

# Client-Server Architecture & XAMPP

Gary KL Tam

Department of Computer Science  
Swansea University

# Lab Materials

## ● On Modules > Lab Materials (after wk3)

Week 3

Lab Materials

Lab Materials

LabFAQ.pdf

Lab Materials are a

Self-labs are part of

21

Lecture & Tutorial 3

Discuss T2 Sol

(XAMPP & MySQL)

Ex3.pdf

PA3 available

[Lab1+2] available, required in PA6, PA7

### Lab Materials

#### Overviews

Here is an overview of all the lab materials. There are **three parts**:

**Part 1:** Basic web programming and database knowledge, and the easy setup of XAMPP.

- wk3: XAMPP
- wk4: MySQL
- wk5: PHP

**Part 2:** Set up phase (your tasks): wk3-5

- You will follow instructions to practically set up XAMPP, MySQL and respective PHP examples.
- If you have trouble setting up XAMPP, see **troubleshooting** / you can come to **Optional Labs** (twk5) for help.
- There are three steps: I (XAMPP), II (MySQL) and III (PHP).

**Part 3:** Self-Labs 1-4 for peer assessments (your tasks, available from wk3):

- You will do these self-labs on your own. They are about the use of SQL, and do not require PHP.
- You should **submit to respective PAs (PA6, PA7, PA10)**.
- You should complete them early, esp. in preparation for CW2. Otherwise, you will struggle to complete CW2. You are warned as early as in wk3.

Please refer to the following sessions for respective files and details.

#### Part 1: Basic Web Programming

We will cover/have covered these materials in **tutorial** time (please refer to tutorial recordings if you missed them).

- wk3: XAMPP ( [XAMPP7-Win.pdf](#) ↓ )
- wk4: MySQL ( [MySQL.pdf](#) ↓, [cs250.sql](#) ↓ )
- wk5: PHP ( [PHP.pdf](#) ↓, [example.zip](#) ↓ )

CS-250 only covers the **very basic**, focusing on the **role of SQL** in an **example application**.

Though basic, it often helps students with technical interviews (e.g. summer internship / year in industry / job applications).

e.g., At least two students told me that their interviewers asked them to show their PHP work/experience, and the students showed their CW2 in their job interviews. That's why the idea and my insistence of having PHP in CS-250 => **it is all for our students' benefits**.

If you love Web Programming, then the more advanced module "[CSC348 Web Application Development](#) CS" would be interesting to you. Sean is likely using PHP too.

#### Part 2:

### Part 1: Basic Web Programming

We will cover/have covered these materials in **tutorial** time

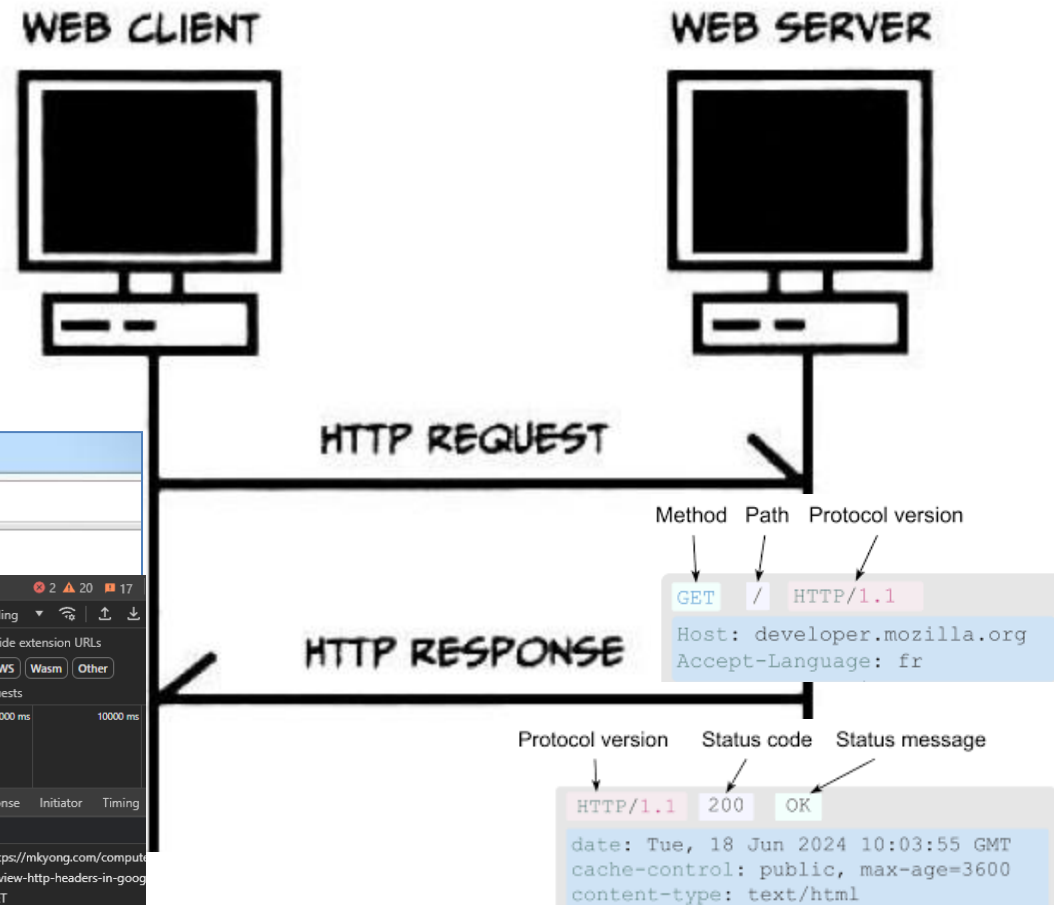
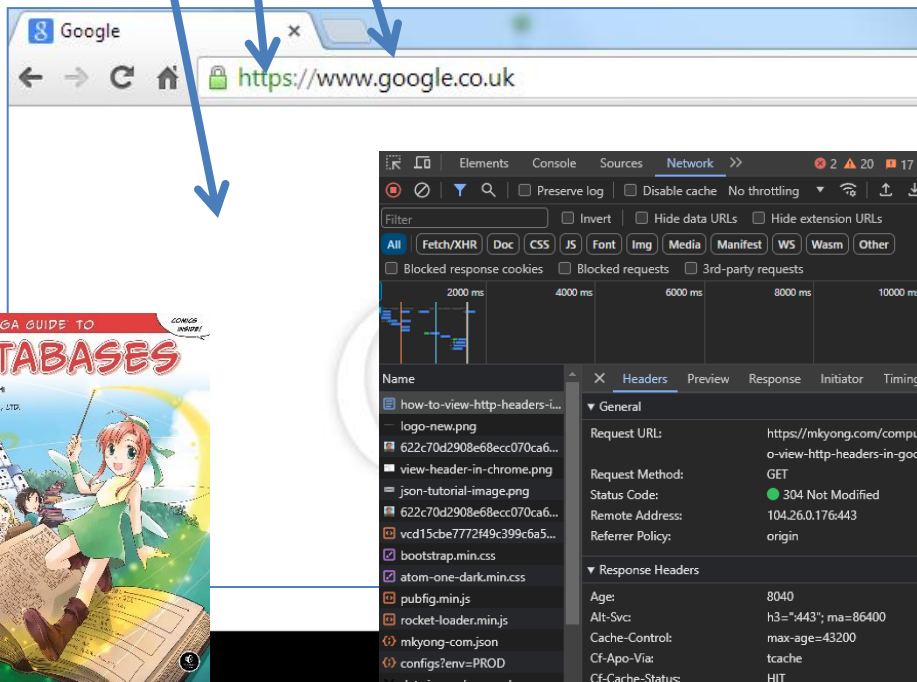
- wk3: XAMPP ( [XAMPP7-Win.pdf](#) ↓ )
- wk4: MySQL ( [MySQL.pdf](#) ↓, [cs250.sql](#) ↓ )
- wk5: PHP ( [PHP.pdf](#) ↓, [example.zip](#) ↓ )

# This Lecture

- Client Server Architecture
- XAMPP
- Security
- No excuses

# Client and Server

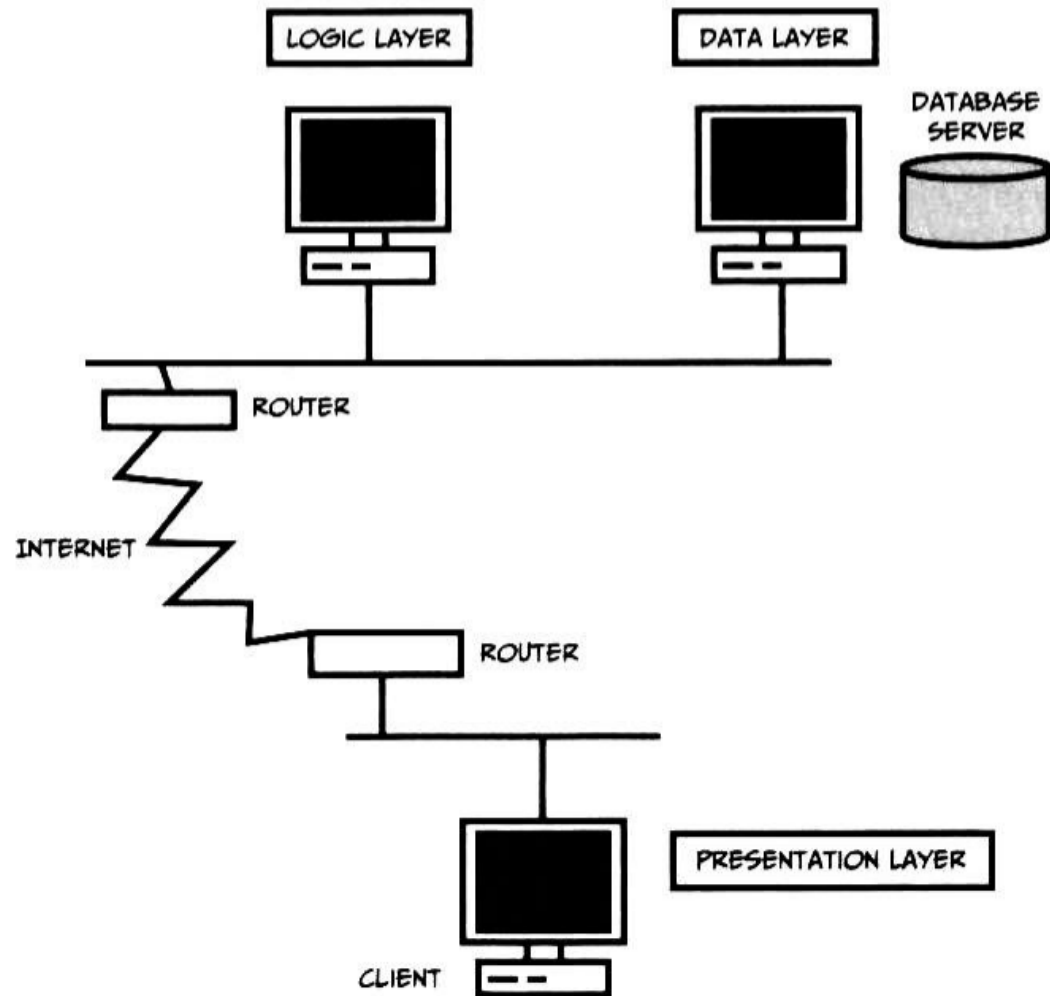
- Browser
- URL
- HTTP protocol
- HTML



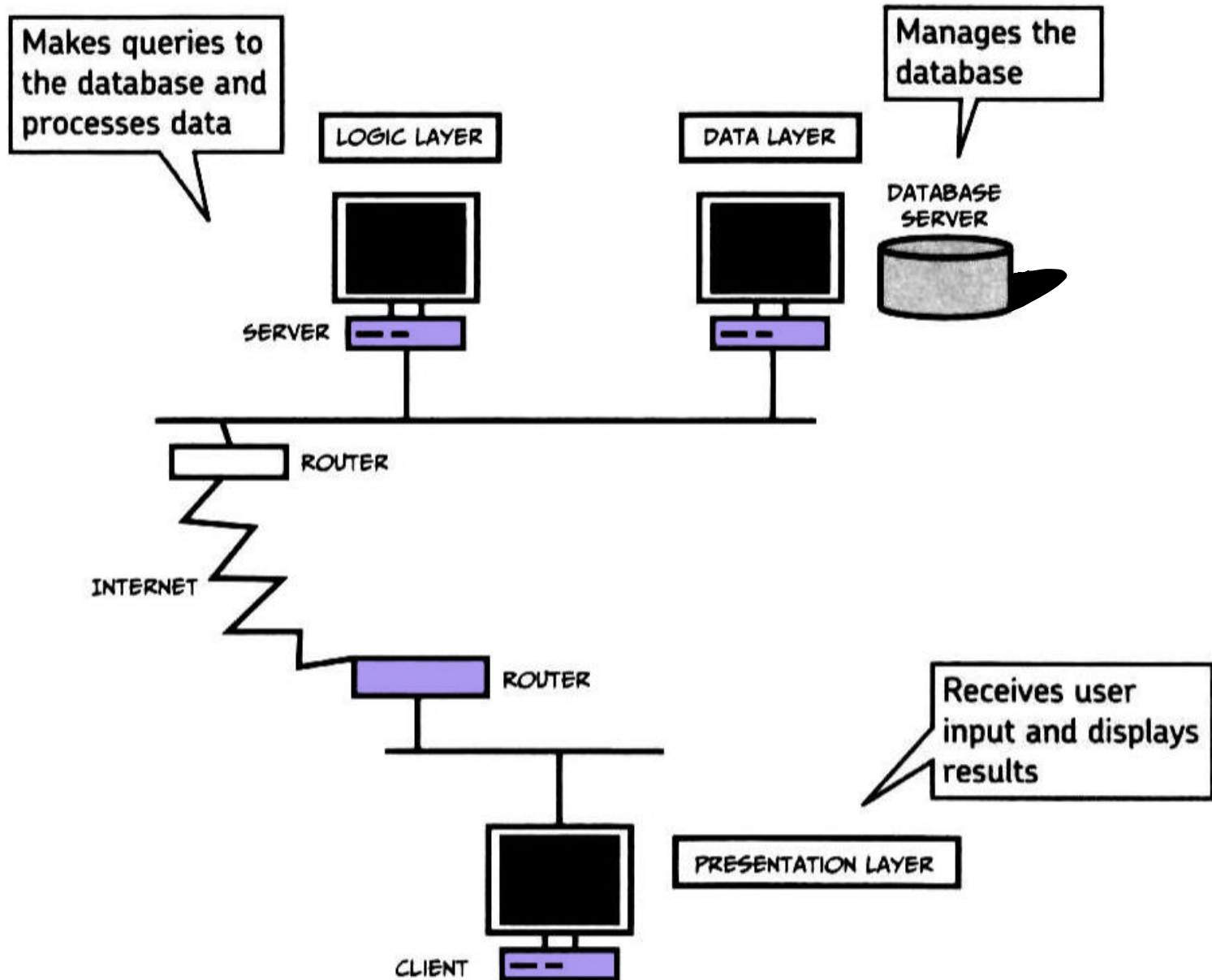
<https://developer.mozilla.org/en-US/docs/Web/HTTP/Overview>

