

# CNT 4714: Enterprise Computing Fall 2013

## Client User Creation In The MySQL Workbench

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# Client User Creation In The MySQL Workbench

- For Project 6 you need to create two new clients for the `project6` database and assign them specific privileges on the database.
- This set of slides steps you through that process using the MySQL Workbench.
- This can also be done via the MySQL command line client, however, it requires issuing specific GRANT commands and while providing finer grained privilege detail, goes a bit beyond what we need for this project.



Start the Workbench and select Server tab at the top of the window. Select Users and Privileges from the drop-down list.

```

1  # SQL commands to create and populate the MySQL database for
2  # CNT 4714 - Fall 2013 - Project 6
3  #
4  # delete the database if it already exists
5  drop database if exists project6;
6
7  #create a new database named project6
8  create database project6;
9
10 #switch to the new database
11 use project6;
12
13 #create the schemas for the four relations in this database
14 create table suppliers (
15     snum varchar(4) not null,
16     sname varchar(20) not null,
17     status integer,
18     city varchar(20),
19     primary key (snum)
20 );
21
22 create table parts (
23     pnum varchar(4) not null,
24     pname varchar(15) not null,
25     color varchar(15),
26     weight integer,
27     city varchar(20),
28     primary key (pnum)
29 );

```

Output

	Time	Action	Message	Duration / Fetch
✓	82 15:03:33	insert into shipments values ('S6','P19','J5',50)	1 row(s) affected	0.031 sec
✓	83 15:03:33	insert into shipments values ('S3','P3','J6',75)	1 row(s) affected	0.047 sec
✓	84 15:03:33	insert into shipments values ('S6','P24','J2',20)	1 row(s) affected	0.047 sec
✓	85 15:03:33	insert into shipments values ('S3','P10','J4',200)	1 row(s) affected	0.031 sec





## SCHEMAS

Filter objects

- ▶ bikedb
- ▶ colorsurvey
- ▶ guestbook
- ▶ largeco
- ▶ mailinglist
- ▶ project2
- ▶ project3
- ▶ project4
- ▶ project5
- ▶ **project6**
- ▶ test
- ▶ vendor2
- ▶ vendors

Management Schemas

Information

No object selected

Object Info Session



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
root	localhost
root	127.0.0.1
root	:::1

Select an account to edit or click Add Account to create a new one

Login Account Limits Administrative Roles Schema Privileges

Login Name: 

You may create multiple accounts with the same name to connect from different hosts.

Authentication Type: SHA256 Password

For the standard password and/or host based authentication, select 'Standard'.

Limit Connectivity to Hosts Matching: 

\* % and \_ wildcards may be used

Password: 

Type a password to reset it.

Consider  marks.Confirm Password: Authentication String: 

You'll now see a window that allows you to create user accounts and set permissions on those account. Currently you'll only have the root user by default.

Click the Add Account button here.

Add Account Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh





## SCHEMAS

Filter objects

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- project6**
- test
- vendor2
- vendors

Management Schemas

Information

No object selected

Object Info Session



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
root	localhost
root	127.0.0.1
root	:::1
newuser	%

## Details for account newuser@%

Login Account Limits Administrative Roles Schema Privileges

Login Name: client1 You may create multiple accounts with the same name to connect from different hosts.

Authentication Type: Standard For the standard password and/or host based authentication, select 'Standard'.

Limit Connectivity to Hosts Matching: % % and \_ wildcards may be used

Password: \*\*\*\*\* Type a password to reset it.

Weak password.

Confirm Password: \*\*\*\*\* Enter password again to confirm.

Add Account Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh

Enter the information for the new user named "client1" as shown.

Click the Apply button when finished





## SCHEMAS

Filter objects

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- mailinglist
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- project5
- project6**
- test
- vendor2
- vendors

Management Schemas

Information

No object selected

Object Info Session



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
client1	%
root	localhost
root	127.0.0.1
root	::1
newuser	%

## Details for account newuser@%

Login Account Limits Administrative Roles Schema Privileges

Login Name: client2

You may create multiple accounts with the same name to connect from different hosts.

