

Tutorial Session

Project Track 1

**Working with Databases and
Web Hosting Systems**

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CS 411 Spring 2013

02/21/2013

Project Track 1

- ☐ Web hosting servers
- ☐ Database Systems
- ☐ Web Interface Scripting
- ☐ File Managing System
- ☐ Web Server
- ☐ Programming
 - ☐ PHP/Perl/Python...

Web Hosting Servers

- LAMP/WAMP

- localhost



- Drupal – UIUC platform



- Free Web hosting – online



- cPanel – Hosting platform software

- Provided by Engineering IT section - CS 411



cPanel

Lets start with
cPanel

Login with your
Net ID and
Password



<https://wiki.engr.illinois.edu/display/cs411sp13/Team0>

MySQL® Databases

Main Domain	shahzad2.web.enqr...
-------------	----------------------

```
Home Directory      /home/shahzad2
```

Disk Space Usage 0 / ∞ MB







Tools inside cPanel

- MySQL Databases
- phpMyAdmin
- PHP/HTML/Perl
- File Manager
- Web Server

Tools inside cPanel

➤ **MySQL Databases**

➤ phpMyAdmin

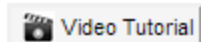
➤ PHP/HTML/Perl

➤ File Manager

➤ Web Server

MySQL Databases

MySQL Databases allow you to store lots of information in an easy to access manner. The databases themselves are not easily read by humans. MySQL databases are required by many web applications including some bulletin boards, content management systems, and others. To use a database, you'll need to create it. Only MySQL Users (different than mail or other users) that have privileges to access a database can read from or write to that database.


[Video Tutorial](#)
[↓ Jump to MySQL Users](#)

Create New Database

New Database: shahzad2_

Remote MySQL Host

The mysql server's address is engr-cpanel-mysql.engr.illinois.edu. When connecting to the mysql server you must specify this host.

Modify Databases

Check DB: shahzad2_gene_test

Repair DB: shahzad2_gene_test

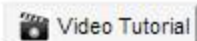
Current Databases

Search

DATABASE	SIZE	USERS	ACTIONS
shahzad2_gene_test	0.00 MB	shahzad2_khuraam	Delete Database

MySQL Databases

MySQL Databases allow you to store lots of information in an easy to access manner. The databases themselves are not easily read by humans. MySQL databases are required by many web applications including some bulletin boards, content management systems, and others. To use a database, you'll need to create it. Only MySQL Users (different than mail or other users) that have privileges to access a database can read from or write to that database.

[↓ Jump to MySQL Users](#)

MySQL Users

[↑ Jump to MySQL Databases](#)

Add New User

Username: shahzad2_

Password:

Password (Again):

Strength (why?): Very Weak (0/100)

[Password Generator](#)[Create User](#)


Add User To Database

User: shahzad2_khura

Database: shahzad2_gene_test

[Add](#)

Current Users

USERS	DELETE
shahzad2_khura	

Tools inside cPanel

➤ MySQL Databases

➤ **phpMyAdmin**

➤ PHP/HTML/Perl

➤ File Manager

➤ Web Server

Now populate your database

Create a table with the following attributes

Gene_No	Gene_ID	Gene_Symbol	Gene_Full_Name	Gene_Function	Gene_Length
1	826470	CRY1	CRYPTOCHROME 1	photoperiod	3151
2	827269	ESD4	EARLY IN SHORT DAYS 4	vernalization	3472
3	838883	GI	GIGANTEA	photoperiod	5873
4	837483	PHYA	PHYTOCHROME A	photoperiod	5102
5	816394	PHYB	PHYTOCHROME B	photoperiod	4550

Import Function

phpMyAdmin



(Recent tables) ...

shahzad2_gene_test

Gene

User

Create table

engr-cpanel-mysql.engr.illinois.edu » shahzad2_gene_test » Gene

Browse

Structure

SQL

Search

Insert

Export

Import

Operations

Triggers

Importing into the table "Gene"

File to Import:

File may be compressed (gzip) or uncompressed.

A compressed file's name must end in `.[format].[compression]`. Example: `.sql.zip`

Browse your computer: No file chosen (Max: 50MiB)

Character set of the file:

Partial Import:

☒ Allow the interruption of an import in case the script detects it is close to the PHP timeout limit. *(This might be a good way to import large files, however it can break transactions.)*

Number of rows to skip, starting from the first row:

Format:

CSV

Note: If the file contains multiple tables, they will be combined into one

Format-Specific Options:

☐ Replace table data with file

☐ Do not abort on INSERT error

Columns separated with:

Columns enclosed with:

Columns escaped with:

Lines terminated with:

Column names:

Go

Executing SQL Query

The screenshot displays the phpMyAdmin web interface. The top navigation bar shows the path: `engr-cpanel-mysql.engr.illinois.edu » shahzad2_gene_test » Gene`. Below this, a menu contains icons for Browse, Structure, SQL, Search, Insert, Export, Import, and a More dropdown. The main heading reads "Run SQL query/queries on database shahzad2_gene_test:". The central text area contains the SQL query: `1 SELECT * FROM `Gene` WHERE Gene_No = 1`. To the right, a "Columns" list shows the table's structure: Gene_No, Gene_ID, Locus_ID, Gene_Symbol, Gene_Full_Name, Gene_Function, Gene_Length, and Gene_Sequence. Below the query editor are buttons for "SELECT *", "SELECT", "INSERT", "UPDATE", "DELETE", and "Clear". At the bottom, there is a "Delimiter" field set to semicolon, checkboxes for "Show this query here again" (checked) and "Retain query box" (unchecked), and a "Go" button.