# Client and Server

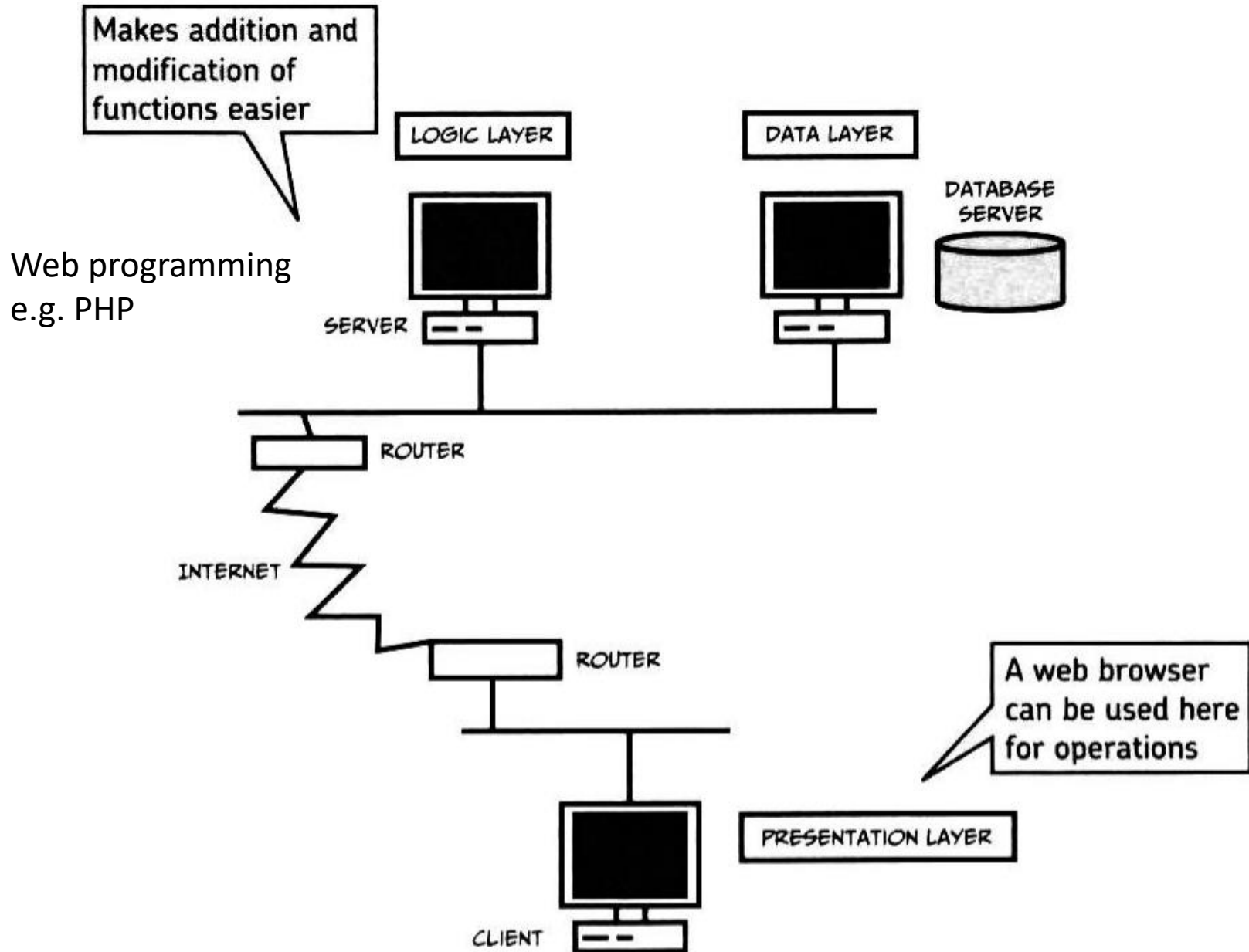
- Three-tier client server
- Server are there waiting to serve



# Client and Server



# Client and Server



# Client and Server

## Web Server

HTTP: HTML, PHP

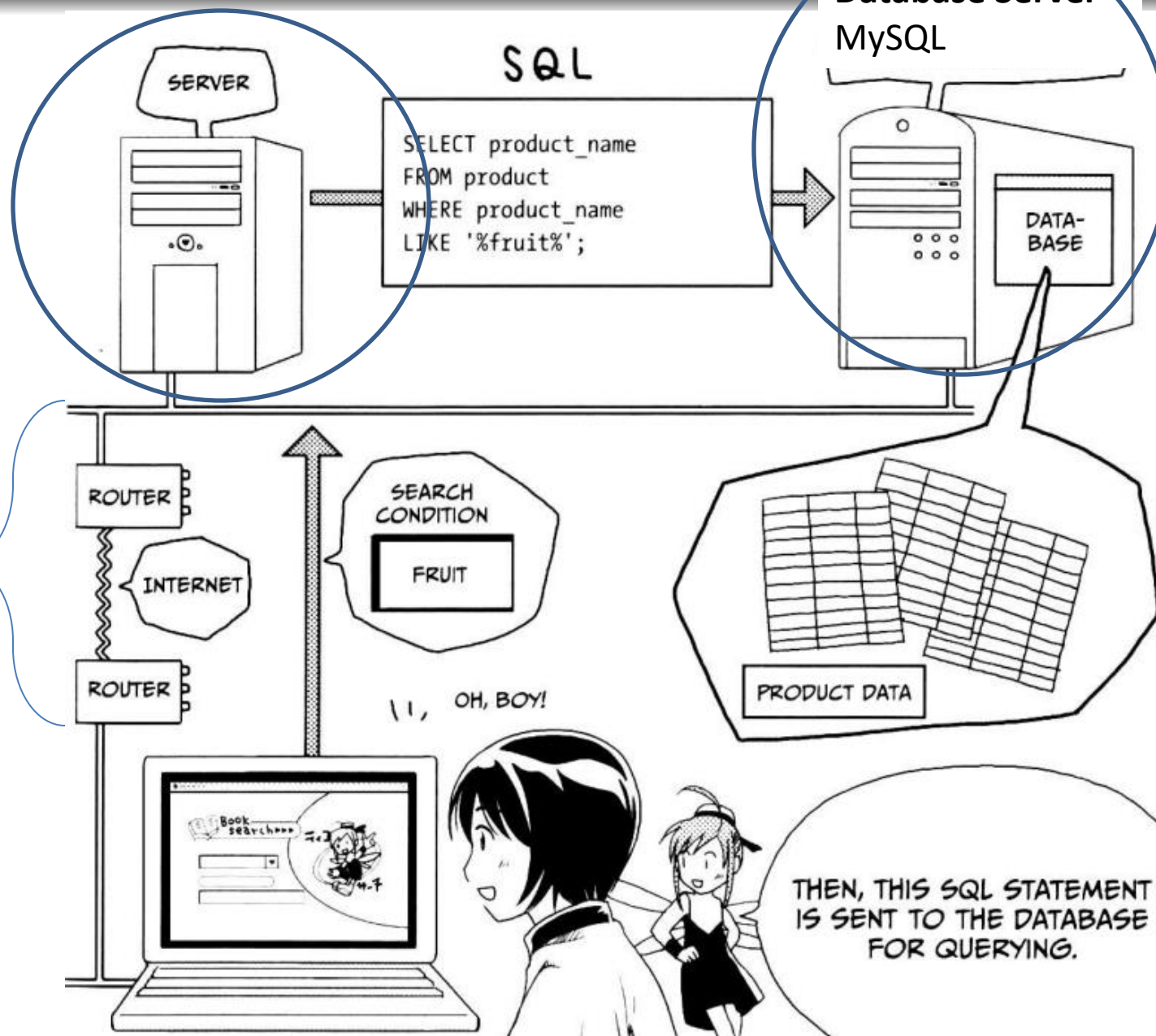
## Database Server MySQL

internet

## Client

Browser

Online bookstore



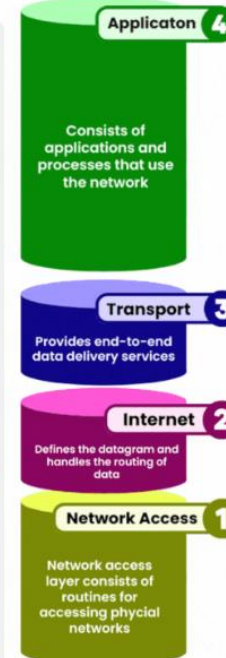
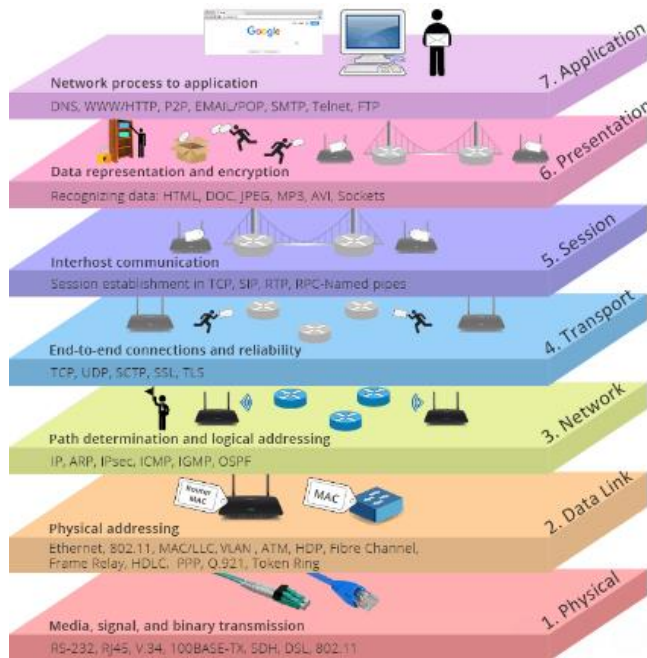


# Internet? This slide is out of syllabus

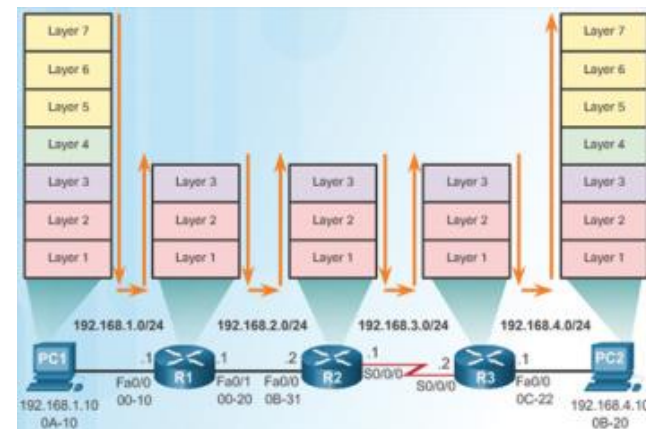
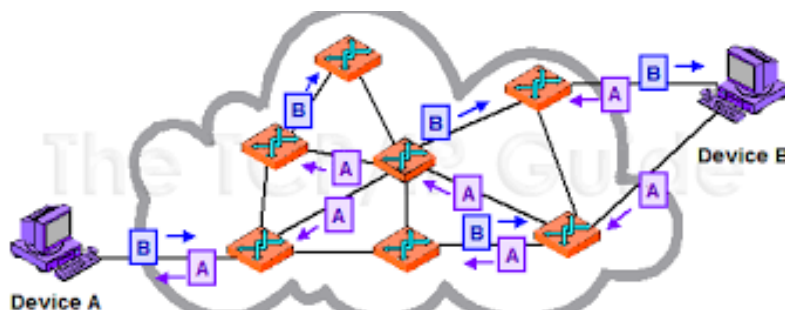
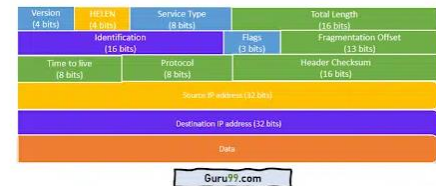
## OSI vs TCP/IP mod

## OSI Model vs TCP/IP Model

## Algorithm



IPv4 Header Components/Fields



# Web server?

- To set up PHP and MySQL at home, you need:
  - A web server e.g. Apache
  - MySQL server
  - PHP 5
- In the old days, setting up webserver is tedious
  - Apache needs to recognise PHP
  - PHP needs to talk to MySQL
- Many many many many config (ini) files to set!  
And no good documentation!

- XAMPP all-in-one. All are installed at the same time, and set up for you.



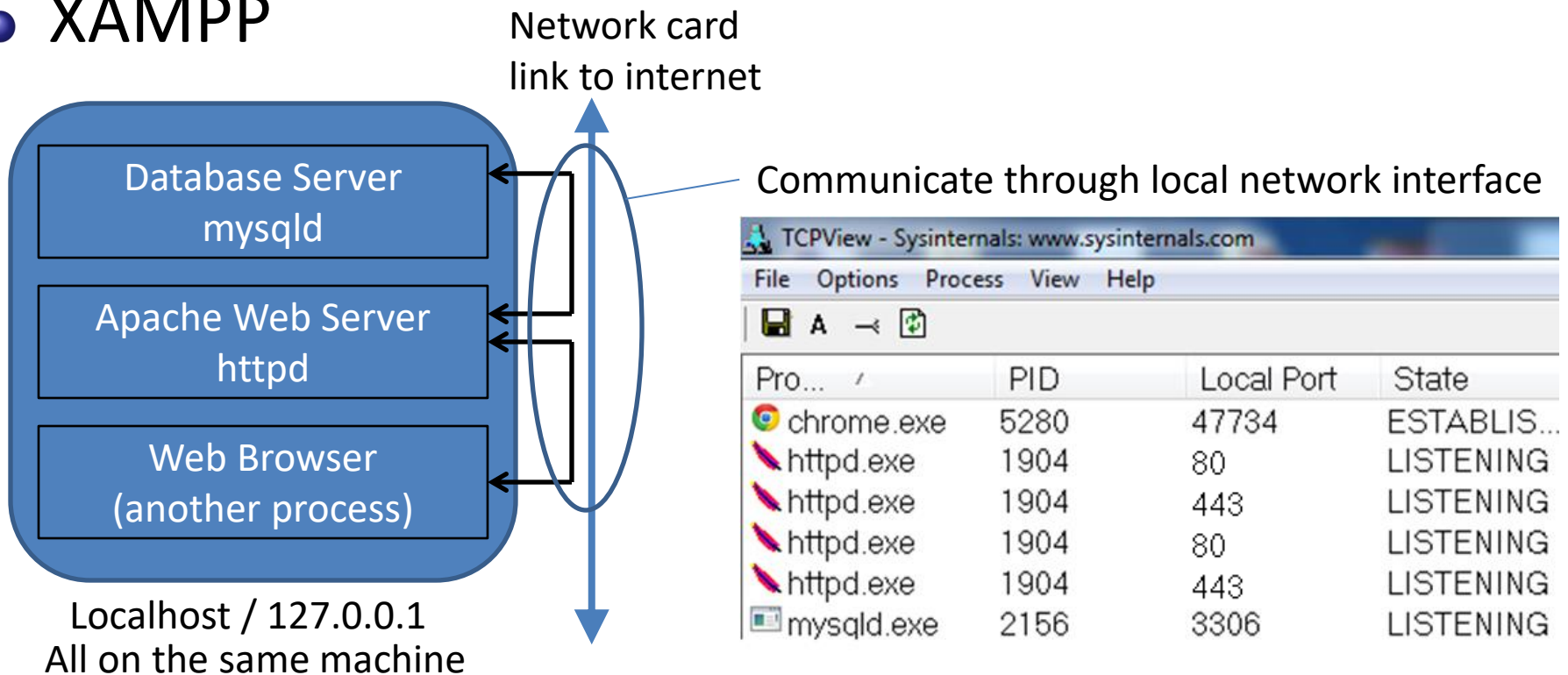
- <http://www.apachefriends.org/en/xampp.html>

Note, it is for development testing. Not for production use.