Authentication Type: Standard

For the standard password and/or host based authentication, select 'Standard'.

Limit Connectivity to Hosts Matching: %

% and \_ wildcards may be used

Password: \*\*\*\*\*

Type a password to reset it.

Weak password.

Confirm Password: \*\*\*\*\*

Enter password again to confirm.

Repeat the steps for client2. Click the Apply button

Add Account Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh





## SCHEMAS

Filter objects

- ▶ bikedb
- ▶ colorsurvey
- ▶ guestbook
- ▶ largeco
- ▶ mailinglist
- ▶ project2
- ▶ project3
- ▶ project4
- ▶ project5
- ▶ **project6**
- ▶ test
- ▶ vendor2
- ▶ vendors

Management Schemas

Information .....

No object selected

Object Info Session



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
client1	%
client2	%
root	localhost
root	127.0.0.1
root	::1

## Details for account client1@%

Login Account Limits Administrative Roles Schema Privileges

Login Name:  You may create multiple accounts with the same name to connect from different hosts.

Authentication Type:  For the standard password and/or host based authentication, select 'Standard'.

Limit Connectivity to Hosts Matching:  % and \_ wildcards may be used

Password:  Type a password to reset it.  
 Consider using a password with 8 or more characters with mixed case letters, numbers and punctuation marks.

Confirm Password:  Enter password again to confirm.

Add Account Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh

You have now created your two client accounts. Next you need to set the permissions (as outlined in the assignment) for each client user.





## SCHEMAS

Filter objects

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- project3
- project4
- project5
- project6**
- test
- vendor2
- vendors

Management Schemas

Information

No object selected

Object Info Session



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
client1	%
client2	%
root	localhost
root	127.0.0.1
root	::1

## Details for account client1@%

Login Account Limits Administrative Roles Schema Privileges

Login Name: client1

You may create multiple accounts with the same name to connect from different hosts.

Authentication Type: Standard

For the standard password and/or host based authentication, select 'Standard'.

Limit Connectivity to Hosts Matching: %

% and \_ wildcards may be used

Password: \*\*\*\*\*

Type a password to reset it.

Consider using a password with 8 or more characters with mixed case letters, numbers and punctuation marks.

Confirm Password: \*\*\*\*\*

Enter password again to confirm.

Add Account

Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh

Select a user (client1 in this case) and then click the Schema Privileges tab on the right side of the window.







## SCHEMAS

Filter objects

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- ▶ colorsurvey
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- ▶ project2
- ▶ project3
- ▶ project4
- ▶ project5
- ▶ **project6**
- ▶ test
- ▶ vendor2
- ▶ vendors

Management Schemas

Information

No object selected

Object Info Session



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
client1	%
client2	%
root	localhost
root	127.0.0.1
root	::1

## Details for account client1@%

Login Account Limits Administrative Roles Schema Privileges

Schema Privileges

Schema	Privileges

Schema and Host fields may use % and \_ wildcards.  
The server will match specific entries before wildcarded ones.

Delete Entry

Add Entry...

From the Schema Privileges window  
click the Add Entry button

Object Rights

DDL Rights

Other Rights

- GRANT OPTION
- CREATE TEMPORARY TABLES
- LOCK TABLES

- ALTER ROUTINE
- DROP
- TRIGGER

Unselect All

Select "ALL"

Add Account

Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh





SCHEMAS

Filter ob

bike  
colo  
gue  
larg  
mail  
proj  
proj  
proj  
proj  
pro  
test  
ven  
ven

Managem

Informati

No object

## New Schema Privilege Definition

Select the Schema for which the user 'client1' will have the privileges you want to define.

Schema

 Any Schema (%)

This rule will apply to any schema name.

