
* Start Wamp by double-clicking on the Wamp icon on the desktop.
* Then click on the Hidden Icons button, and the Wamp Icon.



* Then click on the MySQL console as shown, and when asked for a password just press ‘Enter’.



* Import the database into MySQL as follows:
  + Open the Command Prompt
  + In the **Command** Prompt type:

cd \wamp64\bin\mysql\mysql5.7.14\bin

* + Then type:

mysql -u root -p < "***Full Path***\superheroes.sql"

Where ***Full Path*** is the location of the superheroes.sql just downloaded.

* use superheroes;
* List all tables in the database.

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| mysql |

| performance\_schema |

| superheroes |

| sys |

+--------------------+

* What is the Primary Key of the superhero\_no\_PK table?

mysql> describe superhero\_no\_pk;

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| name | varchar(20) | YES | | NULL | |

| city | varchar(20) | YES | | NULL | |

| Real\_First\_Name | varchar(20) | YES | | NULL | |

| Real\_Surname | varchar(20) | YES | | NULL | |

+-----------------+-------------+------+-----+---------+-------+

Null Primary Key in superhero\_no\_PK table.

* Show all the rows and columns in the superhero\_no\_PK table.

mysql> select \*

-> from superhero\_no\_PK;

+-----------+-------------+-----------------+--------------+

| name | city | Real\_First\_Name | Real\_Surname |

+-----------+-------------+-----------------+--------------+

| Spiderman | New York | Peter | Parker |

| Superman | Metropolis | Clark | Kent |

| Batman | Gotham City | Bruce | Wayne |

+-----------+-------------+-----------------+--------------+

3 rows in set (0.00 sec)

* List all details of all superheroes in the superhero\_no\_PK table whose name begins with *S.*

*mysql> select \**

*-> from superhero\_no\_PK*

*-> where name like "S%";*

*+-----------+------------+-----------------+--------------+*

*| name | city | Real\_First\_Name | Real\_Surname |*

*+-----------+------------+-----------------+--------------+*

*| Spiderman | New York | Peter | Parker |*

*| Superman | Metropolis | Clark | Kent |*

*+-----------+------------+-----------------+--------------+*

*2 rows in set (0.00 sec)*

* List all superheroes in the superhero\_no\_PK table whose Real Surname contains the letter *n.*

mysql> select \*

-> from superhero\_no\_pk

-> where Real\_Surname like "%n%";

+----------+-------------+-----------------+--------------+

| name | city | Real\_First\_Name | Real\_Surname |

+----------+-------------+-----------------+--------------+

| Superman | Metropolis | Clark | Kent |

| Batman | Gotham City | Bruce | Wayne |

+----------+-------------+-----------------+--------------+

2 rows in set (0.00 sec)

* What is the Primary Key of the superhero\_2\_PK table?

mysql> describe superhero\_2\_PK;

+-----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+-------------+------+-----+---------+-------+

| name | varchar(20) | NO | PRI | NULL | |

| city | varchar(20) | NO | PRI | NULL | |

* List all the details of all superheroes in the superhero\_2\_pk table who are male (have *man* as part of their superhero name), and who are from Gotham City

The following column names should be displayed:

HERO, city, First Name Alias, Last Name Alias.

mysql> select \*

-> from superhero\_2\_pk

-> where name like "%man%"

-> and city = 'Gotham City';

+--------+-------------+-----------------+--------------+

| name | city | real\_first\_name | real\_surname |

+--------+-------------+-----------------+--------------+

| Batman | Gotham City | Bruce | Wayne |

+--------+-------------+-----------------+--------------+

1 row in set (0.07 sec)

### Part 2

* Get employeesDB100.sql from Learnonline.
* Import it into MySQL using the procedure described in Part 1.
* use employees;

mysql> use employees

Database changed

* List all tables in the employees database.

mysql> show tables

-> ;

+---------------------+

| Tables\_in\_employees |

+---------------------+

| departments |

| dept\_emp |

| dept\_manager |

| employees |

| salaries |

| titles |

+---------------------+

6 rows in set (0.00 sec)

* List all Departments.

mysql> select \*

-> from departments;

+---------+--------------------+

| dept\_no | dept\_name |

+---------+--------------------+

| d009 | Customer Service |

| d005 | Development |

| d002 | Finance |

| d003 | Human Resources |

| d001 | Marketing |

| d004 | Production |

| d006 | Quality Management |

| d008 | Research |

| d007 | Sales |

+---------+--------------------+

9 rows in set (0.00 sec)