As a CS student, knowing how to install and use XAMPP is BASIC skills.

# XAMPP & Three-Tier Architecture

## ● XAMPP



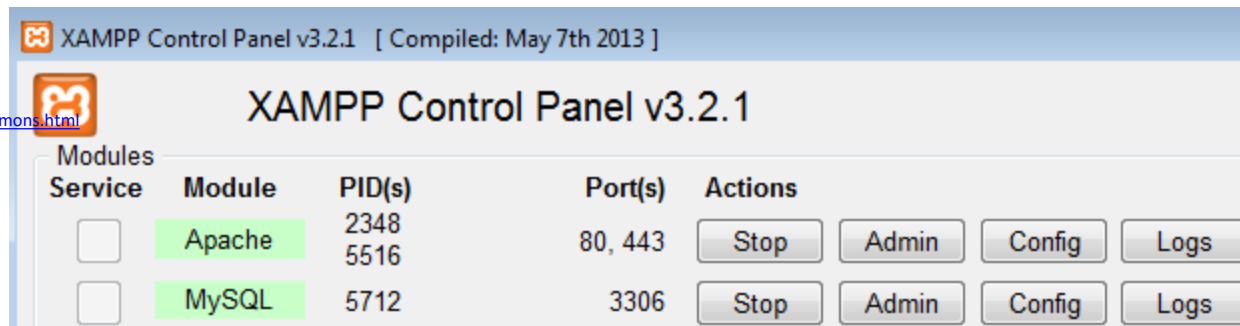
what does “d” mean?

<https://www.techtarget.com/whatis/definition/daemon>

<https://docs.freebsd.org/doc/6.1-RELEASE/usr/share/doc/handbook/basics-daemons.html>

Remember!

Start the process

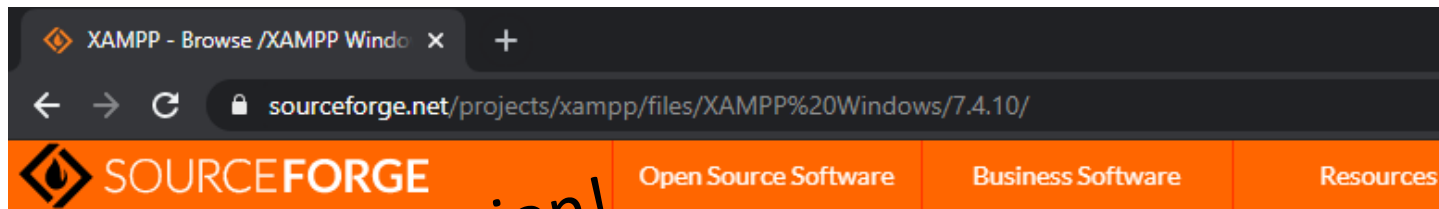


# XAMPP




- Download from here:

In general all version work similarly but  
We tested on 7.4.10 only.

<https://sourceforge.net/projects/xampp/files/XAMPP%20Windows/7.4.10/>



Use the **portable** version!

Name	Modified	Size	Downloads / Week	
Parent folder				
xampp-portable-windows-x64-7.4.10-0-VC15.7z	2020-09-12	85.6 MB	690	
xampp-portable-windows-x64-7.4.10-0-VC15.zip	2020-09-12	195.9 MB	1,578	
xampp-portable-windows-x64-7.4.10-0-VC15-inst...	2020-09-12	142.7 MB	480	
xampp-windows-x64-7.4.10-0-VC15.7z	2020-09-12	105.9 MB	121	
xampp-windows-x64-7.4.10-0-VC15.zip	2020-09-12	224.7 MB	291	
xampp-windows-x64-7.4.10-0-VC15-installer.exe	2020-09-12	163.7 MB	12,593	

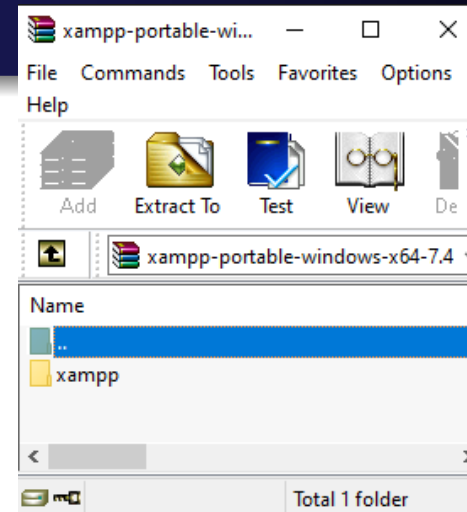


# XAMPP

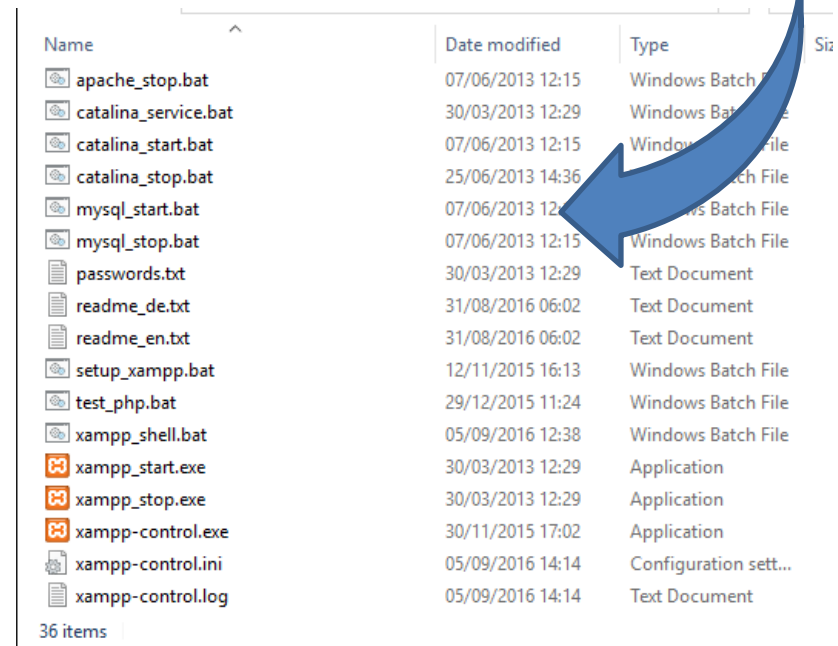
- Extract to a folder on the drive, e.g.
- D:/xampp
- E:/xampp
- G:/xampp
- If you work across multiple machines, use a (fast) USB stick



- Extract to a folder on the stick (e.g. H:/xampp)



decompress

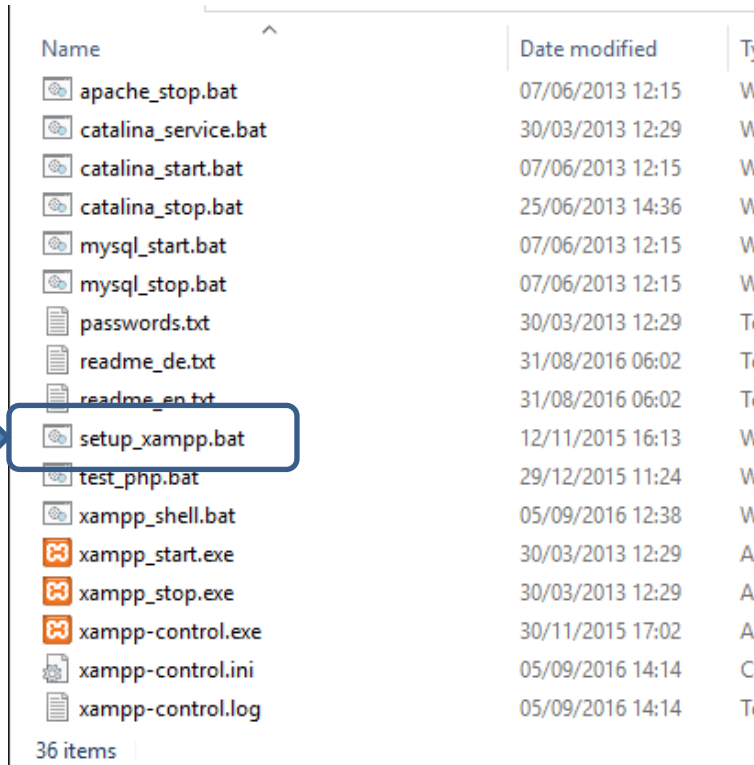




# XAMPP

- \*\*\* Important \*\*\*
- Double click the **setup\_xampp.bat**
- ***Do it whenever you run it on a new machine***

Update the drive letter in  
XAMPP internal scripts



```
C:\Windows\System32\cmd.exe - setup_xampp.bat
Microsoft Windows [Version 10.0.19041.508]
(c) 2020 Microsoft Corporation. All rights reserved.

G:\xampp>setup_xampp.bat

#####
#
#               XAMPP USB Stick Installation
#
#####

#####
# ApacheFriends XAMPP setup win32 Version
#-----#
# Copyright (c) 2002-2020 ApacheFriends 7.4.10
#
#-----#
# Authors: Kay Vogelgesang <kvo@apachefriends.org>
#           Carsten Wiedmann <webmaster@wiedmann-online.de>
#####

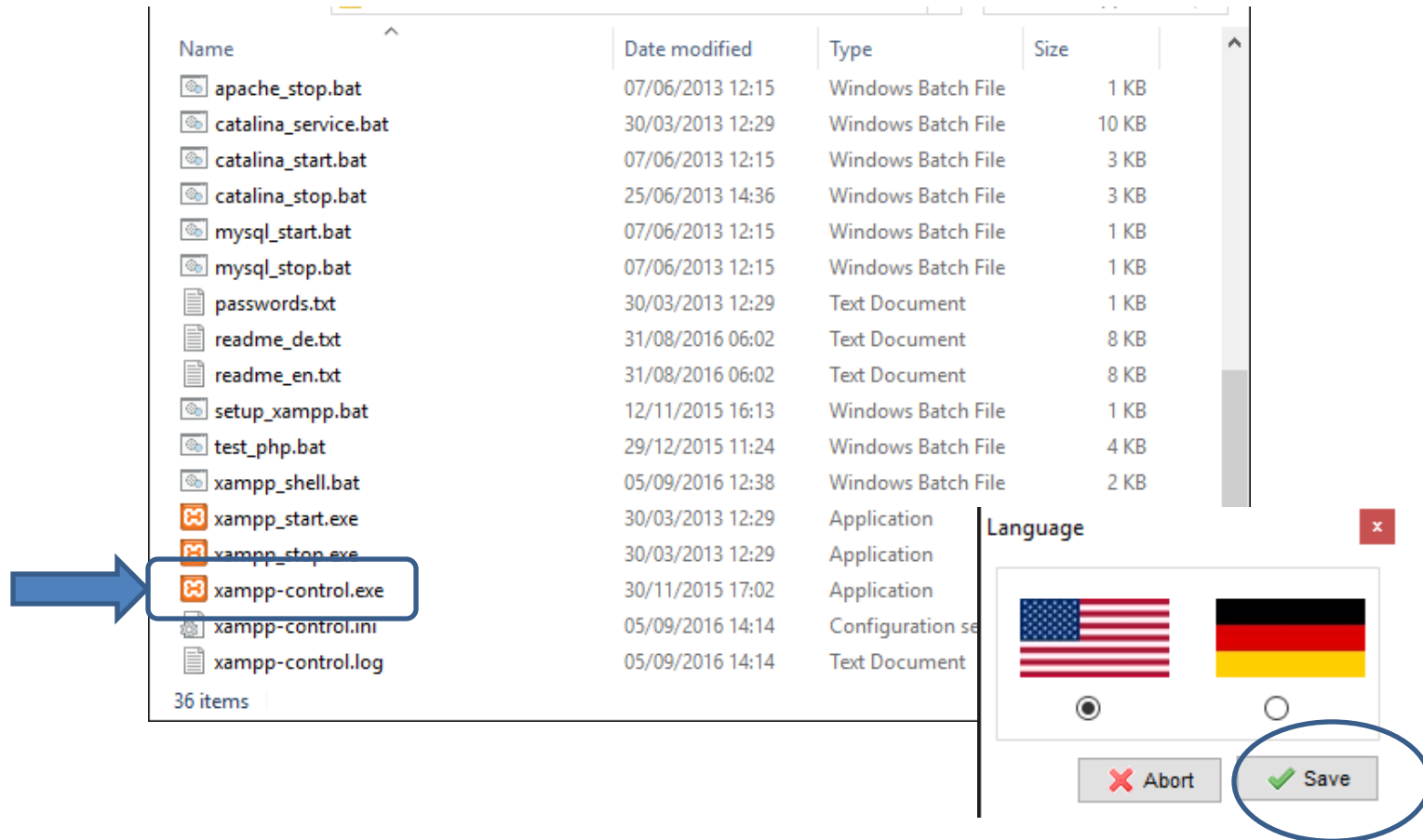
Configure XAMPP with awk for 'Windows_NT'
Updating configuration files ... please wait ... DONE!

##### Have fun with ApacheFriends XAMPP! #####

Press any key to continue . . .
```