 Schemas matching pattern or name:

This rule will apply to schemas that match the given name or pattern. You may use \_ and % as wildcards in a pattern. Escape these characters with \ in case you want their literal value.

bikedb  
coloursurvey  
guestbook  
information\\_schema  
largeco  
mailinglist  
mysql  
performance\\_schema  
project2  
project3  
project4  
project5  
project6  
test  
vendor2  
vendors

 Selected schema:

Select a specific schema name for the rule to apply to.

Select the "Selected Schema" button and then select the project6 database from the selection box. Then click OK.

Cancel

OK

ALL"





## SCHEMAS

Filter objects

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- ▶ project5
- ▶ **project6**
- ▶ test
- ▶ vendor2
- ▶ vendors



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
client1	%
client2	%
root	localhost
root	127.0.0.1
root	:::1

## Details for account client1@%

Login Account Limits Administrative Roles Schema Privileges

Schema	Privileges
project6	none

Schema and Host fields may use % and \_ wildcards.  
The server will match specific entries before wildcarded ones.

Delete Entry

Add Entry...

The user 'client1'@'%' will have the following access rights to the schema 'project6':

## Object Rights

- SELECT
- INSERT
- UPDATE
- DELETE
- EXECUTE
- SHOW VIEW

## DDL Rights

- CREATE
- ALTER
- REFERENCES
- INDEX
- CREATE VIEW
- CREATE ROUTINE
- ALTER ROUTINE
- DROP
- TRIGGER

## Other Rights

- GRANT OPTION
- CREATE TEMPORARY TABLES
- LOCK TABLES

Unselect All

Select "ALL"

Add Account

Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh

You've now returned to the Schema Privileges window, but the options below are now accessible.





## SCHEMAS

Filter objects

- ▶ bikedb
- ▶ colorsurvey
- ▶ guestbook
- ▶ largeco
- ▶ mailinglist
- ▶ project2
- ▶ project3
- ▶ project4
- ▶ project5
- ▶ **project6**
- ▶ test
- ▶ vendor2
- ▶ vendors



Local instance MySQL56

## Users and Privileges

## User Accounts

User	From Host
client1	%
client2	%
root	localhost
root	127.0.0.1
root	:::1

## Details for account client1@%

Login Account Limits Administrative Roles Schema Privileges

Schema	Privileges
project6	INSERT, SELECT

Client1 should have only selection and insertion privileges on the project6 database. Click those two options only and click Apply.

Schema and Host fields may use % and \_ wildcards.  
The server will match specific entries before wildcarded ones.

Delete Entry

Add Entry...

The user 'client1'@'%' will have the following access rights to the schema 'project6':

## Object Rights

- SELECT
- INSERT
- UPDATE
- DELETE
- EXECUTE
- SHOW VIEW

## DDL Rights

- CREATE
- ALTER
- REFERENCES
- INDEX
- CREATE VIEW
- CREATE ROUTINE
- ALTER ROUTINE
- DROP
- TRIGGER

## Other Rights

- GRANT OPTION
- CREATE TEMPORARY TABLES
- LOCK TABLES

Unselect All

Select "ALL"

Add Account

Drop

Revoke All Privileges

Expire Password

Revert

Apply

Refresh





- SCHEMAS**
- Filter objects
- ▶ bikedb
  - ▶ colorsurvey
  - ▶ guestbook
  - ▶ largeco
  - ▶ mailinglist
  - ▶ project2
  - ▶ project3
  - ▶ project4
  - ▶ project5
  - ▶ **project6**
  - ▶ test
  - ▶ vendor2
  - ▶ vendors

Local instance MySQL56  
**Users and Privileges**

User Accounts

User	From Host
client1	%
client2	%
root	localhost
root	127.0.0.1
root	::1

Details for account client2@%

- Login Account Limits Administrative Roles Schema Privileges

Schema	Privileges
project6	SELECT, UPDATE

Schema and Host fields may use % and \_ wildcards.  
The server will match specific entries before wildcarded ones.

