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Office: ICT 515

Setup PHP, MySQL, NetBeans and Apache on Your Own PC

If your server does not support PHP, you must:

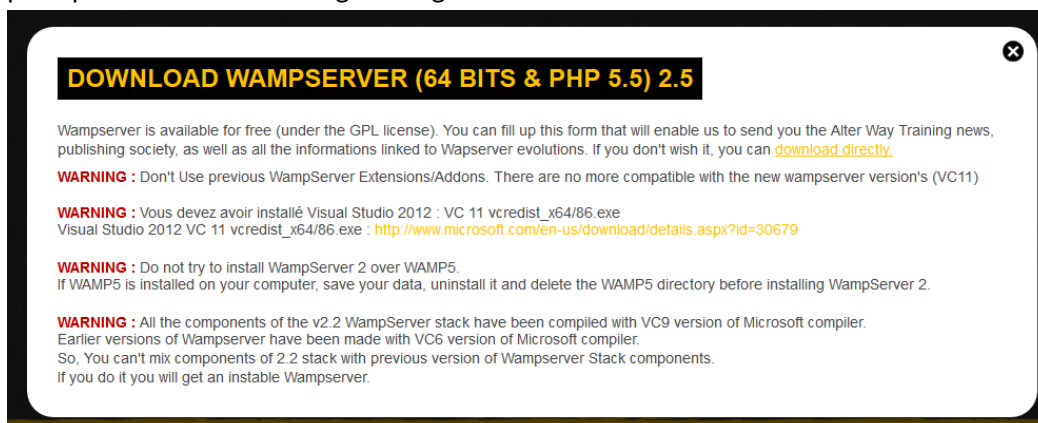
Install a web server on your own PC, and then install PHP

Install Wamp

1. Obtain WAMP installation file from the following link
<http://www.wampserver.com/en/>



2. After clicking on the link (make sure you choose the correct architecture 32 or 64), you will be prompted with the following message:

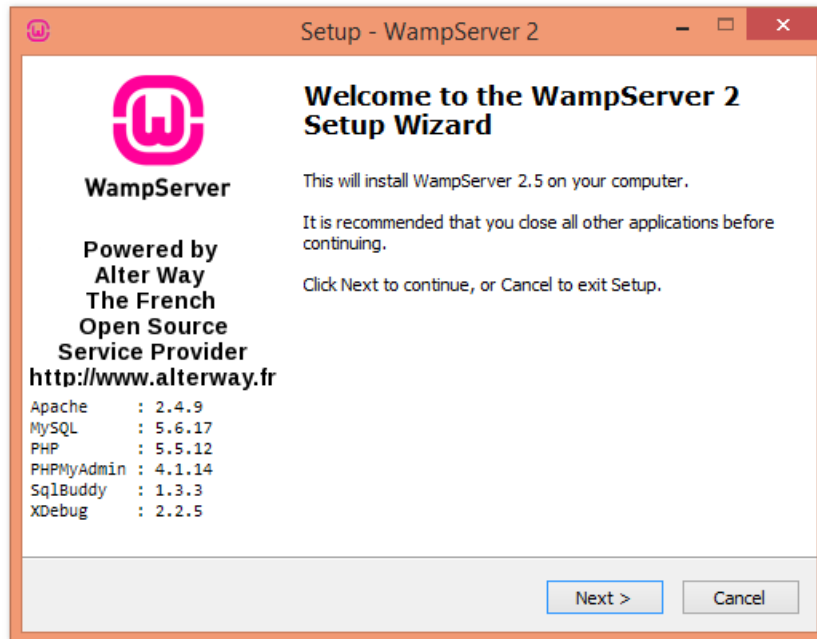


Make sure you have the packages mentioned in the first warning.

Read the rest of the warning.

