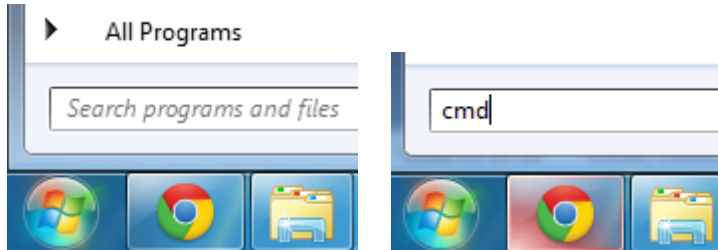


Accessing MySQL

- Get the command line



- change drive (if needed), type
 - C: <ENTER> (where C is the drive letter)
- change to the xampp installation folder, type
 - cd c:\xampp\mysql\bin <ENTER>

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Gary>C:

C:\Users\Gary>cd c:\xampp\mysql\bin

c:\xampp\mysql\bin>
```

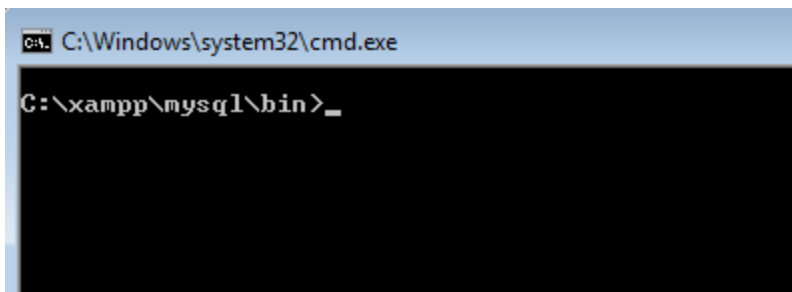
Accessing MySQL

- **Win7/10**, simpler way.
- Explorer > navigate to xampp\mysql\bin folder
- **Shift + RightClick**
- **Select:**
Open command window here

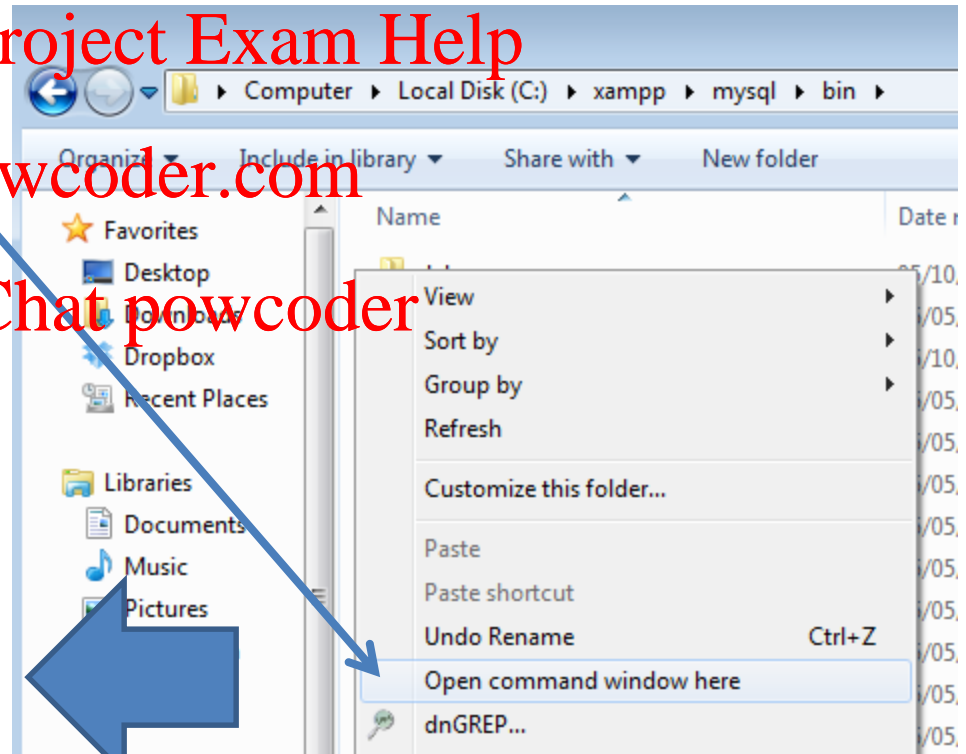
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```
C:\Windows\system32\cmd.exe
C:\xampp\mysql\bin>_
```



Accessing MySQL

- Login using root and password (if you set one)
- Type the following:

-u: username

-p: password

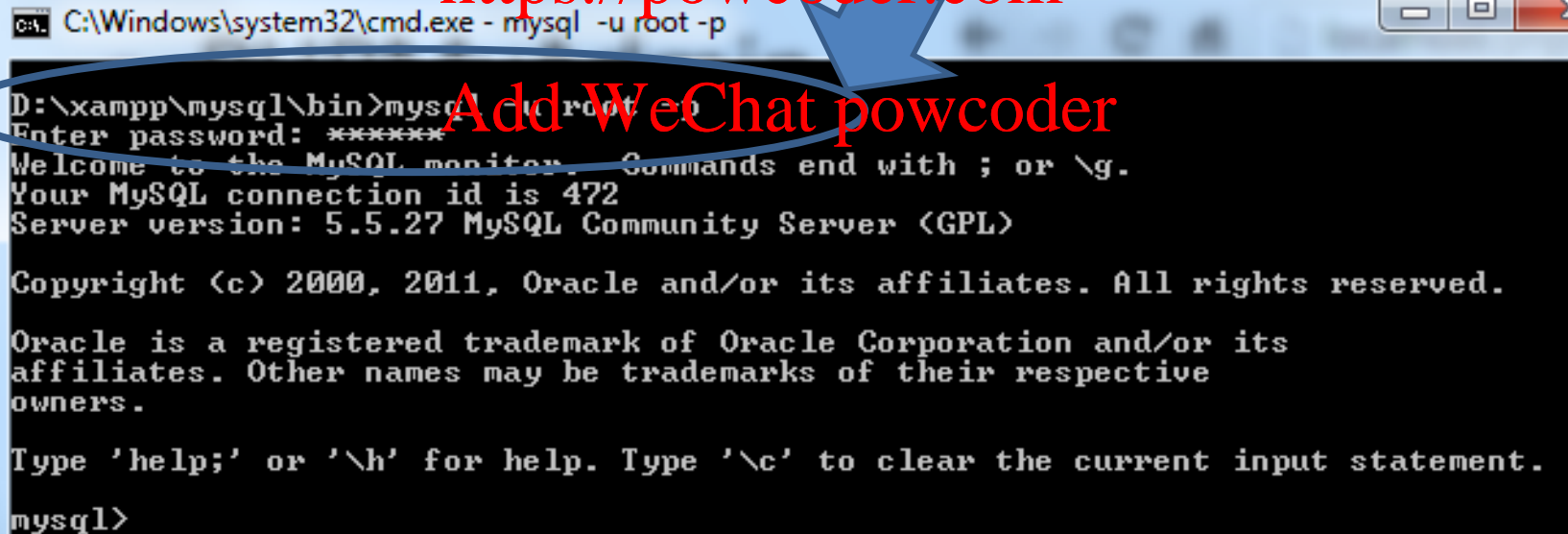
`mysql -u root -p <enter>`

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- And then your password

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```
C:\Windows\system32\cmd.exe - mysql -u root -p

D:\xampp\mysql\bin>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 472
Server version: 5.5.27 MySQL Community Server (GPL)

Copyright (c) 2000, 2011, Oracle and/or its affiliates. All rights reserved.

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Basic MySQL command

- xampp comes with **cdcol** database installed
- **cdcol** contains **cds** table.
- To use/change database (note the semi-colon):
use <database>;
<https://powcoder.com>
- e.g. use cdcol:
Add WeChat powcoder
- To show available tables:
show tables;

```
mysql> use cdcol;
Database changed
mysql> show tables;
+-----+
| Tables_in_cdcol |
+-----+
| cds              |
+-----+
1 row in set (0.00 sec)

mysql>
```

Basic MySQL command

- Show schema/constraints of table, type:
describe <tablename>;
- e.g. describe cds;

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```
mysql> describe cds;
```

Field	Type	Null	Key	Default	Extra
titel	varchar(200)	YES		NULL	
interpret	varchar(200)	YES		NULL	
jahr	int(11)	YES		NULL	
id	bigint(20) unsigned	NO	PRI	NULL	auto_increment

```
4 rows in set (0.02 sec)
```

```
mysql>
```

Import an existing database

- You are provided with example script which construct tables used in lecture: cs250.sql
- Download cs250.sql from blackboard
- Save it in xampp/mysql/bin folder.
<https://powcoder.com>
- There are two ways to rebuild/import database from a .sql file.
[Add WeChat powcoder](#)
 1. Use MySQL *under window prompt*
 2. Use MySQL's **source** command *within MySQL*

1. Use MySQL under window prompt

- Type in command prompt:
`mysql -u root -p < cs250.sql`

```
c:\xampp\mysql\bin>mysql -u root -p < cs250.sql
Enter password:
c:\xampp\mysql\bin>
```

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Extra: what is the meaning of `<` under prompt:

redirect standard input from a file

What is standard input? *The cursor where you can type!*

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1. Use MySQL under window prompt

- Now, GO into MySQL, check if the database is created.