Object Rights

- SELECT
- INSERT
- UPDATE
- DELETE
- EXECUTE
- SHOW VIEW

DDL Rights

- CREATE
- ALTER
- REFERENCES
- INDEX
- CREATE VIEW
- CREATE ROUTINE
- ALTER ROUTINE
- DROP
- TRIGGER

Delete Entry Add Entry...

Repeat for client2 who should have only selection and update privileges on the project6 database.

Add Account Drop

Revoke All Privileges Expire Password Revert Apply Refresh



## MySQL Connections + ↻

🔍

## Shortcuts

Local instance MySQL56

client1



MySQL Doc Library

## Setup New Connection

- □ ×

Connection Name: client2 Type a name for the connection

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: 127.0.0.1 Port: 3310 Name or IP address of the server host. - TCP/IP port.

Username: client2 Name of the user to connect with.

Password: Store in Vault ... Clear The user's password. Will be requested later.

Default Schema: The schema to use as default schema. Leave blank for the default schema.

Configure Server Management...

Test Connection

Cancel

OK

To test your work, go back to the main workbench screen and open a connection to start querying, but login as client1 or client2. Since you'll be doing this a lot, I'd suggest creating a connection for each client.



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The Navigator pane on the left shows the SCHEMAS section with a search filter and two visible schemas: 'project6' and 'test'. A blue arrow points from a callout box to the 'project6' schema. The main query editor area is empty, showing a single query with the number '1'. The bottom pane shows the Output section with 'Action Output' selected, displaying a table with columns for Time, Action, Message, and Duration / Fetch.

The Workbench after logging in on the client2 connection. Notice that the only databases available to this user are the project6 and test (default) databases. Those that were accessible to the root are not visible now.



The screenshot shows the MySQL Workbench interface with the following components:

- Navigator:** Shows the 'project6' database schema with tables, views, stored procedures, and functions.
- Query Editor:** Contains the query `select * from suppliers`.
- Output Window:** Shows the execution results for the query.

The output window displays the following data:

snm	sname	status	city
S1	Michael Scuhmacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S17	Rubens Barichello	3	Sao Paulo
S2	Juan Pablo Montoya	4	Interlagos
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Remd Schnieder	2	Berlin

The Output window also shows the following message:

Time	Action	Message	Duration / Fetch
1 15:33:44	select * from suppliers LIMIT 0, 1000	15 row(s) returned	0.000 sec / 0.000 sec

A callout box with a blue border and a grey background contains the text: "Client2 has select privileges on the project6 database, so this query executes properly." Two blue arrows point from this box to the query editor and the output window.





Local instance MySQL56 (bikedb) x Local instance MySQL56 (project6) x client2 x

File Edit View Query Database Server Tools Scripting Help

ORACLE

Navigator: Query 1 x SQLAdditions

SCHEMAS

Filter objects

project6

- Tables
- Views
- Stored Procedures
- Functions
- test

Management Schemas

Information

Schema: project6

1 • insert into suppliers values ('S99', 'Megan Fox', 9, 'Orlando')

SQLAdditions

Jump to

**Topic: IN**

Syntax: expr IN (value,...)

Returns 1 if expr is equal to any of the

If all

expr

This

ue

ace

Client2 attempts to execute an insert command, but does not have this privilege on the project6 database, so the DBMS denies the operation and no insert operation occurs.

See also: [Online help comparison-operators](#)

Context Help Snippets

Output

Action Output

	Time	Action	Message	Duration / Fetch
✓	1 15:33:44	select * from suppliers LIMIT 0, 1000	15 row(s) returned	0.000 sec / 0.000 sec
✗	2 15:35:53	insert into suppliers values ('S99', 'Megan Fox', 9, 'Orlando')	Error Code: 1142. INSERT command denied to user 'client2'@local...	0.000 sec

Object Info Session