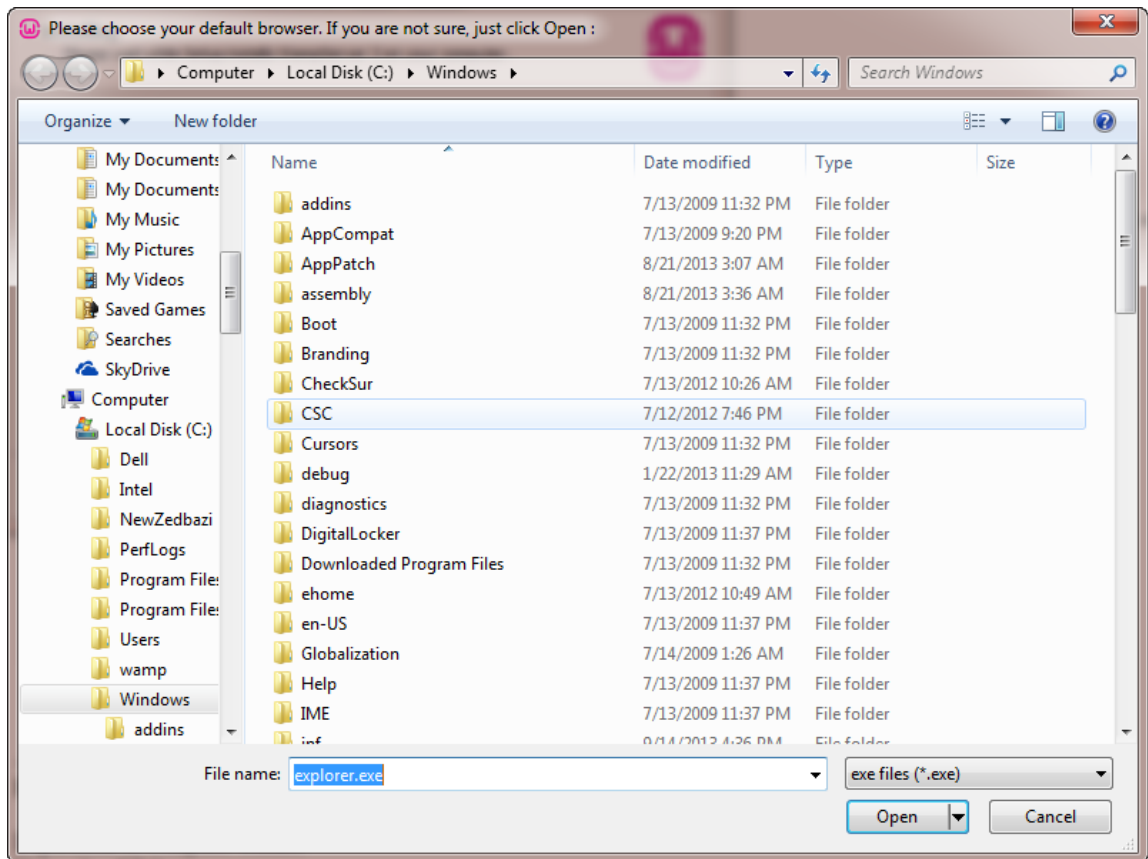
If you have all the packages, click on the “you can download it directly” link and your download will start.

3. After the download finishes, click on the downloaded file to start the installation.
4. The installation window, such as the figure below, will open up.