* List **only the name** of the Department d005.

mysql> select dept\_name

-> from departments

-> where dept\_no = "d005";

+-------------+

| dept\_name |

+-------------+

| Development |

+-------------+

1 row in set (0.00 sec)

* List all salaries greater than or equal to 101,000, but use an alias called **money** to display the results.

mysql> select salary as "My money"

-> from salaries

-> where salary > 101000;

+----------+

| My money |

+----------+

| 102425 |

| 102674 |

| 103672 |

| 101829 |

| 101630 |

| 105533 |

| 106204 |

| 108345 |

| 111623 |

| 112470 |

| 113229 |

| 102651 |

+----------+

12 rows in set (0.00 sec)

* List all employees who were hired in 1987.

mysql> select \*

-> from employees

-> where hire\_date between "1987-01-01" and "1987-12-31";

+--------+------------+------------+--------------+--------+------------+

| emp\_no | birth\_date | first\_name | last\_name | gender | hire\_date |

+--------+------------+------------+--------------+--------+------------+

| 10014 | 1956-02-12 | Berni | Genin | M | 1987-03-11 |

| 10015 | 1959-08-19 | Guoxiang | Nooteboom | M | 1987-07-02 |

| 10018 | 1954-06-19 | Kazuhide | Peha | F | 1987-04-03 |

| 10025 | 1958-10-31 | Prasadram | Heyers | M | 1987-08-17 |

| 10033 | 1956-11-14 | Arif | Merlo | M | 1987-03-18 |

| 10058 | 1954-10-01 | Berhard | McFarlin | M | 1987-04-13 |

| 10060 | 1961-10-15 | Breannda | Billingsley | M | 1987-11-02 |

| 10067 | 1953-01-07 | Claudi | Stavenow | M | 1987-03-04 |

| 10068 | 1962-11-26 | Charlene | Brattka | M | 1987-08-07 |

| 10071 | 1958-01-21 | Hisao | Lipner | M | 1987-10-01 |

| 10075 | 1960-03-09 | Gao | Dolinsky | F | 1987-03-19 |

| 10078 | 1959-12-25 | Danel | Mondadori | F | 1987-05-26 |

| 10083 | 1959-07-23 | Vishv | Zockler | M | 1987-03-31 |

| 10094 | 1957-05-25 | Arumugam | Ossenbruggen | F | 1987-04-18 |

| 10100 | 1953-04-21 | Hironobu | Haraldson | F | 1987-09-21 |

+--------+------------+------------+--------------+--------+------------+

15 rows in set (0.00 sec)

OR

mysql> select \*

-> from employees

-> where hire\_date like "1987%";

* List all employees who were hired in 1987 but were born in the 1960s or later.

mysql> select \*

-> from employees

-> where hire\_date between "1987-01-01" and "1987-12-31"

-> and birth\_date >= "1960-01-01";

+--------+------------+------------+-------------+--------+------------+

| emp\_no | birth\_date | first\_name | last\_name | gender | hire\_date |

+--------+------------+------------+-------------+--------+------------+

| 10060 | 1961-10-15 | Breannda | Billingsley | M | 1987-11-02 |

| 10068 | 1962-11-26 | Charlene | Brattka | M | 1987-08-07 |

| 10075 | 1960-03-09 | Gao | Dolinsky | F | 1987-03-19 |

+--------+------------+------------+-------------+--------+------------+

3 rows in set (0.00 sec)

* List the employee numbers of all employees who joined department *d005* after June 1st 1986.

mysql> select \*

-> from dept\_emp

-> where dept\_no = "d005"

-> and from\_date >= "1986-06-01";