phpMyAdmin

(Recent tables) ...

shahzad2_gene_test

Gene

User

Create table

engr-cpanel-mysql.engr.illinois.edu » shahzad2_gene_test » Gene

Browse Structure SQL Search Insert Export Import More

Run SQL query/queries on database shahzad2_gene_test:

```
1 SELECT * FROM `Gene` WHERE Gene_No = 1
```

Columns

- Gene_No
- Gene_ID
- Locus_ID
- Gene_Symbol
- Gene_Full_Name
- Gene_Function
- Gene_Length
- Gene_Sequence

SELECT * SELECT INSERT UPDATE DELETE Clear

[Delimiter ;] ☒ Show this query here again ☐ Retain query box Go

Query Results

phpMyAdmin

(Recent tables) ...

shahzad2_gene_test

Gene

User

Create table

engr-cpanel-mysql.engr.illinois.edu » shahzad2_gene_test » Gene

Browse Structure SQL Search Insert Export Import Operations More

Show query box

Showing rows 0 - 0 (1 total, Query took 0.0012 sec)

```
SELECT *  
FROM `Gene`  
WHERE Gene_No = 1  
LIMIT 0, 30
```

Profiling [Inline] [Edit] [Explain SQL] [Create PHP Code] [Refresh]

Show : Start row: 0 Number of rows: 30 Headers every 100 rows

+ Options

	Gene_No	Gene_ID	Locus_ID	Gene_Symbol	Gene_Full_Name	Gene_Function	Gene_Length
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	826470	NC_003075	CRY1	CRYPTOCHROME 1	photoperiod	3151

Check All / Uncheck All With selected: Change Delete Export

Show : Start row: 0 Number of rows: 30 Headers every 100 rows

Query results operations

Print view Print view (with full texts) Export Display chart Create view

Tools inside cPanel

➤ MySQL Databases

➤ phpMyAdmin

➤ **PHP/HTML/Perl**

➤ File Manager

➤ Web Server

Creating Web Pages

- Now we know that our database is ready!
- Its time to make our schema as a functional unit
- by creating server side and user side interfaces
- Scripting ...
 - Client-Side Scripting (HTML, Javascript...)
 - Server-Side Scripting (PHP, Django...)
- <https://wiki.engr.illinois.edu/display/cs411sp13/Tool+Resources>

Tools inside cPanel

➤ MySQL Databases

➤ phpMyAdmin

➤ PHP/HTML/Perl

➤ **File Manager**

➤ Web Server

File Manager

➤ Upload your file to the server to make them functional

File Manager [Settings](#)

Search for

New File

New Folder

Copy

Move File

Upload

Download

Delete

Rename

Edit

Code Editor

HTML Editor

Change Permission

View

Extract

Compress

Collapse all

(/home/shahzad2)

- access-logs
- perl5
- public_html**
- tmp

Home Up One Level Back Forward Reload ☒ Select all ☐ Unselect all

	Name	Size	Last Modified (Central S	Type	Perms
	cgi-bin	4 KB	Aug 20, 2012 1:24 PM	http/unix-directory	0711
	arabidop1.png	42.88 KB	Jan 31, 2013 2:26 AM	image/x-generic	0644
	error_log	11.34 KB	Jan 31, 2013 9:00 PM	text/x-generic	0644
	index.html	3.53 KB	Jan 31, 2013 9:37 PM	text/html	0644
	search_genes.p	2.45 KB	Jan 31, 2013 9:39 PM	application/x-httpd-php	0644
	style.css	616 bytes	Jan 31, 2013 9:34 PM	text/css	0644

Connecting to a Database

```
$link = mysql_connect('localhost', 'username', 'password');  
if (!$link) {  
    die('Could not connect: ' . mysql_error());  
}  
mysql_select_db('database_name');
```

```
$link = mysql_connect('engr-cpanel-mysql.engr.illinois.edu', 'shahzad2_cs411', 'cs411');  
if (!$link) {  
    die('Could not connect: ' . mysql_error());  
}  
mysql_select_db('shahzad2_cs411');
```

-
-
-

```
mysql_close($link);
```

Tools inside cPanel

➤ MySQL Databases

➤ phpMyAdmin

➤ PHP/HTML/Perl

➤ File Manager

➤ **Web Server**

Web Server

➤ Apache Handler

- Web Server
- Apache HTTP Server (<http://httpd.apache.org/>)
- The goal of this project is to provide a secure, efficient and extensible server that provides HTTP services in sync with the current HTTP standards

Finally...

- ✓ <https://web.engr.illinois.edu/~shahzad2/>
- ✓ Basics have been provided...
- ✓ Now its your turn to convert them into advance functionalities.
- ✓ Could be targeted into reputed journals

Project Group Accounts

- To get access to your project group accounts
- Captain of each team needs to send an email mentioning about team name and its members (with Net IDs) to
- engrit-help@illinois.edu

Thanks

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Good luck for your Projects