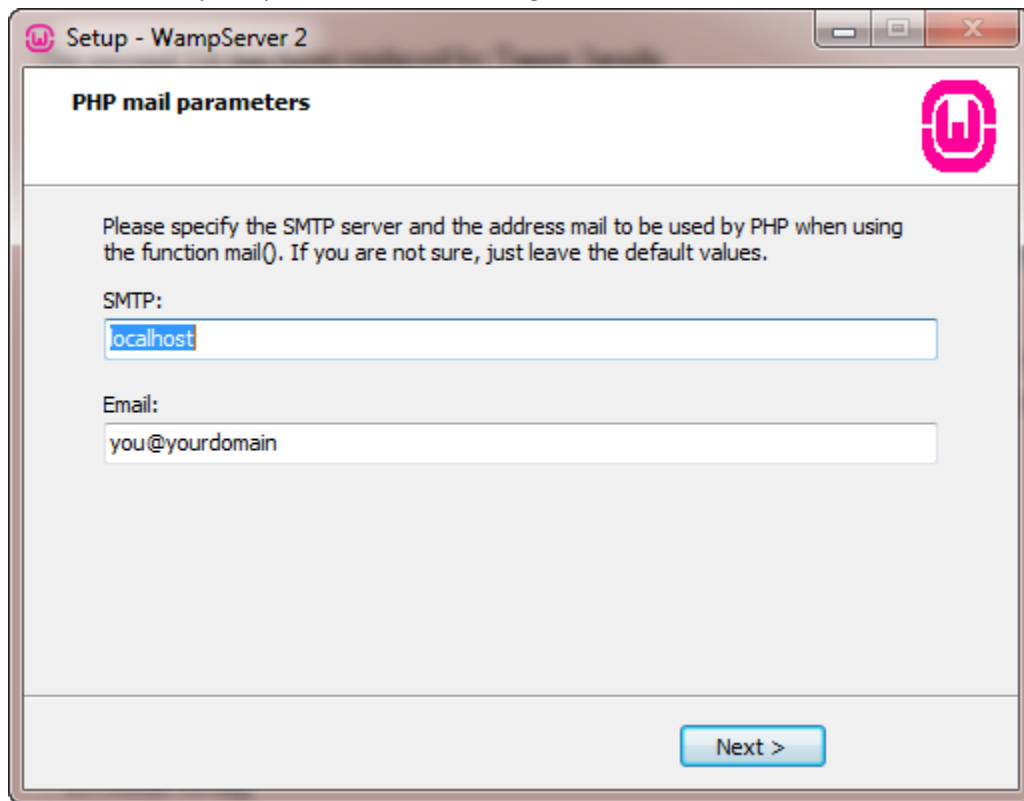


5. Click Next
6. Accept License Agreement, click Next
7. Choose setup directory (default), click Next
8. Choose where you like your shortcuts, click Next
9. Review the summary, click Install

10. During the installation, you will be prompted for the internet browser executable you would like to use. If you are not sure, click open button



11. You will also be prompted with the following window:



12. You can use the defaults, click Next

13. Click finish to Launch WampServer 2

14. DONE!

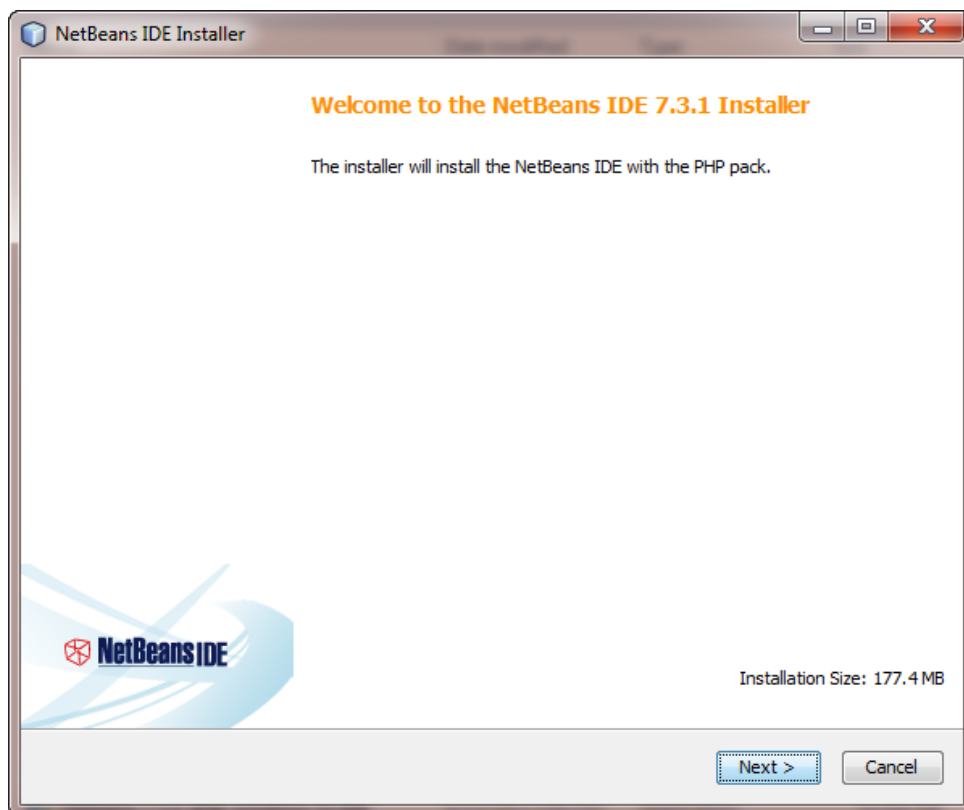
Install Netbeans

1. Make sure you have installed Java Development Kit JDK on your system. You can obtain it from the following link:
<http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html>
2. Obtain the NetBeans installation files from
<https://netbeans.org/downloads/>