+--------+---------+------------+------------+

| emp\_no | dept\_no | from\_date | to\_date |

+--------+---------+------------+------------+

| 10001 | d005 | 1986-06-26 | 9999-01-01 |

| 10006 | d005 | 1990-08-05 | 9999-01-01 |

| 10008 | d005 | 1998-03-11 | 2000-07-31 |

| 10012 | d005 | 1992-12-18 | 9999-01-01 |

| 10014 | d005 | 1993-12-29 | 9999-01-01 |

| 10018 | d005 | 1987-04-03 | 1992-07-29 |

| 10021 | d005 | 1988-02-10 | 2002-07-15 |

| 10022 | d005 | 1999-09-03 | 9999-01-01 |

| 10023 | d005 | 1999-09-27 | 9999-01-01 |

| 10025 | d005 | 1987-08-17 | 1997-10-15 |

| 10027 | d005 | 1995-04-02 | 9999-01-01 |

| 10028 | d005 | 1991-10-22 | 1998-04-06 |

| 10031 | d005 | 1991-09-01 | 9999-01-01 |

| 10037 | d005 | 1990-12-05 | 9999-01-01 |

| 10040 | d005 | 1993-02-14 | 2002-01-22 |

| 10043 | d005 | 1990-10-20 | 9999-01-01 |

| 10056 | d005 | 1990-02-01 | 9999-01-01 |

| 10057 | d005 | 1992-01-15 | 9999-01-01 |

| 10062 | d005 | 1991-08-30 | 9999-01-01 |

| 10065 | d005 | 1998-05-24 | 9999-01-01 |

| 10072 | d005 | 1989-05-21 | 9999-01-01 |

| 10074 | d005 | 1990-08-13 | 9999-01-01 |

| 10075 | d005 | 1988-05-17 | 2001-01-15 |

| 10076 | d005 | 1996-07-15 | 9999-01-01 |

| 10078 | d005 | 1994-09-29 | 9999-01-01 |

| 10079 | d005 | 1995-12-13 | 9999-01-01 |

| 10091 | d005 | 1992-11-18 | 9999-01-01 |

| 10092 | d005 | 1996-04-22 | 9999-01-01 |

+--------+---------+------------+------------+

28 rows in set (0.00 sec)

* Show the *emp\_no*, *salary*, *from\_date* and *to\_date* of all employees who earned more than 65,000 at any time during the 1980s.

mysql> select \*

-> from salaries

-> where salary > 65000

-> and from\_date between "1980-01-01" and "1989-12-31";

+--------+--------+------------+------------+

| emp\_no | salary | from\_date | to\_date |

+--------+--------+------------+------------+

| 10001 | 66074 | 1988-06-25 | 1989-06-25 |

| 10001 | 66596 | 1989-06-25 | 1990-06-25 |

| 10005 | 78228 | 1989-09-12 | 1990-09-12 |

| 10009 | 66302 | 1988-02-18 | 1989-02-17 |

| 10009 | 69042 | 1989-02-17 | 1990-02-17 |

| 10060 | 74686 | 1989-05-28 | 1990-05-28 |

| 10061 | 68577 | 1989-12-02 | 1990-12-02 |

| 10066 | 69736 | 1986-02-26 | 1987-02-26 |

| 10066 | 72147 | 1987-02-26 | 1988-02-26 |

| 10066 | 76616 | 1988-02-26 | 1989-02-25 |

| 10066 | 78885 | 1989-02-25 | 1990-02-25 |

| 10068 | 87964 | 1987-08-07 | 1988-08-06 |

| 10068 | 92176 | 1988-08-06 | 1989-08-06 |

| 10068 | 92089 | 1989-08-06 | 1990-08-06 |

| 10088 | 65957 | 1988-09-02 | 1989-09-02 |

| 10088 | 67837 | 1989-09-02 | 1990-09-02 |

| 10099 | 68781 | 1988-10-18 | 1989-10-18 |

| 10099 | 70711 | 1989-10-18 | 1990-10-18 |

+--------+--------+------------+------------+

18 rows in set (0.00 sec)

* List the *emp­\_no*, *title*, *from\_date* and *to\_date* of all employees who once had the job title “Engineer”, but never progressed to “Senior Engineer” and who are still employed as an “Engineer”.

mysql> select \*

-> from titles

-> where title = "Engineer"

-> and to\_date = "9999-01-01";

+--------+----------+------------+------------+

| emp\_no | title | from\_date | to\_date |

+--------+----------+------------+------------+

| 10010 | Engineer | 1996-11-24 | 9999-01-01 |

| 10014 | Engineer | 1993-12-29 | 9999-01-01 |

| 10020 | Engineer | 1997-12-30 | 9999-01-01 |

| 10022 | Engineer | 1999-09-03 | 9999-01-01 |

| 10023 | Engineer | 1999-09-27 | 9999-01-01 |

| 10045 | Engineer | 1996-11-16 | 9999-01-01 |

| 10065 | Engineer | 1998-05-24 | 9999-01-01 |

| 10078 | Engineer | 1994-09-29 | 9999-01-01 |

| 10092 | Engineer | 1996-04-22 | 9999-01-01 |

| 10096 | Engineer | 1999-01-23 | 9999-01-01 |

+--------+----------+------------+------------+

10 rows in set (0.00 sec)