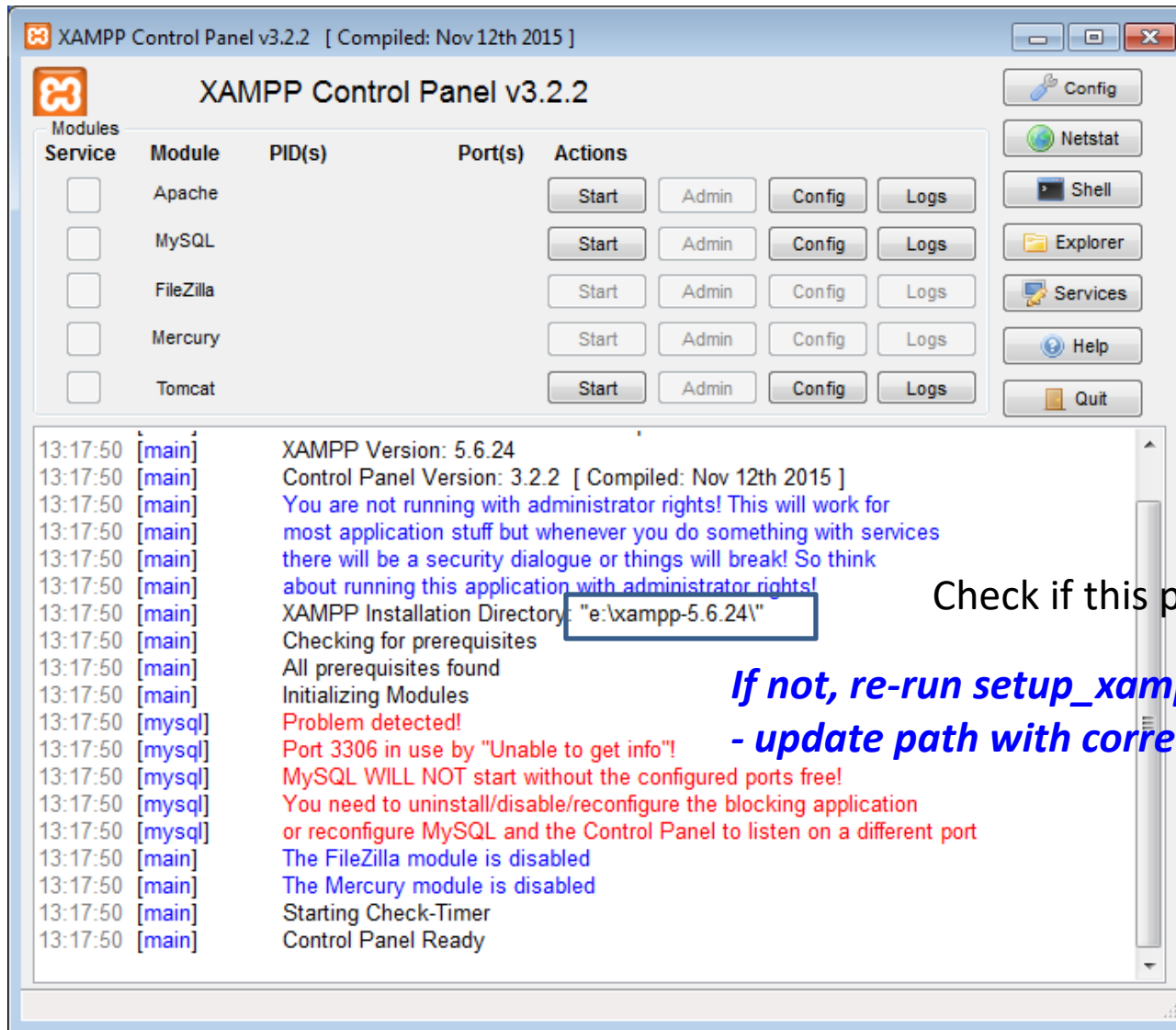
# XAMPP

- Then double click to run *xampp-control.exe*





- XAMPP Control Panel



# XAMPP

XAMPP Control Panel v3.2.2 [ Compiled: Nov 12th 2015 ]

**XAMPP Control Panel v3.2.2**

Modules

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache			Start Admin Config Logs
<input type="checkbox"/>	MySQL			Start Admin Config Logs
<input type="checkbox"/>	FileZilla			Start Admin Config Logs
<input type="checkbox"/>	Mercury			Start Admin Config Logs
<input type="checkbox"/>	Tomcat			Start Admin Config Logs

13:17:50 [main] XAMPP Version: 5.6.24  
13:17:50 [main] Control Panel Version: 3.2.2 [ Compiled: Nov 12th 2015 ]  
13:17:50 [main] You are not running with administrator rights! This most application stuff but whenever you do something there will be a security dialogue or things will break about running this application with administrator  
13:17:50 [main] XAMPP Installation Directory: "e:\xampp-5.6.24\  
13:17:50 [main] Checking for prerequisites  
13:17:50 [main] All prerequisites found  
13:17:50 [main] Initializing Modules  
13:17:50 [mysql] Problem detected!  
13:17:50 [mysql] Port 3306 in use by "Unable to get info!"  
13:17:50 [mysql] MySQL WILL NOT start without the configured p  
13:17:50 [mysql] You need to uninstall/disable/reconfigure the blo  
13:17:50 [mysql] or reconfigure MySQL and the Control Panel to li  
13:17:50 [main] The FileZilla module is disabled  
13:17:50 [main] The Mercury module is disabled  
13:17:50 [main] Starting Check-Timer  
13:17:50 [main] Control Panel Ready

XAMPP Control Panel v3.2.2 [ Compiled: Nov 12th 2015 ]

**XAMPP Control Panel v3.2.2**

Modules

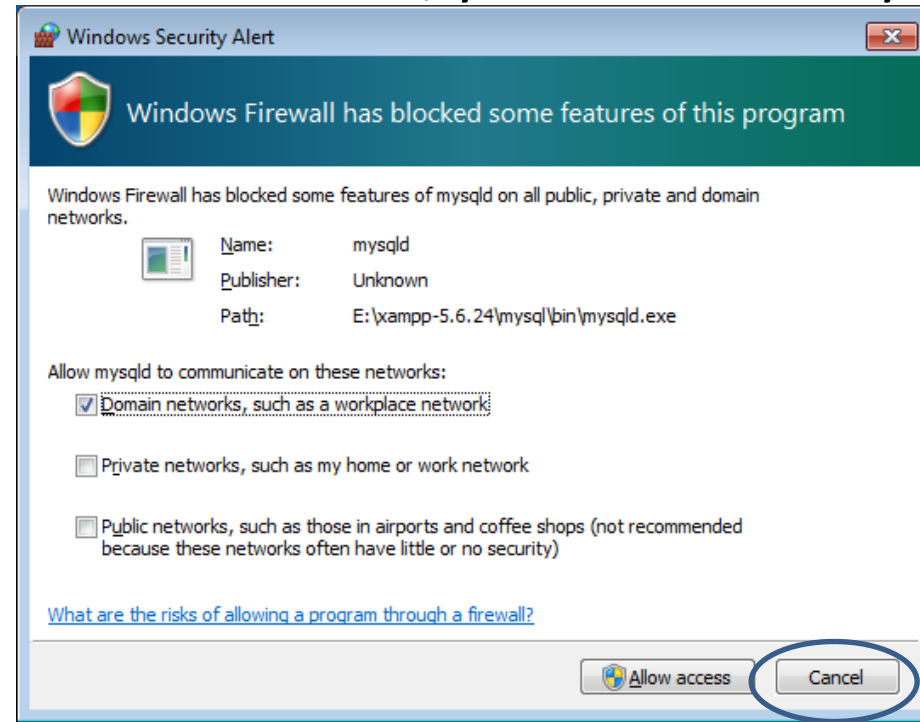
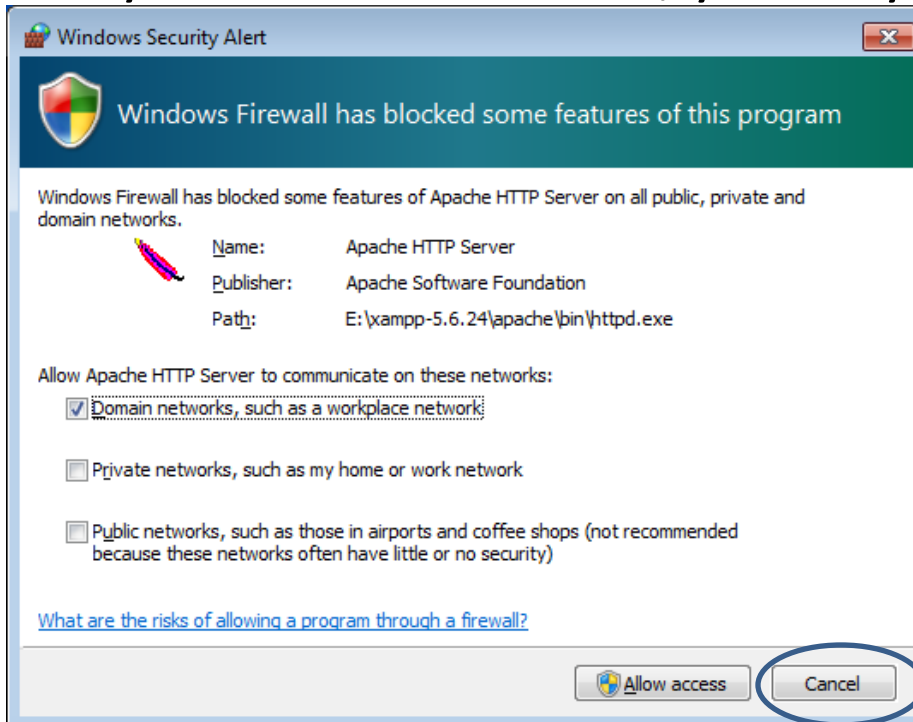
Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache	708 4276	80, 443	Stop Admin Config Logs
<input type="checkbox"/>	MySQL	6832	3306	Stop Admin Config Logs
<input type="checkbox"/>	FileZilla			Start Admin Config Logs
<input type="checkbox"/>	Mercury			Start Admin Config Logs
<input type="checkbox"/>	Tomcat			Start Admin Config Logs

13:09:05 [main] Initializing Control Panel  
13:09:05 [main] Windows Version: Windows 7 Enterprise SP1 64-bit  
13:09:05 [main] XAMPP Version: 5.6.24  
13:09:05 [main] Control Panel Version: 3.2.2 [ Compiled: Nov 12th 2015 ]  
13:09:05 [main] You are not running with administrator rights! This will work for most application stuff but whenever you do something with services there will be a security dialogue or things will break! So think about running this application with administrator rights!  
13:09:05 [main] XAMPP Installation Directory: "e:\xampp-5.6.24\  
13:09:05 [main] Checking for prerequisites  
13:09:06 [main] All prerequisites found  
13:09:06 [main] Initializing Modules  
13:09:06 [mysql] XAMPP MySQL is already running on port 3306  
13:09:06 [main] The FileZilla module is disabled  
13:09:06 [main] The Mercury module is disabled  
13:09:06 [main] Starting Check-Timer  
13:09:06 [main] Control Panel Ready  
13:09:44 [Apache] Attempting to start Apache app...  
13:09:44 [Apache] Status change detected: running

# XAMPP - Troubleshoot

Firewall alert! No worry.

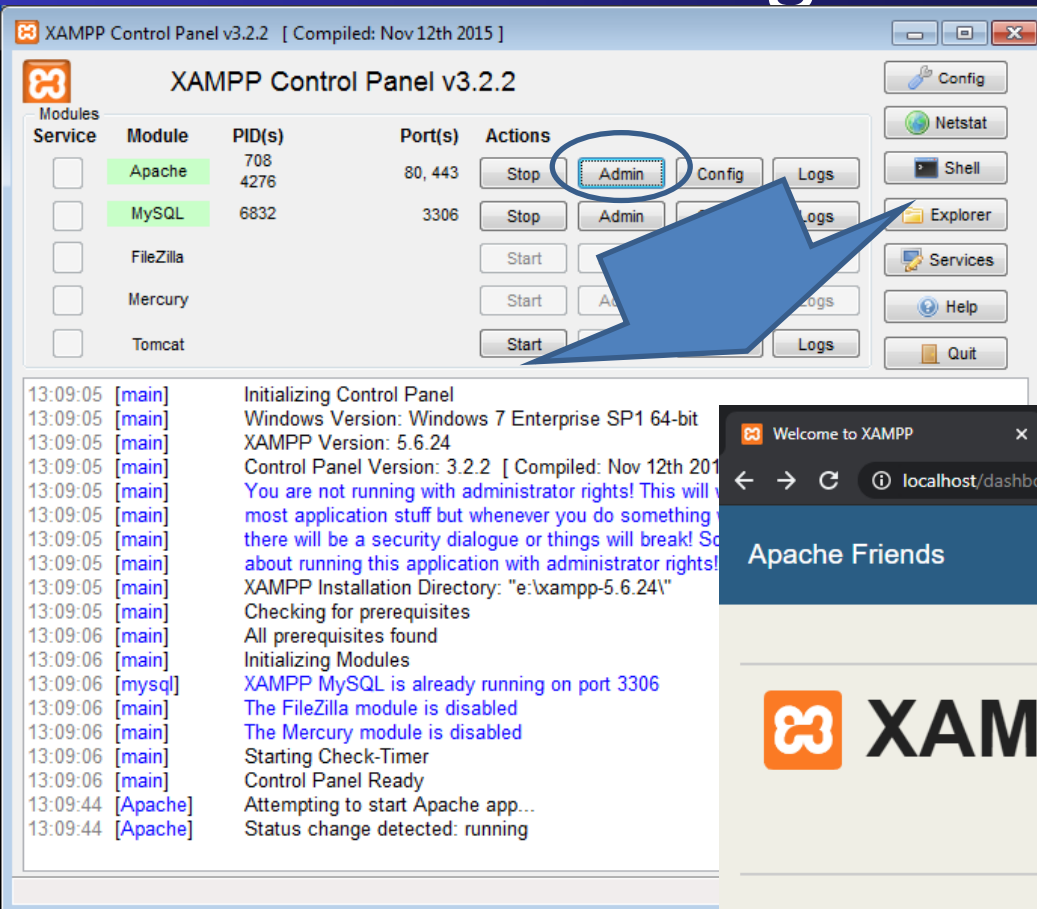
If you do not see these, you may not have firewall, you should worry!



In Lab, click “**Cancel**” => You will not have permission to do anything.  
At home, for highest security, click “**Cancel**” too.

If you want other machines in your home network to discover XAMPP server, choose “**private only**”.