I choose this

	Java SE	Java EE	C/C++	PHP	All
Supported technologies *					
③ NetBeans Platform SDK	•	•			•
③ Java SE	•	•			•
③ Java FX	•	•			•
③ Java EE		•			•
③ Java ME					•
③ HTML5		•		•	•
③ Java Card™ 3 Connected					•
③ C/C++			•		•
③ Groovy					•
③ PHP				•	•
Bundled servers					
③ GlassFish Server Open Source Edition 4.0		•			•
③ Apache Tomcat 7.0.34		•			•
	Download	Download	Download	Download	Download
	Free, 81 MB	Free, 204 MB	Free, 52 MB	Free, 52 MB	Free, 224 MB

- Click download, your download will start shortly.
- After the download finishes, click on the downloaded file to run the installation
- The installation window looks as follows:

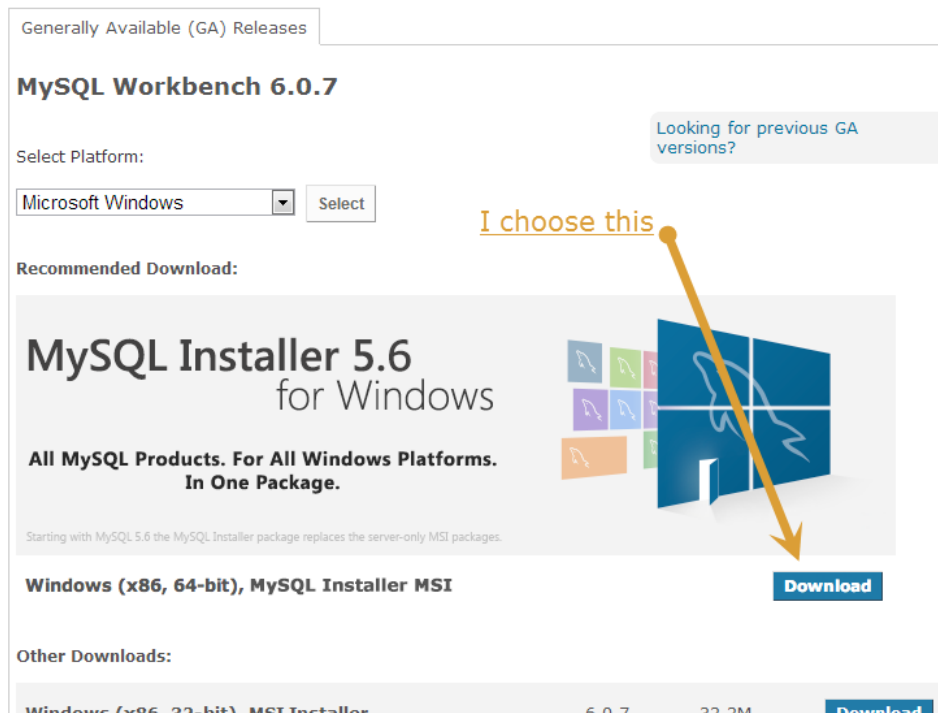


- Click Next
- Accept License Agreement
- Choose your NetBeans installation folder and Java environment (JDK) folder and click Next
- Make sure the option "Check for updates" is selected and Click Install.