```
C:\Windows\system32\cmd.exe - mysql -u root -p

D:\xampp\mysql\bin>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 472
Server version: 5.5.27 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql>
```

Before
import

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| cdcol |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
| webauth |
+-----+
```

After
import

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| cdcol |
| cs250 |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
| webauth |
+-----+
```

Database CS250 is created and available.

2. Use MySQL's source command

If Method 1 works, you need not run this.

- Inside MySQL, type: `source <drive\path\filename>`

```
mysql> source cs250.sql
Query OK, 8 rows affected (0.03 sec)

Query OK, 1 row affected (0.00 sec)

Database changed
```

e.g. `source c:\xampp\mysql\bin\cs250.sql`

note: NO quotes, NO semi-colon at the end

note: if `drive\path` is omitted, assume same folder as `mysql`

Before
import

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| cdcol      |
| mysql      |
| performance_schema |
| phpmyadmin |
| test       |
| webauth    |
+-----+
```

After
import

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| cdcol      |
| cs250      |
| mysql      |
| performance_schema |
| phpmyadmin |
| test       |
| webauth    |
+-----+
```

Database CS250 is created and available.

Basic MySQL command

- What is in cs250.sql?

- SQL DDL statements

- To be covered at week4
Lecture 8

```
1  -- reset everything
2  -- drop the cs250 database
3  drop database if exists cs250;
4
5  -- and to create a new one
6  create database if not exists cs250;
7
8  -- use cs250 database
9  use cs250;
10
11 -- create prof table
12 create table prof(
13     pid char(20),
14     name char(20),
15     dept char(20),
16     rank char(20),
17     sal integer,
18     primary key (pid)
19 );
20
21 -- add some data into prof
22 insert into prof values ('p1', 'Adam', 'CS', 'asst', '6000');
23 insert into prof values ('p2', 'Bob', 'EE', 'asso', '8000');
24 insert into prof values ('p3', 'Calvin', 'CS', 'full', '10000');
25 insert into prof values ('p4', 'Dorothy', 'EE', 'asst', '5000');
26 insert into prof values ('p5', 'Emily', 'EE', 'asso', '8500');
27 insert into prof values ('p6', 'Frank', 'CS', 'full', '9000');
```

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Basic MySQL command

- To test SQL statements taught in lecture
- Use cs250 database.
- Type SQL in MySQL,
 - semi-colon

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```
mysql> use cs250;
Database changed
mysql> select * from PROF
-> where rank = 'asst';
+-----+-----+-----+-----+-----+
| pid | name   | dept | rank | sal |
+-----+-----+-----+-----+-----+
| p1  | Adam  | CS   | asst | 6000 |
| p4  | Dorothy | EE   | asst | 5000 |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

PROF				
pid	name	dept	rank	sal
p1	Adam	CS	asst	6000
p2	Bob	EE	asso	8000
p3	Calvin	CS	full	10000
p4	Dorothy	EE	asst	5000
p5	Emily	EE	asso	8500
p6	Frank	CS	full	9000

select *
from PROF
where rank = 'asst'

$\sigma_{\text{rank} = \text{"asst"}}(\text{PROF})$

Copy data from command prompt

```
mysql> <select * from teach> union all <select * from teach>;
+-----+-----+-----+
| pid | cid | year |
+-----+-----+-----+
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

right click
select Mark

```
mysql> <select * from teach> union all <select * from teach>;
+-----+-----+-----+
| pid | cid | year |
+-----+-----+-----+
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

Mark
Copy Enter
Paste
Select All
Scroll
Find...

click and drag
your mouse

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<https://powcoder.com>

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```
mysql> <select * from teach> union all <select * from teach>;
+-----+-----+-----+
| pid | cid | year |
+-----+-----+-----+
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

```
mysql> <select * from teach> union all <select * from teach>;
+-----+-----+-----+
| pid | cid | year |
+-----+-----+-----+
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

```
+-----+-----+-----+
| pid | cid | year |
+-----+-----+-----+
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
| p1  | c1  | 2011 |
| p1  | c2  | 2012 |
| p2  | c2  | 2012 |
+-----+-----+-----+
```

paste anywhere
you like

right click again
to copy

Accessing MySQL

- phpMyAdmin:

<http://localhost/phpmyadmin>

- Click

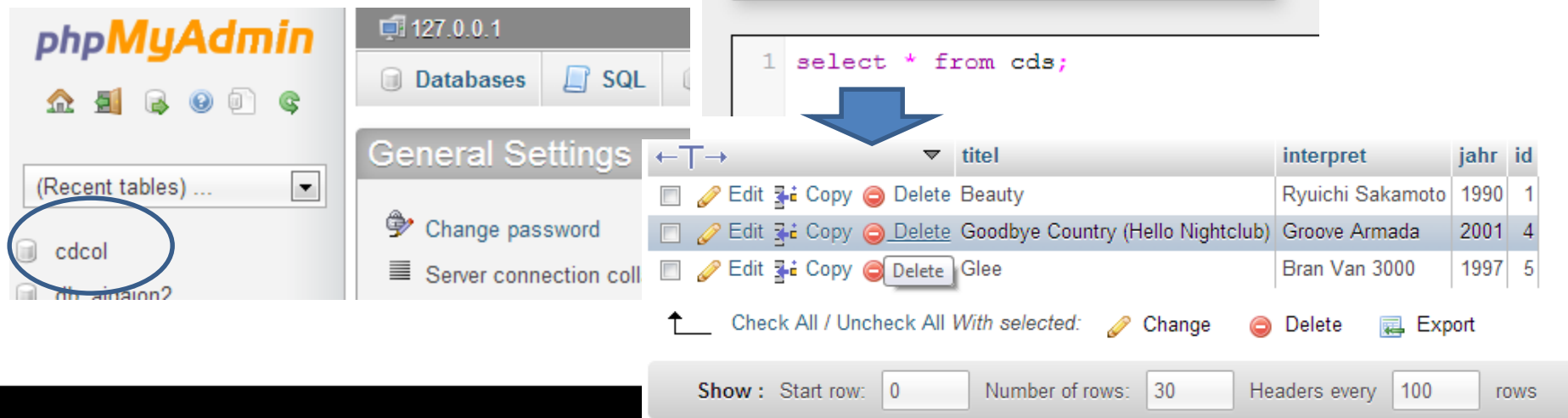
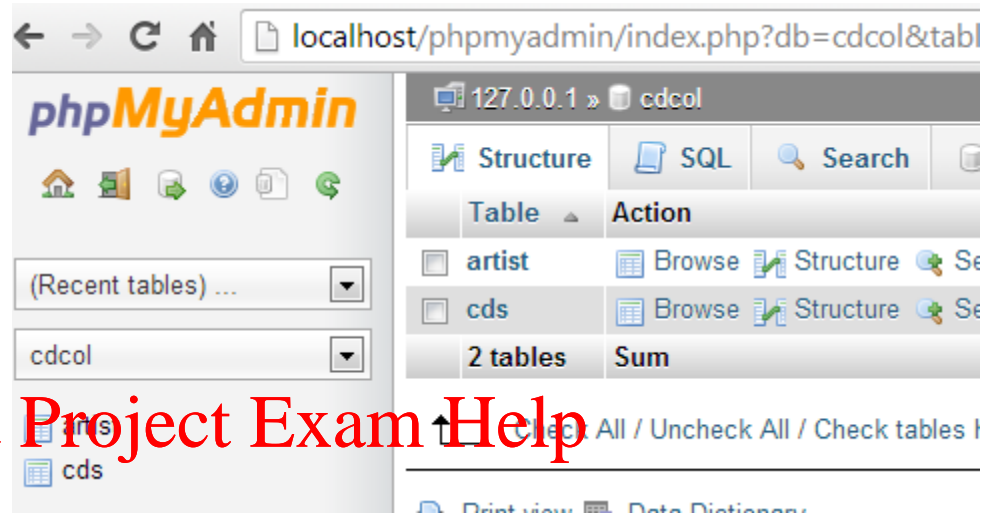
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- cdcol database

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- SQL tab

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- Useful, but you are **warned**:
 - Need to deal with **collation** and language settings
 - UI is **messy** and **not intuitive**
 - Command line is much faster

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- Importantly, for your career & job search:
 - On linux (OpenSource,Free) / unix
 - phpMyAdmin very likely **NOT** available!
 - Often **ONLY** text prompt is available
 - And, know the SQL command is a **MUST!!!**