# XAMPP - Testing

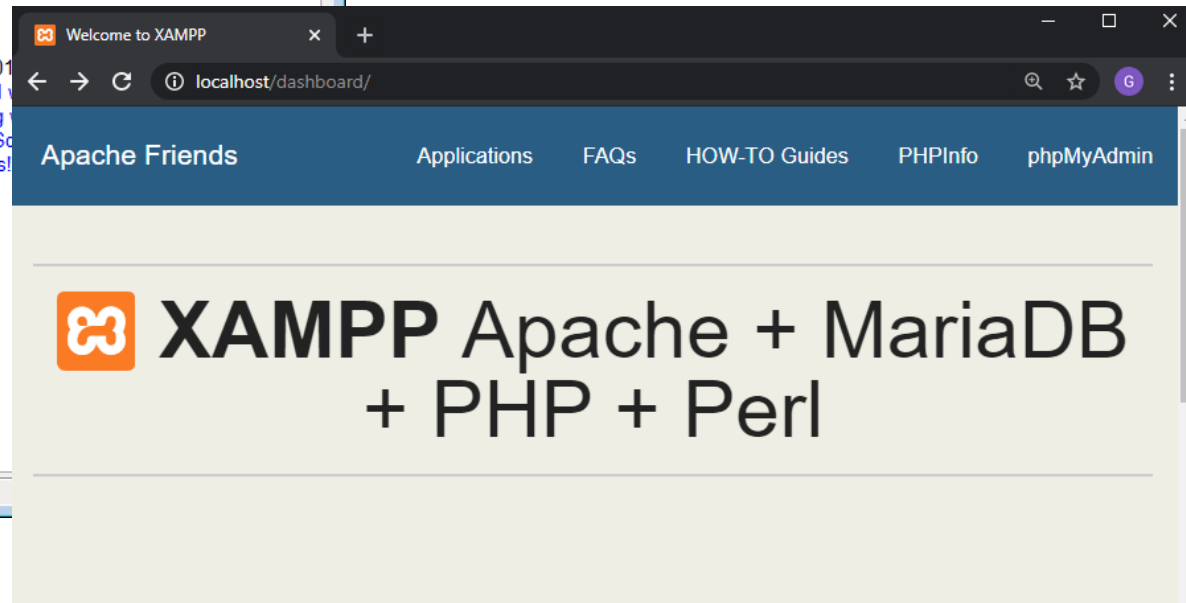


XAMPP Control Panel v3.2.2 [ Compiled: Nov 12th 2015 ]

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache	708 4276	80, 443	Stop Admin Config Logs
<input type="checkbox"/>	MySQL	6832	3306	Stop Admin Config Logs
<input type="checkbox"/>	FileZilla			Start
<input type="checkbox"/>	Mercury			Start Admin Config Logs
<input type="checkbox"/>	Tomcat			Start Admin Config Logs

13:09:05 [main] Initializing Control Panel  
13:09:05 [main] Windows Version: Windows 7 Enterprise SP1 64-bit  
13:09:05 [main] XAMPP Version: 5.6.24  
13:09:05 [main] Control Panel Version: 3.2.2 [ Compiled: Nov 12th 2015 ]  
13:09:05 [main] You are not running with administrator rights! This will work for most application stuff but whenever you do something like installing or updating there will be a security dialogue or things will break! So please run this application with administrator rights!  
13:09:05 [main] XAMPP Installation Directory: "e:\xampp-5.6.24\  
13:09:05 [main] Checking for prerequisites  
13:09:06 [main] All prerequisites found  
13:09:06 [main] Initializing Modules  
13:09:06 [mysql] XAMPP MySQL is already running on port 3306  
13:09:06 [main] The FileZilla module is disabled  
13:09:06 [main] The Mercury module is disabled  
13:09:06 [main] Starting Check-Timer  
13:09:06 [main] Control Panel Ready  
13:09:44 [Apache] Attempting to start Apache app...  
13:09:44 [Apache] Status change detected: running

Or type in browser:  
<http://localhost>



Welcome to XAMPP

localhost/dashboard/

Apache Friends Applications FAQs HOW-TO Guides PHPInfo phpMyAdmin

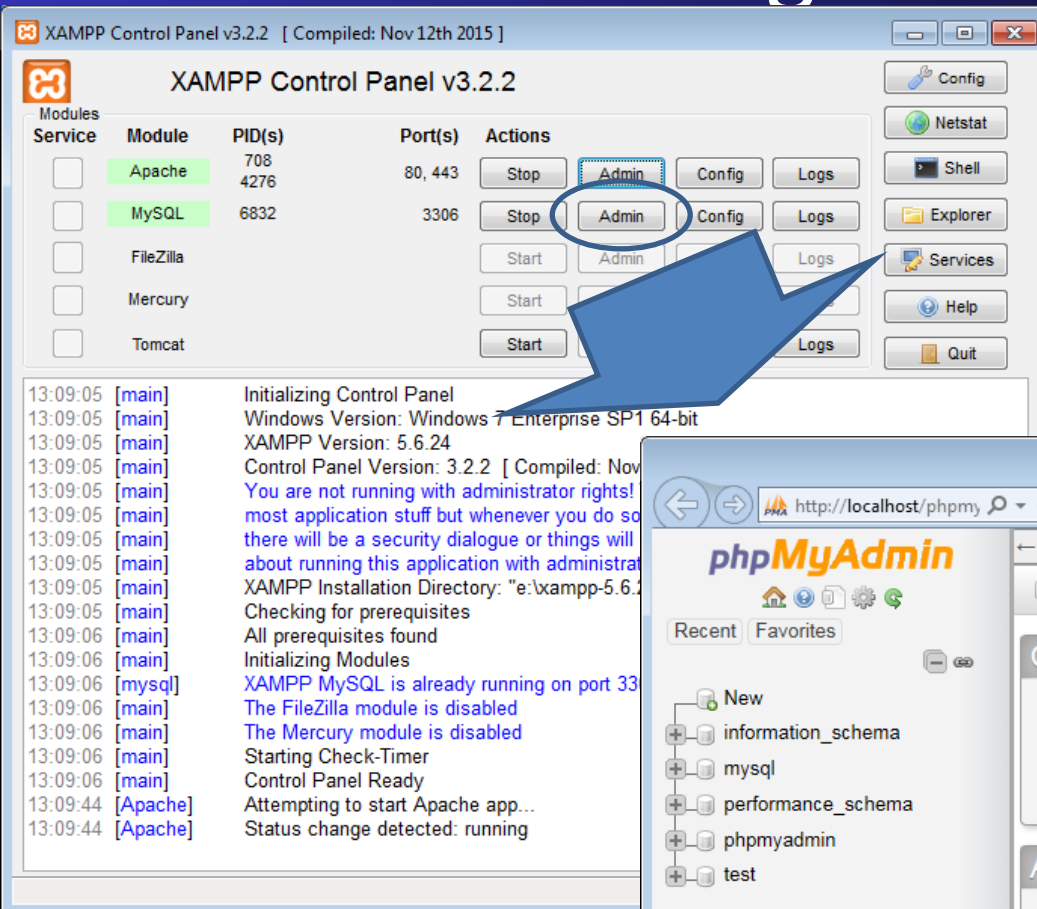
**XAMPP** Apache + MariaDB  
+ PHP + Perl

Your webserver is up  
and running.

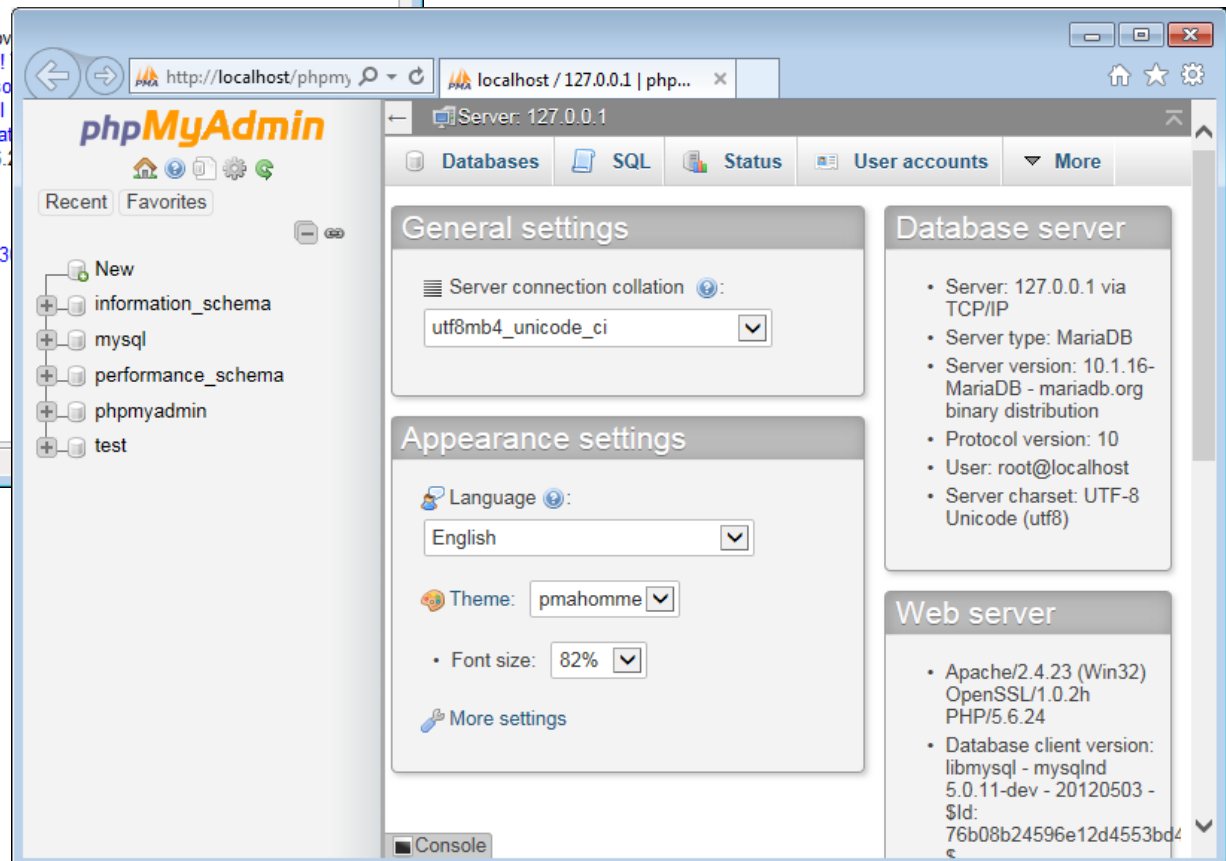
## Welcome to XAMPP for Windows 7.4.10

You have successfully installed XAMPP on this system! Now you can start using Apache, MariaDB, PHP and other components. You can find more info in the [FAQs](#) section or check the [HOW-TO Guides](#) for getting started with PHP applications.

# XAMPP - Testing

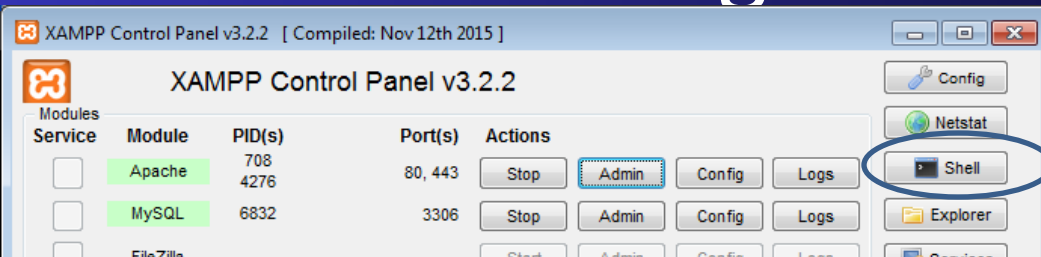


Or type in browser:  
<http://localhost/phpmyadmin>

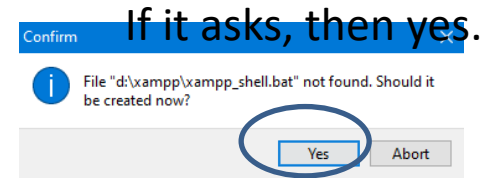


Your mysql server and  
PHP scripting are  
up and running

# XAMPP-Testing



To use it, click "Shell"



Alternatively, you can type this:  
xampp\_shell.bat in cmd

MySQL is ready for use  
mysql client locates at:  
xampp/mysql/bin/mysql.exe

Then type:  
cd mysql  
cd bin  
mysql -u root



Inside MySQL type:  
show databases;

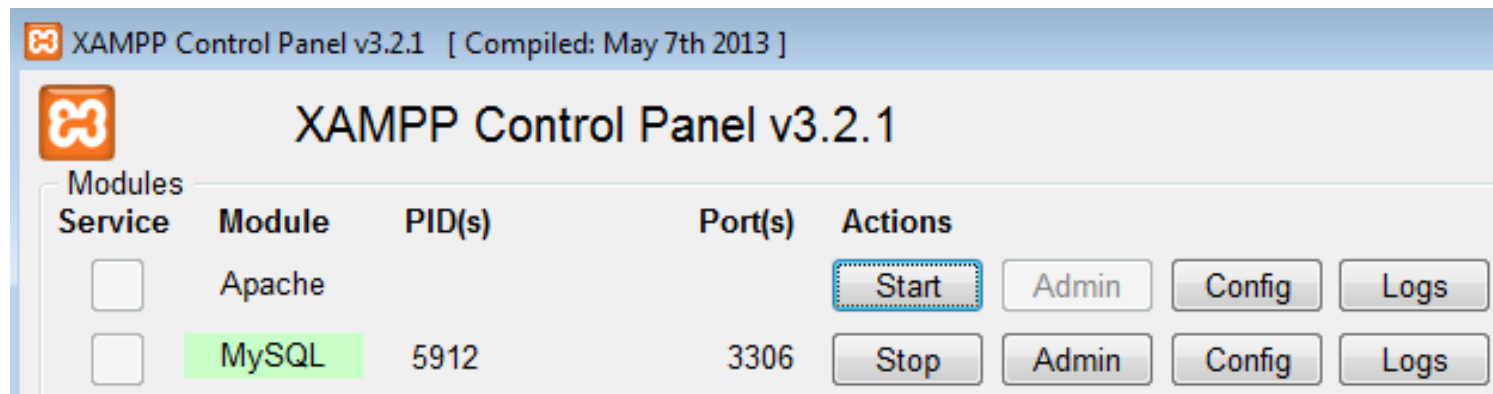


```
Gary@USER-PC g:\xampp
# cd mysql
13:09:05 [main] Gary@USER-PC g:\xampp\mysql
13:09:05 [main] # cd bin
13:09:05 [main] Gary@USER-PC g:\xampp\mysql\bin
13:09:05 [main] # mysql -u root
13:09:05 [main] Welcome to the MariaDB monitor.  Commands end with ; or \g.
13:09:05 [main] Your MariaDB connection id is 35
13:09:06 [main] Server version: 10.4.14-MariaDB mariadb.org binary distribution
13:09:06 [main] Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
13:09:06 [main] Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
13:09:44 [main] MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
+-----+
5 rows in set (0.000 sec)

MariaDB [(none)]> quit
Bye
Gary@USER-PC g:\xampp\mysql\bin
#
```