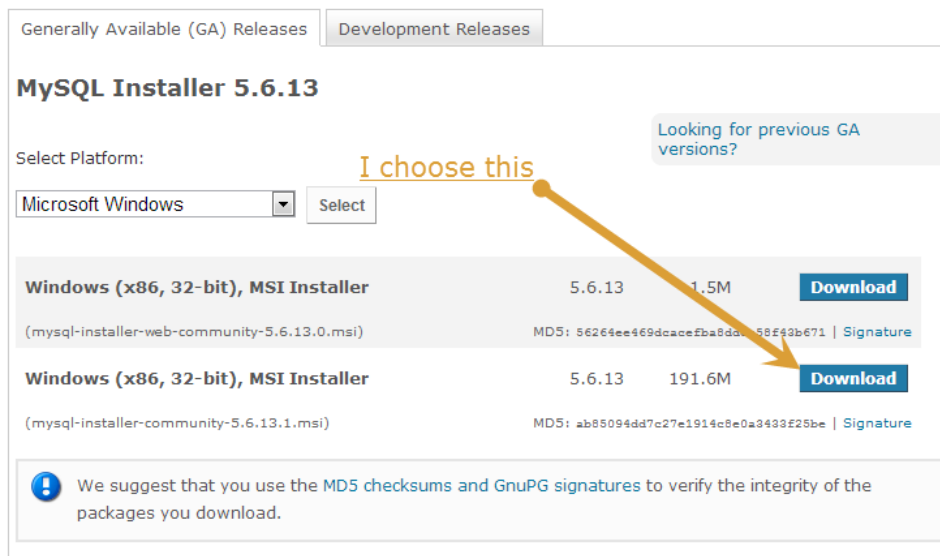
10. The installation procedure will start. Click Finish button.

Install MySQL workbench

1. Obtain the MySQL workbench installation files from the following link:
<http://dev.mysql.com/downloads/tools/workbench/>



2. Click on Download button. You will be redirected to the following page:



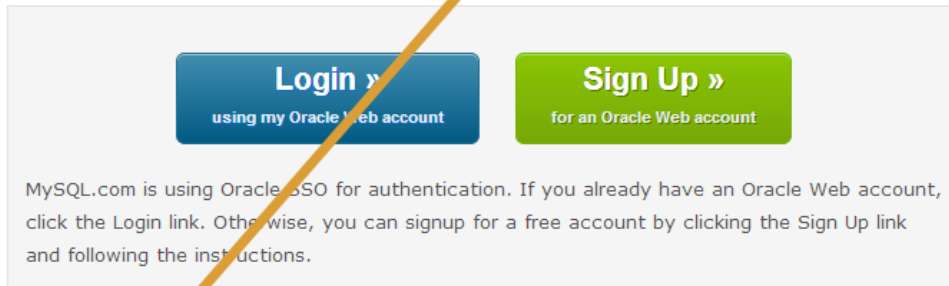
- Click on Download, you will be redirected to another page.

Begin Your Download - mysql-installer-community-5.6.13.1.

Login Now or Sign Up for a free account.

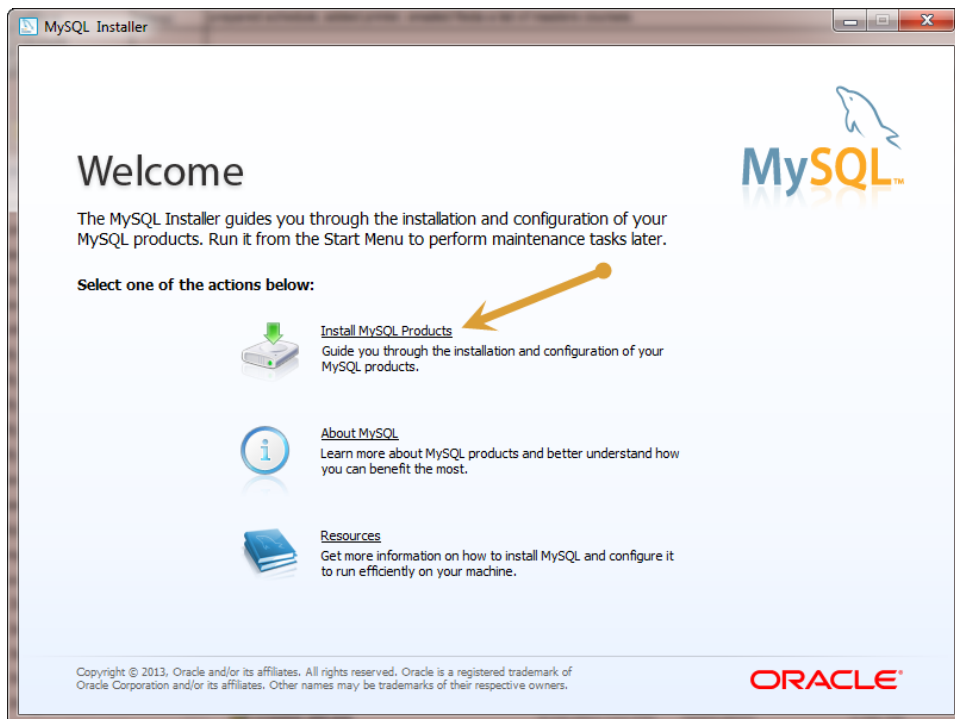
An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system
- Comment in the MySQL Documentation



[No thanks, just start my download.](#)

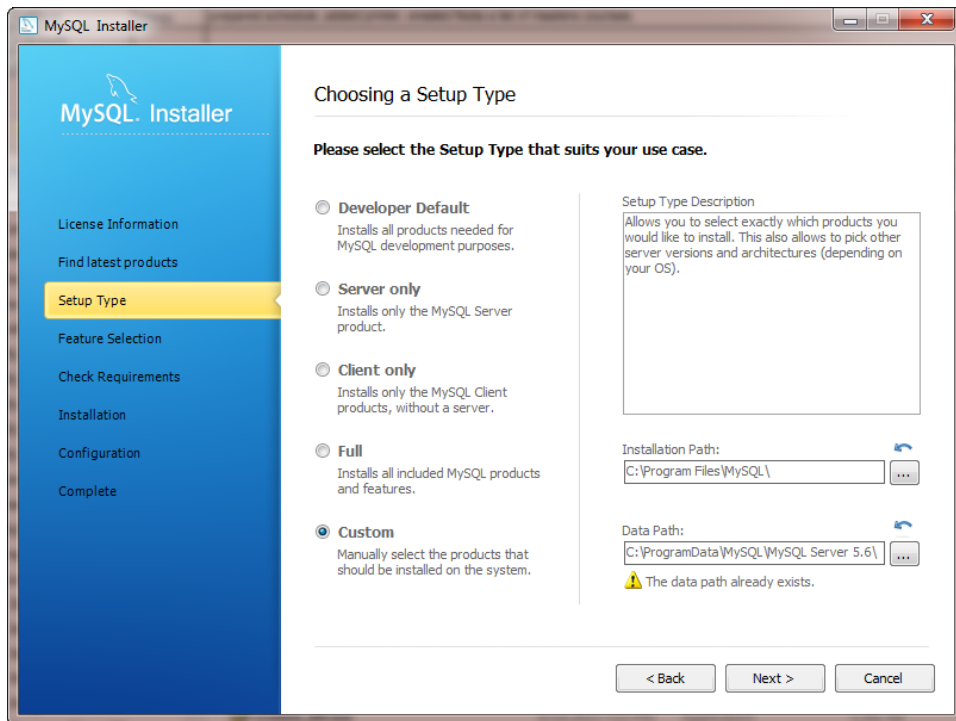
- Click on No thanks, just start my download. Your download will begin.
- After the download is finished, click on the downloaded file to begin the installation process.
- The installation window will popup:



- Click Install MySQL Products
- Accept License Agreement, click next
- Click Execute to begin checking for updates