# MySQL

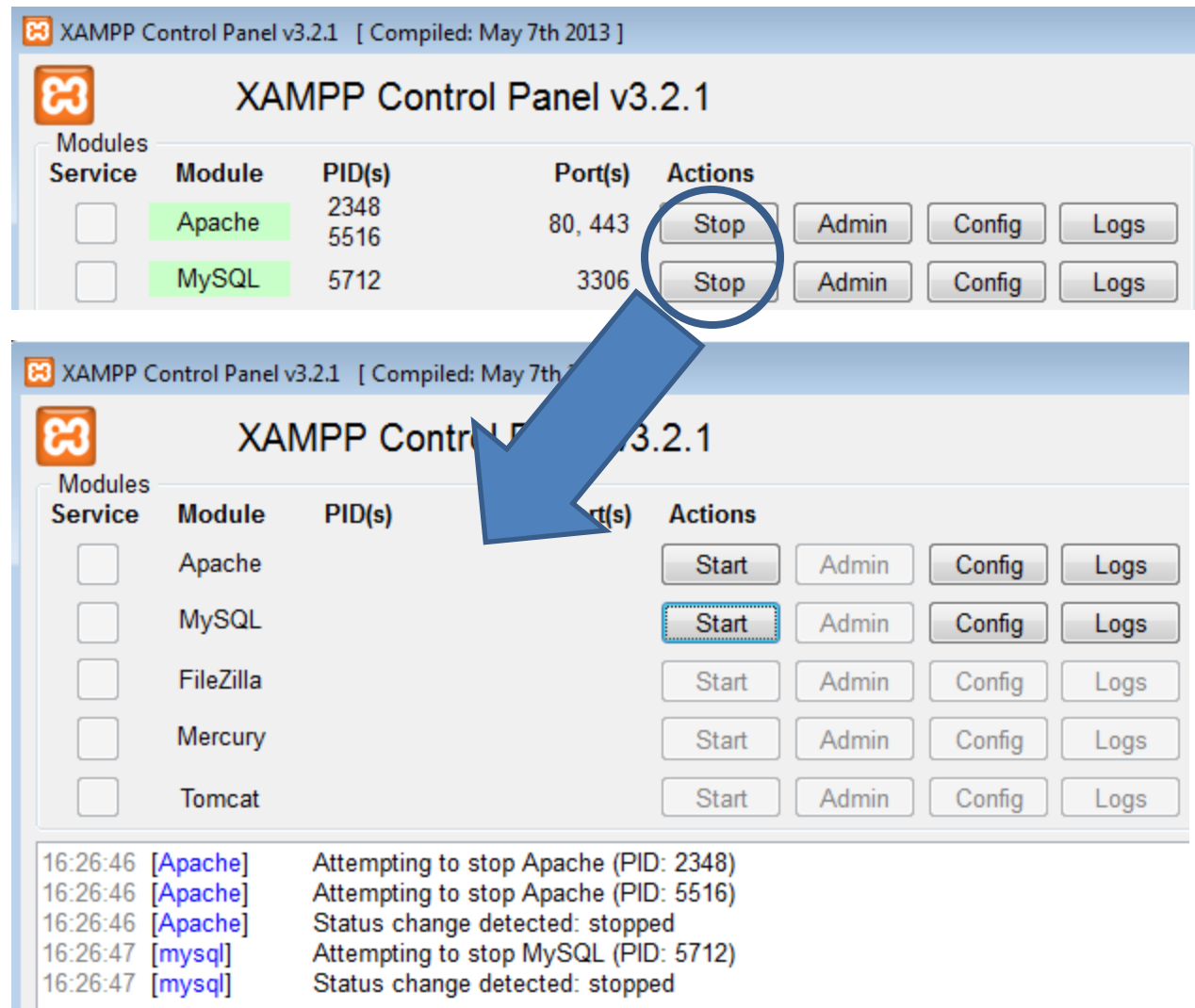
- If you only need MySQL
- Start only MySQL:





# XAMPP

- Important!!! Switch off after use!!!



XAMPP Control Panel v3.2.1 [ Compiled: May 7th 2013 ]

**XAMPP Control Panel v3.2.1**

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache	2348 5516	80, 443	<b>Stop</b> Admin Config Logs
<input type="checkbox"/>	MySQL	5712	3306	<b>Stop</b> Admin Config Logs

**XAMPP Control Panel v3.2.1**

Service	Module	PID(s)	Port(s)	Actions
<input type="checkbox"/>	Apache			Start Admin Config Logs
<input type="checkbox"/>	MySQL			<b>Start</b> Admin Config Logs
<input type="checkbox"/>	FileZilla			Start Admin Config Logs
<input type="checkbox"/>	Mercury			Start Admin Config Logs
<input type="checkbox"/>	Tomcat			Start Admin Config Logs

16:26:46 [Apache] Attempting to stop Apache (PID: 2348)  
16:26:46 [Apache] Attempting to stop Apache (PID: 5516)  
16:26:46 [Apache] Status change detected: stopped  
16:26:47 [mysql] Attempting to stop MySQL (PID: 5712)  
16:26:47 [mysql] Status change detected: stopped

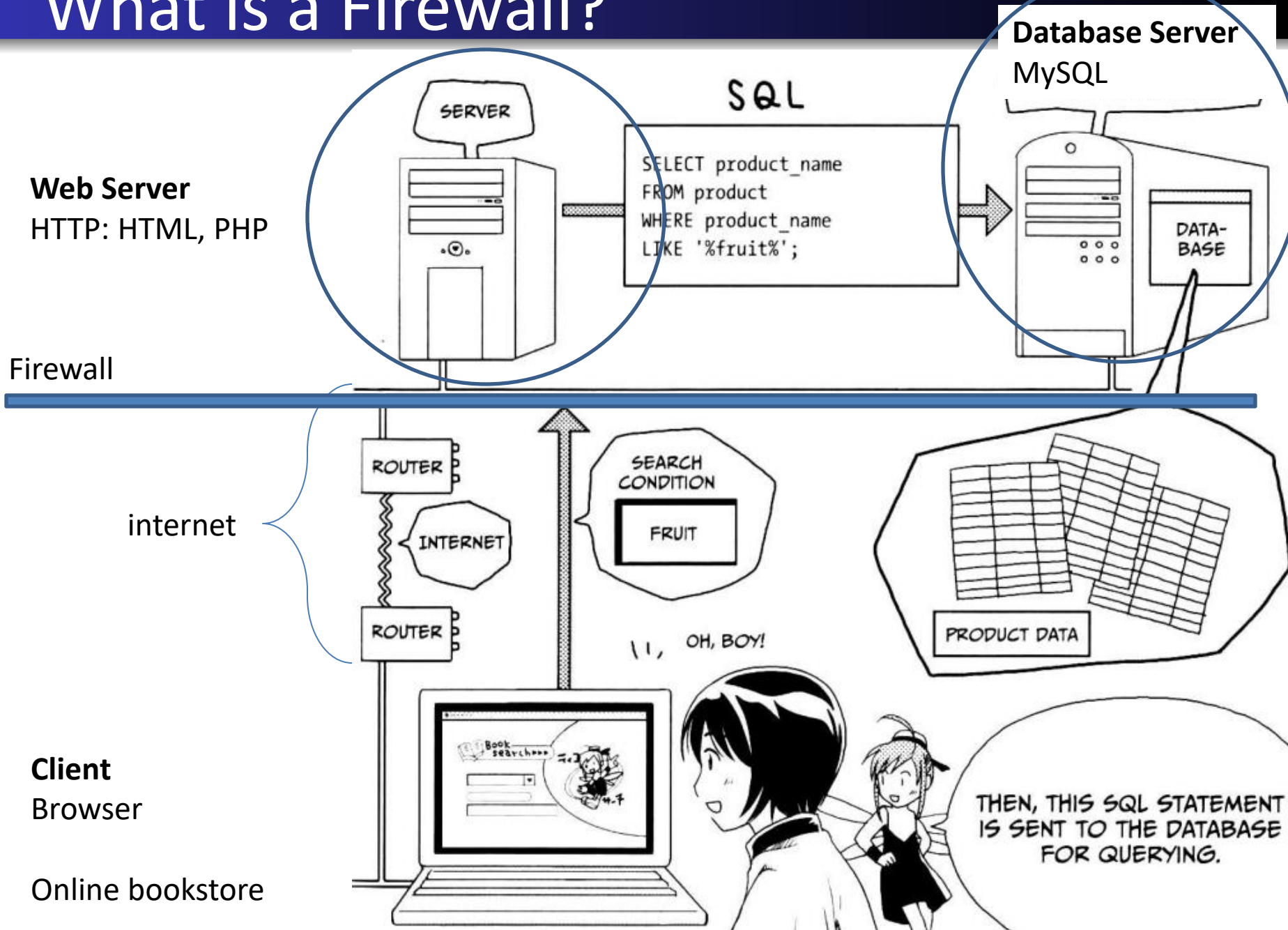


# This is for real!!!

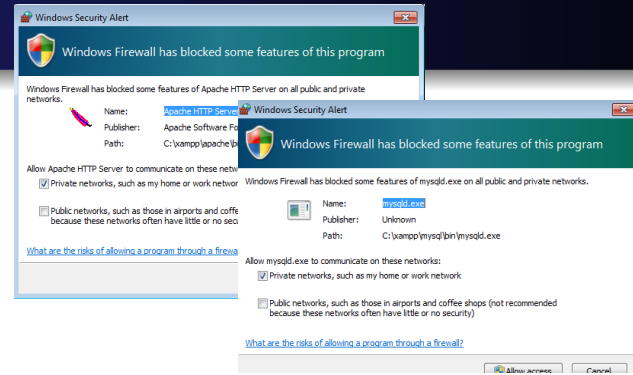
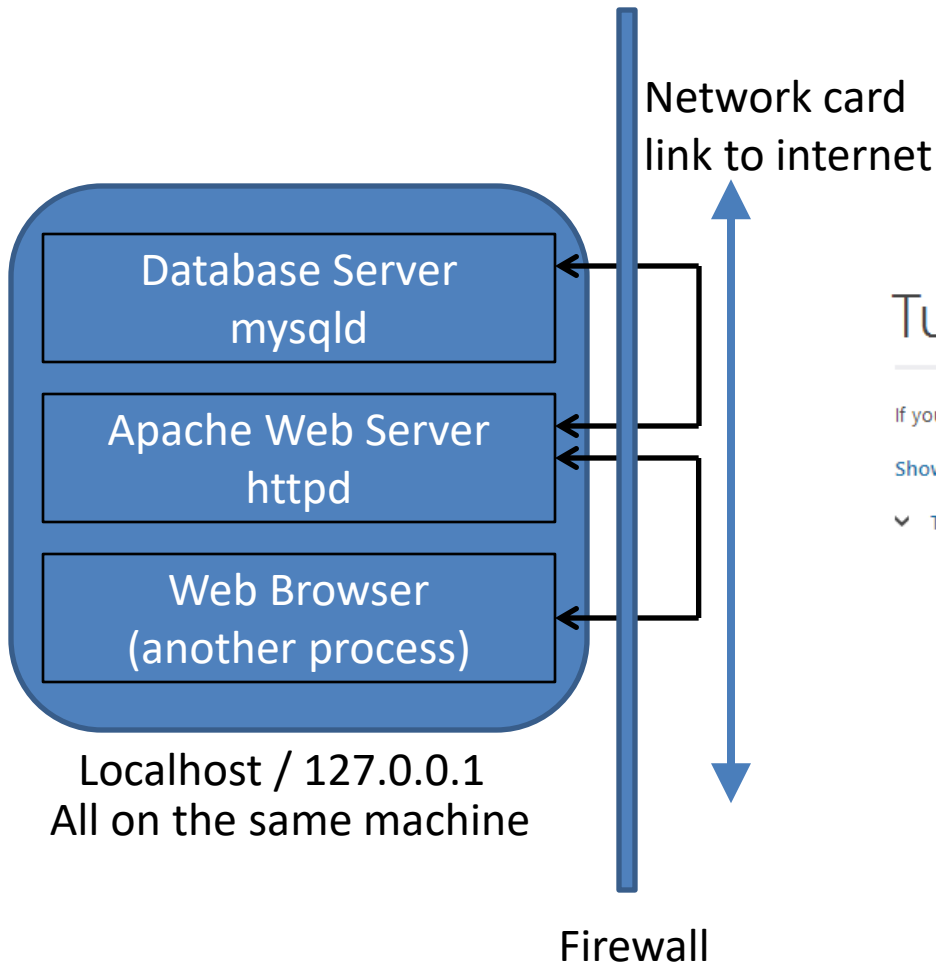
- Some machines in campus are exposed to outside world.
  - Good: allow remote access from outside campus (e.g. home).
  - Bad: machines are exposed to hacker attack.
- Think your home. Got protection?
- Hackers are there 24/7 all year round.
- Hackers try different methods to gain access to your machine.

- XAMPP is mainly for developmental purpose.
  - There are security issues.
- Good practice:
  - Use passwords
  - have antivirus, firewall installed!
    - and know how to use them!
  - use TCPview to check who else connect to your server
  - do not start unnecessary servers (like ftp server)
  - google search: “Best Practices for Keeping Your Home Network Secure”

# What is a Firewall?



# Firewall / Antivirus




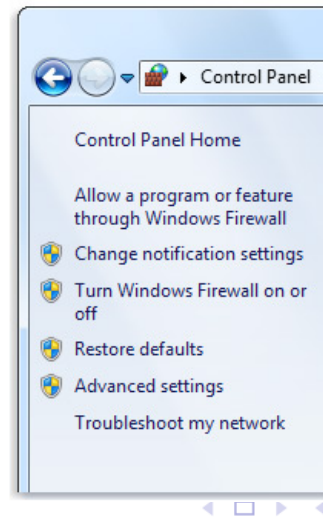
## Turn Windows Firewall on or off

If your computer is connected to a network, network policy settings might prevent you from cor

Show all

### To turn on Windows Firewall

1. Open Windows Firewall by clicking the **Start** button , and then clicking **Control Panel** **firewall**, and then click **Windows Firewall**.
2. In the left pane, click **Turn Windows Firewall on or off**.  If you're prompted for an a confirmation, type the password or provide confirmation.



Microsoft Firewall

<http://windows.microsoft.com/en-GB/windows7/products/features/windows-firewall>

Microsoft Security

<http://windows.microsoft.com/en-us/windows/security-essentials-download>

# Security

- You are liable to your own machine security.
- For those who are totally new to internet programming, and has no background in networking, and want max security when trying CS250 tutorial questions.
- Fool-proof method (though may sound extreme):
  - Cut the internet!!!
  - Temporarily switch off modem **during** use.
  - Temporarily switch off router **during** use.
  - Temporarily switch off WIFI **during** use.
  - Switch off mysql and apache **after** use.

# No excuses!

- “Forgetting the password” is not an excuse for late coursework submission!!!
- “Your machine has been hacked” is not an excuse for late coursework submission!!!
- “Your coursework was stolen” is not an excuse for plagiarism.
- Do not hack others!

# Self-Labs

## ● Continue MySQL and PHP (discuss in wk4, wk5)

### II) Working with MySQL

- simply follow [MySQL.pdf](#) ↓, then you can try [Self-Lab1-4](#).

### III) Working with PHP example

- follow these files as instructed: [PHP.pdf](#) ↓, [example.zip](#) ↓
- this prepares you for the last part of CW2
- Tip: understand and *modify* the *last* PHP example for CW2!

Available from wk3 onwards:

#### Weekly Activities



Lab Materials

## ● And Do the Self-Labs (submit to PAs)

### Part3: Self-Labs 1-4 and Peer Assessments

There are four Self-labs 1-4 for your better understanding of MySQL.  
It does not require PHP.

Self-Lab1: [Lab1\\_qn.pdf](#) ↓ [Lab 1\\_qn.docx](#) ↓ (PA5 =Lab1+Ex5)

Self-Lab2: [Lab2\\_qn.pdf](#) ↓ [Lab 2\\_qn.docx](#) ↓ (PA6 =Lab2+Ex6)

Self-Lab3: [Lab3\\_qn.pdf](#) ↓ [Lab 3\\_qn.docx](#) ↓ (PA10)

Self-Lab4: [Lab4\\_qn.pdf](#) ↓ [Lab 4\\_qn.docx](#) ↓ (PA10)

When you have done all these, please submit it to respective PAs.

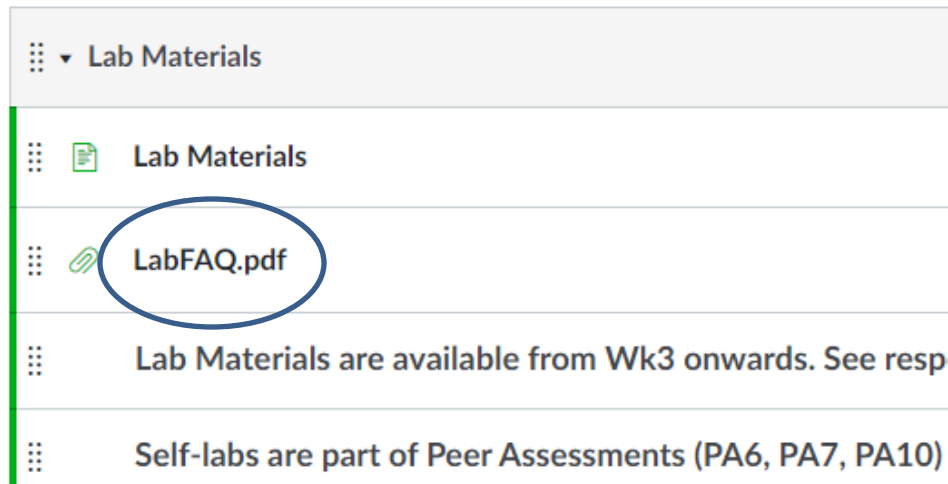
These **ALL** prepare you for **CW2 and exam**. Please action now without delay.

# XAMPP Troubleshoot

- If you encounter issues, have a look.

LabFAQ.pdf:

<https://canvas.swansea.ac.uk/courses/24913/files/2377763>



- Report on discussion board etc.
- Or come to ***optional*** labs.

Gary, and demonstrator(s)  
Venue: SoM 128 PC Lab (Bay)  
Date: 31 Oct 2024 (Thur)  
Time: 3pm-4pm, 4pm-5pm  
Task: [XAMPP-OptLab.pdf](#) ↓



# XAMPP Common Issues / FAQ

- Most students do not have any issues.
- If you experience issues, here we list some common issues with XAMPP installation.
  - [How to tell if I am in console / in MySQL?](#)
  - Change MySQL Password?
  - PHPMyAdmin issues after password change.
  - Cannot start XAMPP process (httpd/mysqld)
  - Further issues

# XAMPP-Testing (Common mistakes)

- How to tell if I am in console / in MySQL?

```
XAMPP for Windows

Gary@USER-PC g:\xampp
# cd mysql

Gary@USER-PC g:\xampp\mysql
# cd bin

Gary@USER-PC g:\xampp\mysql\bin
# mysql -u root

Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 35
Server version: 10.4.14-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
+-----+
5 rows in set (0.000 sec)

MariaDB [(none)]> quit
Bye

Gary@USER-PC g:\xampp\mysql\bin
#
```

Within MySQL

In Window console, the prompt  
#

Note, within MySQL  
Prompt is changed to:  
MariaDB [...]>

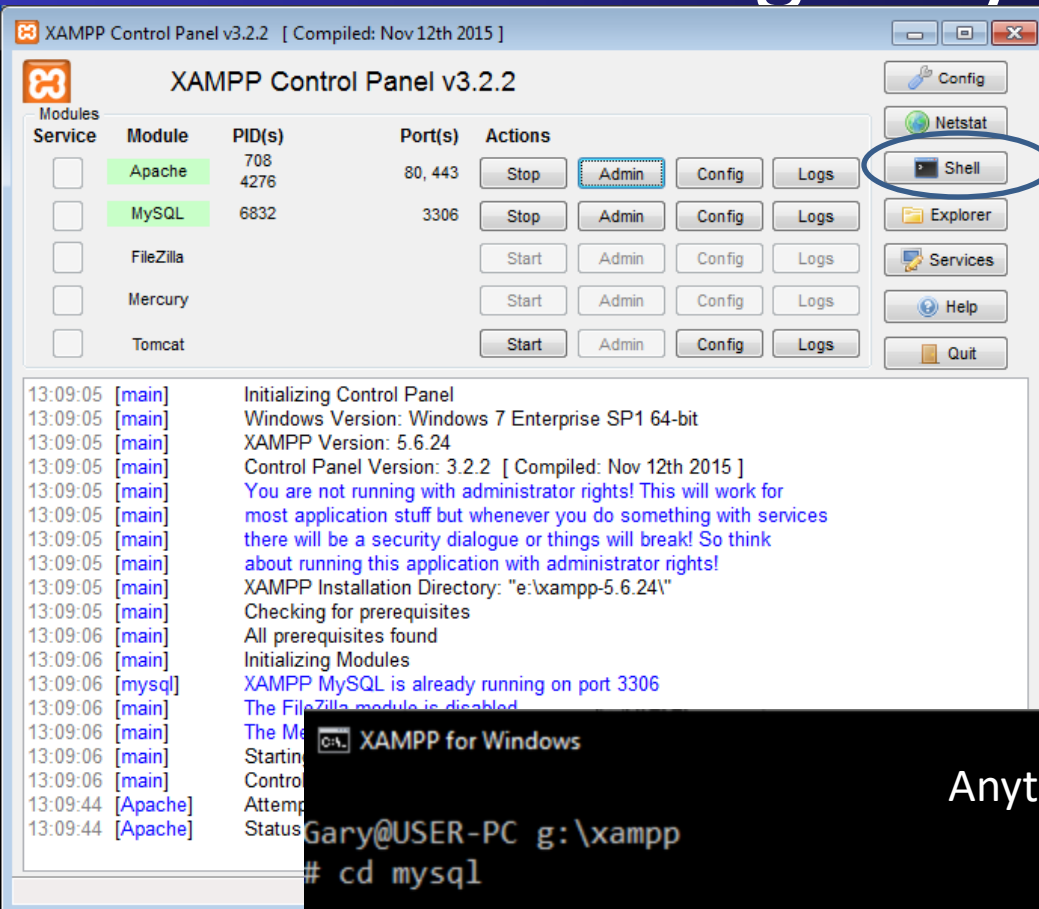
In older version, it states  
MySQL [...]>

You are now back to console,  
see the prompt #

# XAMPP Common Issues / FAQ

- Here we list some common issues with XAMPP installation.
  - How to tell if I am in console / in MySQL?
  - [Change MySQL Password?](#)
  - [PHPMyAdmin issues after password change.](#)
  - Cannot start XAMPP process (httpd/mysqld)
  - Further issues

# XAMPP – Change MySQL Password



MySQL by default comes with NO PASSWORD.

**Change MySQL Password:**  
Click Shell

Type the following in the shell

```
cd mysql
cd bin
mysqladmin -u root password "<newpwd>"
```

Anything between "" is your password

```
Gary@USER-PC g:\xampp
# cd mysql

Gary@USER-PC g:\xampp\mysql
# cd bin

Gary@USER-PC g:\xampp\mysql\bin
# mysqladmin -u root password " "

Gary@USER-PC g:\xampp\mysql\bin
# mysql -u root
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)
```

Once you changed password, mysql -u root does not work.

# XAMPP – Change MySQL Password

Instead, you need to add -p parametr

```
Gary@USER-PC g:\xampp\mysql\bin
# mysql -u root -p
Enter password: *****
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 37
Server version: 10.4.14-MariaDB mariadb.org binary distribution

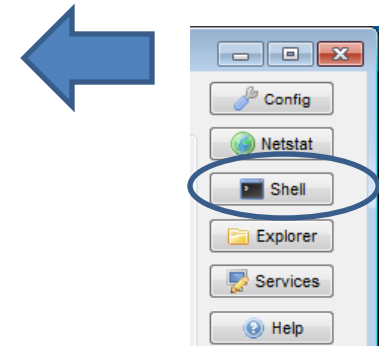
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;
+-----+
| Database                |
+-----+
| information_schema      |
| mysql                   |
| performance_schema      |
| phpmyadmin              |
| test                    |
+-----+
5 rows in set (0.000 sec)

MariaDB [(none)]> quit
Bye

Gary@USER-PC g:\xampp\mysql\bin
#
```



Type these instead:

(if not in bin folder)

```
cd mysql
```

```
cd bin
```

Use these from now on:

```
mysql -u root -p
```

```
<then your new pwd>
```

# XAMPP – Troubleshoot PHPMyAdmin

- CS250 does **NOT** require PHPMyAdmin.
- and recommend you **not** to use it on CWs. However, if you insist, and if you have changed password...
- Issues arise **IF you set a password** in MySQL database...

Modify xampp\phpMyAdmin\config.inc.php

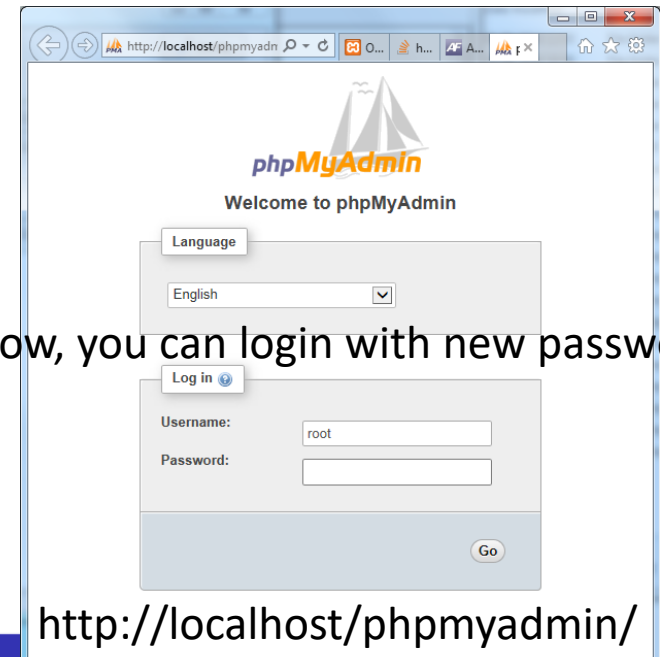
Change the line:

```
/* Authentication type and info */  
$cfg['Servers'][$i]['auth_type'] = 'config';
```

```
/* Authentication type and info */  
$cfg['Servers'][$i]['auth_type'] = 'cookie';
```



```
1 <?php  
2 /*  
3  * This is needed for cookie based authentication to encrypt password in  
4  * cookie  
5  */  
6 $cfg['blowfish_secret'] = 'xampp'; /* YOU SHOULD CHANGE THIS FOR A MORE SECURE COOKIE AUTH! */  
7  
8 /*  
9  * Servers configuration  
10  */  
11 $i = 0;  
12  
13 /*  
14  * First server  
15  */  
16 $i++;  
17  
18 /* Authentication type and info */  
19 $cfg['Servers'][$i]['auth_type'] = 'config';  
20  
21 $cfg['Servers'][$i]['user'] = 'root';  
22 $cfg['Servers'][$i]['password'] = '';  
23 $cfg['Servers'][$i]['extension'] = 'mysql';  
24 $cfg['Servers'][$i]['AllowNoPassword'] = true;  
25 $cfg['Lang'] = '';  
26  
27 /* Bind to the localhost ipv4 address and tcp */  
28 $cfg['Servers'][$i]['host'] = '127.0.0.1';  
29 $cfg['Servers'][$i]['connect_type'] = 'tcp';  
30  
31 /* User for advanced features */  
32 $cfg['Servers'][$i]['controluser'] = 'mma';
```



# XAMPP Common Issues / FAQ

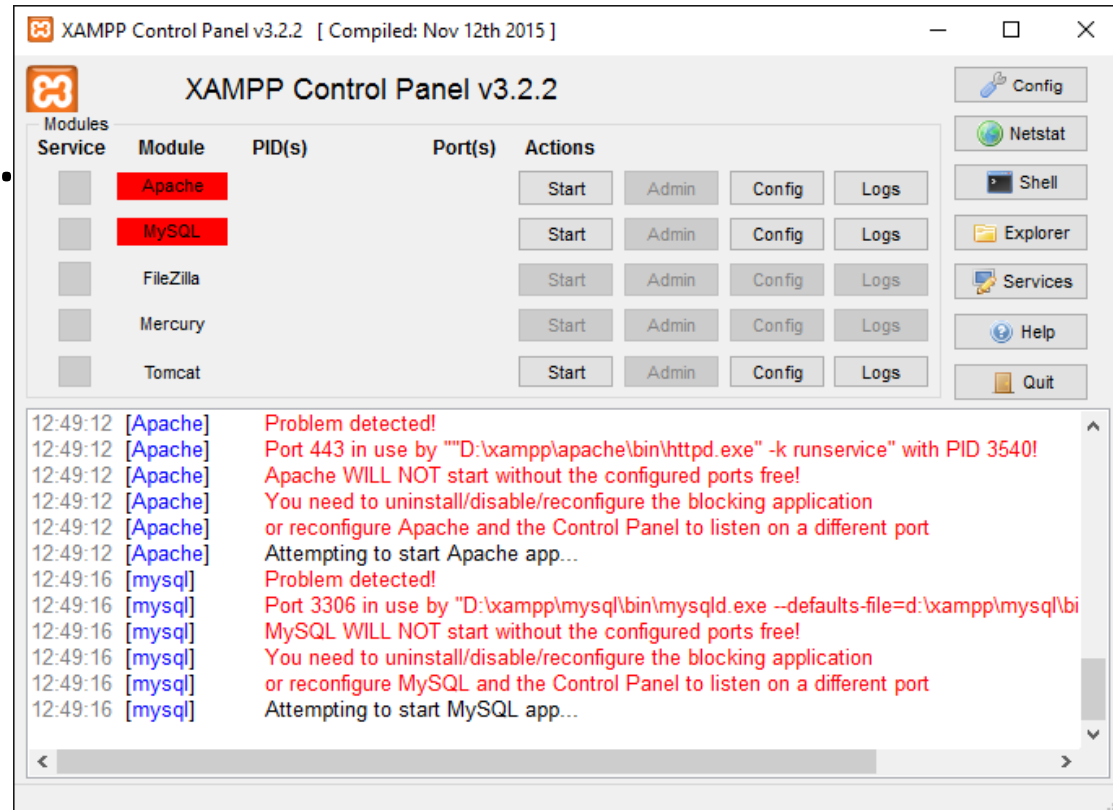
- Here we list some common issues with XAMPP installation.
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  - PHPMyAdmin issues after password change.
  - Cannot start XAMPP process (httpd/mysqlld)
  - Further issues

# XAMPP – Troubleshoot (1)

- The processes cannot be started.

*Try run again: setup\_xampp.bat  
Restart XAMPP, and try again.*

- Possible errors at home/laptop.



Some process are likely using port 80 (http), 443 (https), or 3306 (mysql).  
It would be Windows' WWW Publishing Service, Skype etc.

Read these: <http://stackoverflow.com/questions/27333203/xampp-couldnt-start-apache-windows-10>

Find the process and kill them using ProcessXP and TCPView.



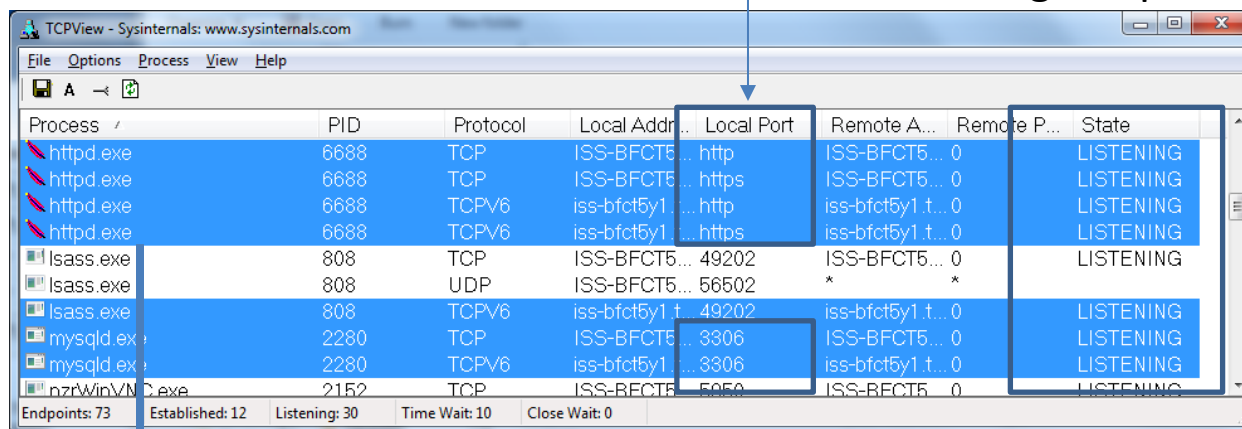
# XAMPP - Troubleshoot (1)

## Tool: TCPView

<https://technet.microsoft.com/en-us/sysinternals/tcpview.aspx>

Look into LocalPort Column

See what are using the ports!



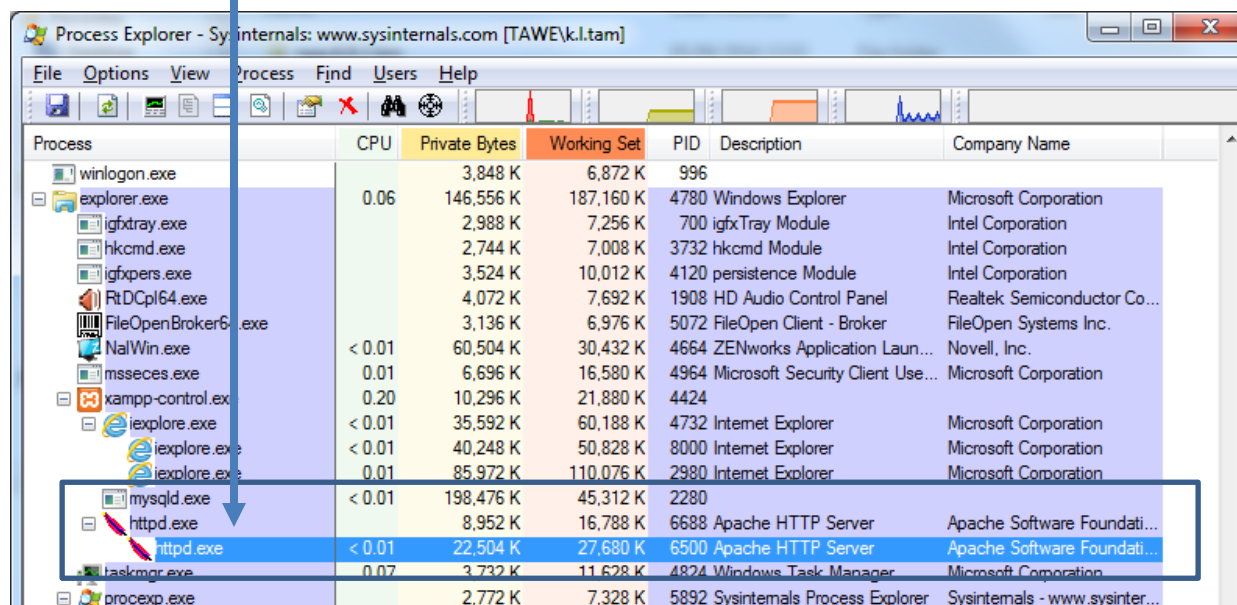
Process	PID	Protocol	Local Address	Local Port	Remote Address	Remote Port	State
httpd.exe	6688	TCP	ISS-BFCT5...	http	ISS-BFCT5...	0	LISTENING
httpd.exe	6688	TCP	ISS-BFCT5...	https	ISS-BFCT5...	0	LISTENING
httpd.exe	6688	TCPV6	iss-bfct5y1...	http	iss-bfct5y1.t...	0	LISTENING
httpd.exe	6688	TCPV6	iss-bfct5y1...	https	iss-bfct5y1.t...	0	LISTENING
lsass.exe	808	TCP	ISS-BFCT5...	49202	ISS-BFCT5...	0	LISTENING
lsass.exe	808	UDP	ISS-BFCT5...	56502	*	*	LISTENING
lsass.exe	808	TCPV6	iss-bfct5y1...	49202	iss-bfct5y1.t...	0	LISTENING
mysqld.exe	2280	TCP	ISS-BFCT5...	3306	ISS-BFCT5...	0	LISTENING
mysqld.exe	2280	TCPV6	iss-bfct5y1...	3306	iss-bfct5y1.t...	0	LISTENING
nprWinVNC.exe	2152	TCP	ISS-BFCT5...	5950	ISS-BFCT5...	0	LISTENING

Endpoints: 73   Established: 12   Listening: 30   Time Wait: 10   Close Wait: 0

## Tool: ProcessXP

<https://technet.microsoft.com/en-us/sysinternals/processexplorer.aspx>

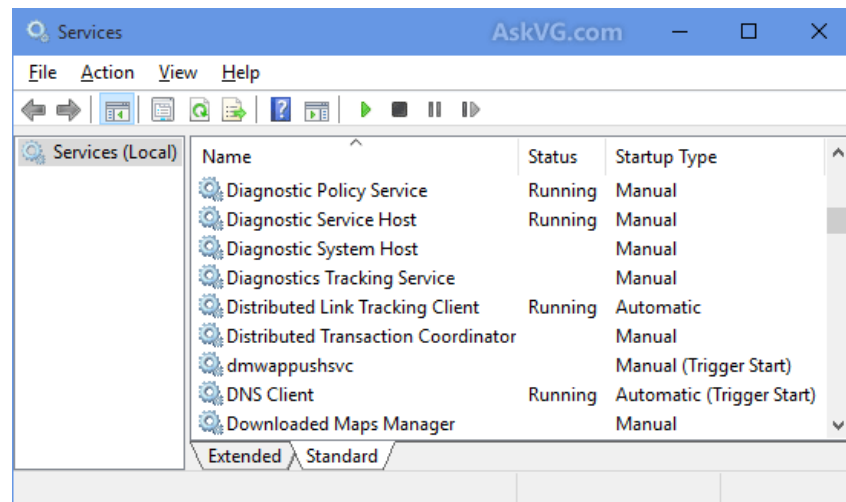
port 80 (http), 443 (https), or 3306 (mysql)



Process	CPU	Private Bytes	Working Set	PID	Description	Company Name
winlogon.exe		3,848 K	6,872 K	996		
explorer.exe	0.06	146,556 K	187,160 K	4780	Windows Explorer	Microsoft Corporation
igfxtray.exe		2,988 K	7,256 K	700	igfxTray Module	Intel Corporation
hkcmd.exe		2,744 K	7,008 K	3732	hkcmd Module	Intel Corporation
igfxpers.exe		3,524 K	10,012 K	4120	persistence Module	Intel Corporation
RtDCpl64.exe		4,072 K	7,692 K	1908	HD Audio Control Panel	Realtek Semiconductor Co...
FileOpenBroker6.exe		3,136 K	6,976 K	5072	FileOpen Client - Broker	FileOpen Systems Inc.
NalWin.exe	< 0.01	60,504 K	30,432 K	4664	ZENworks Application Laun...	Novell, Inc.
mssec.exe	0.01	6,696 K	16,580 K	4964	Microsoft Security Client Use...	Microsoft Corporation
xampp-control.exe	0.20	10,296 K	21,880 K	4424		
ieexplore.exe	< 0.01	35,592 K	60,188 K	4732	Internet Explorer	Microsoft Corporation
ieexplore.exe	< 0.01	40,248 K	50,828 K	8000	Internet Explorer	Microsoft Corporation
ieexplore.exe	0.01	85,972 K	110,076 K	2980	Internet Explorer	Microsoft Corporation
mysqld.exe	< 0.01	198,476 K	45,312 K	2280		
httpd.exe	< 0.01	8,952 K	16,788 K	6688	Apache HTTP Server	Apache Software Foundati...
httpd.exe	< 0.01	22,504 K	27,680 K	6500	Apache HTTP Server	Apache Software Foundati...
taskmgr.exe	0.07	3,732 K	11,628 K	4824	Windows Task Manager	Microsoft Corporation
procexp.exe		2,772 K	7,328 K	5892	Sysinternals Process Explorer	Sysinternals - www.sysinter...

# XAMPP - Troubleshoot (1)

- If TCPView / Process XP review the culprit is a "System Process", then it means Microsoft is the one to be blamed.
- Common culprit:
  - World Wide Web Publishing Service
  - IIS (ASP server)
  - SQL Server Reporting Services
  - Skype
  - Microsoft-HTTPAPI/2.0
  - Web Deployment Agent Service
  - MySQL server (you install it separately?)
- To turn off services that you do not want in windows you go to
- Start > Run > Type: 'services.msc'
- Double Click on the service you want to alter and change the startup type to **disabled** or **manual**; and click **stop** to stop the process.
- And/Or uninstall them.
  - For example, MySQL server conflicts with XAMPP. Uninstall it / Change port.
  - To change port, there are some instructions in **option 4 (lab machine setup)**.



<https://www.sitepoint.com/unblock-port-80-on-windows-run-apache/>

<http://stackoverflow.com/questions/30758894/apache-server-xampp-doesnt-run-on-windows-10-port-80>

<https://www.sitepoint.com/unblock-port-80-on-windows-run-apache/>

<http://www.askvg.com/beginners-guide-to-configure-windows-10-services/>

# XAMPP - Troubleshoot (2)

- If apache (httpd) / mysql (mysqld) processes still cannot run
- Two more things you can try:
  - 1) Do you have additional firewall / antivirus other than Microsoft Firewall/Defender? Sometimes these firewall / antivirus software block these processes due to security reasons.
    - For Norton Antivirus/Firewall, there is a way to “trust” processes.  
<https://support.norton.com/sp/en/uk/home/current/solutions/v6958602>  
(You may have others brand of firewall/antivirus. Google it to find out.)
  - 2) Try putting XAMPP folder to the root of the drive. Sometimes it help.
    - For example, put it under G:\XAMPP, H:\XAMPP
    - If you mainly use XAMPP on your laptop/desktop, and need not be portable, put them under C:\XAMPP, D:\XAMPP
    - Issues: “space” in the relative path or “non-English encoding”.




# XAMPP - Troubleshoot (3)

- Sometimes XAMPP reports error messages from PHP
  - missing .dll / cannot find .dll etc?
- You may want to try installing Microsoft Visual C++ Redistributable. (Download the latest one both 32bit and 64 bits)
- <https://learn.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist>
- PHP was built using VC++ on window platform and it depends on some redistributable libraries (pre-compiled standard libraries). These redistributable may be installed by some Games already. For new clean machines, these may not be available.
- Download and install redistributable, restart machine, try again.

# XAMPP Common Issues / FAQ

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  - How to tell if I am in console / in MySQL?
  - Change MySQL Password?
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# XAMPP – Further Issues

- If you still have problems installing XAMPP.
  - Google it – most common problems are answered by the web
  - Post on discussion board with **screenshot**  
see if Gary/Tutor/peers can help
- If you still have problems installing XAMPP *after 3 days*
  - **DO NOT WASTE TIME**
  - Follow Option 4,
  - USE lab machines,  
follow specific instructions
  - 4. Computational Foundry Lab environment (Win10 machines):
    - You need to access a Lab PC machine physically. Two ways:
      1. come back to campus, find a PC in lab physically; or
      2. access a PC remotely
        - See this document provided by ISS: [Remote Access to PC in Labs.pdf](#) 
        - You need to config your account, install and set up Microsoft authentication
    - next, follow [XAMPP\\_OptLab.pdf](#) 
    - Here is a step-by-step video of the XAMPP\_OptLab.pdf
    - click the ↗ button to open two streams mode, and the click  to swap the v

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