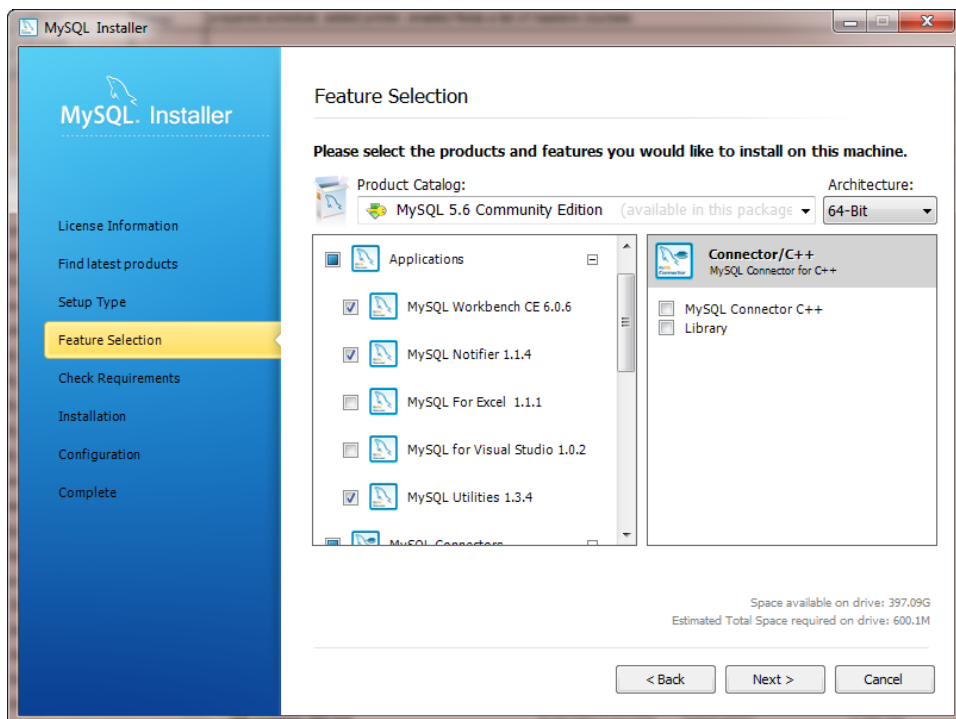
10. Click Next

11. From the Choose a Setup Type window, choose Custom

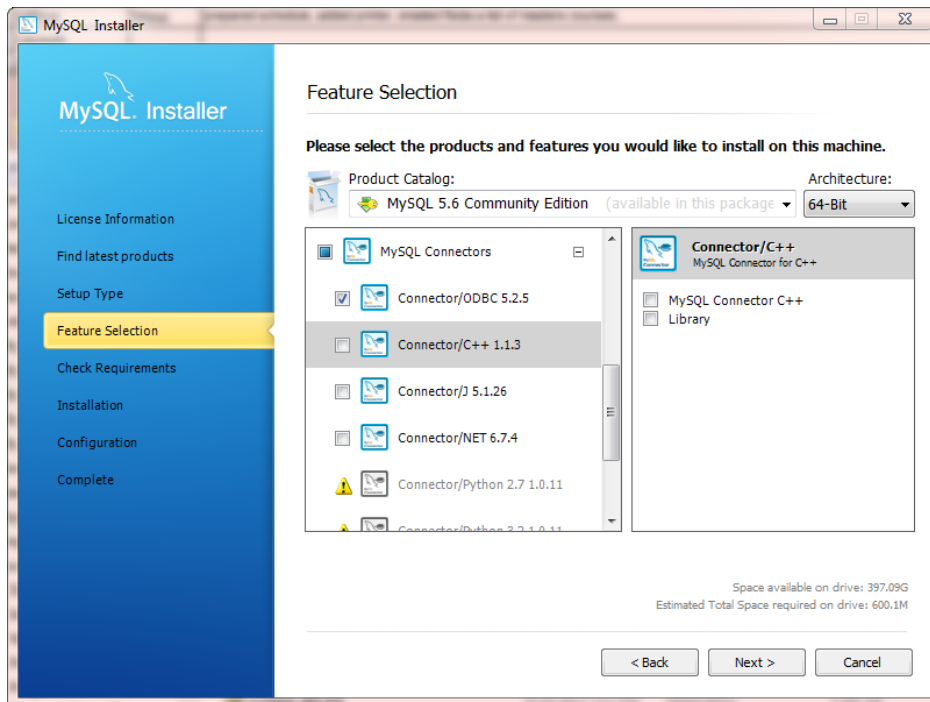


12. Click Next

13. From the Next window, expand Applications and uncheck *MySQL For Excel* and *MySQL for Visual Studio* as shown below:



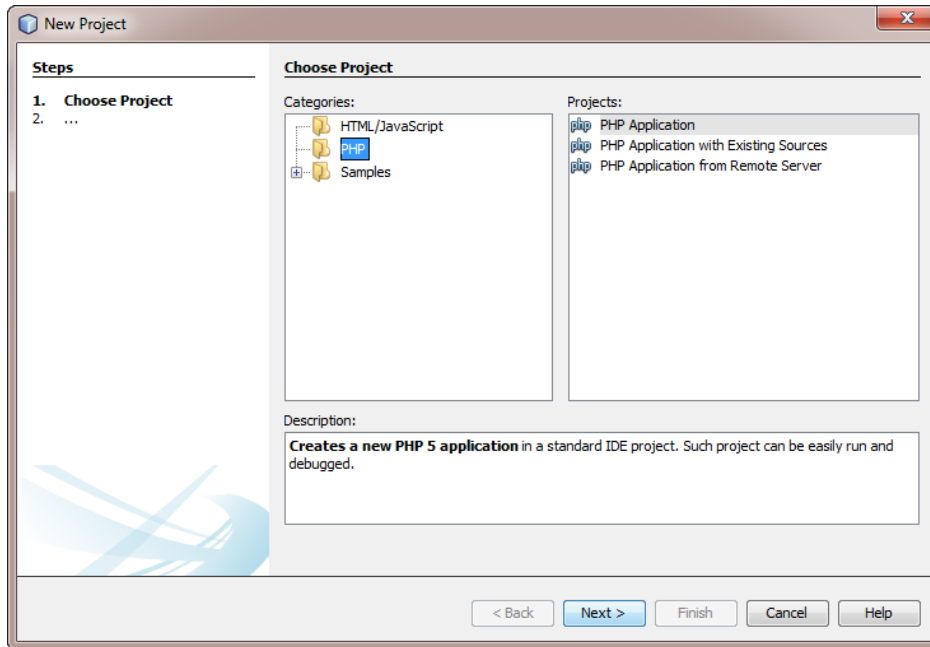
14. Also, expand MySQL Connectors and make sure only *Connector/ODBC 5.2.5* is selected, as shown below



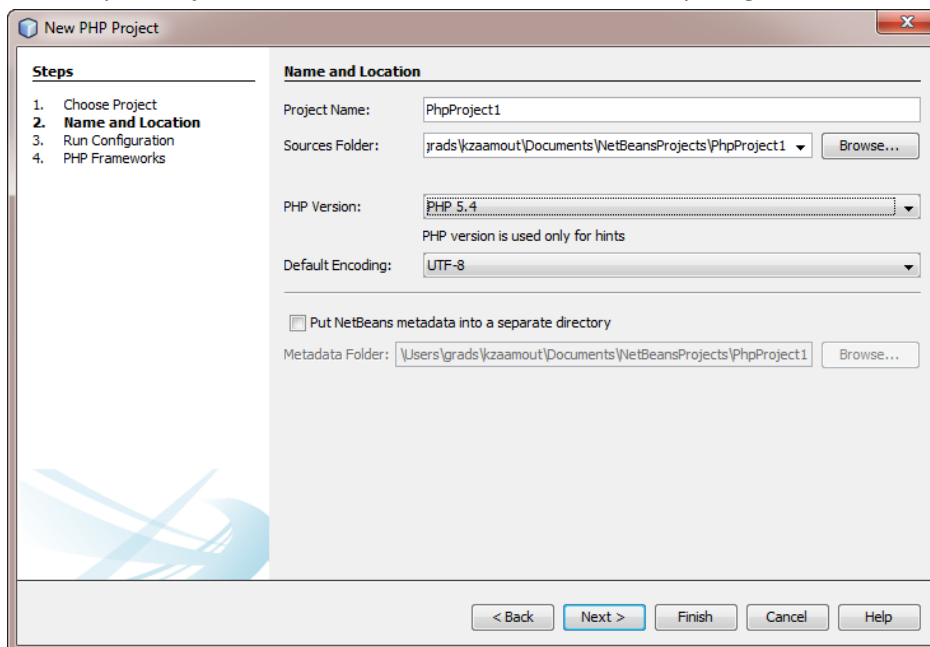
15. Click Next
16. Click Next
17. Click Execute
18. Installation will begin. When finished, Click Next
19. The configuration will start
20. Leave all the defaults, Click Next
21. Choose a root password, click Next
22. Leave Defaults, Click Next
23. Congratulations, you are finished!

Now, let's run NetBeans and configure it properly.

1. Start NetBeans by clicking on its shortcut or browsing to it from your windows menu
2. After NetBeans run, click on File-> New Project, a new window will popup:

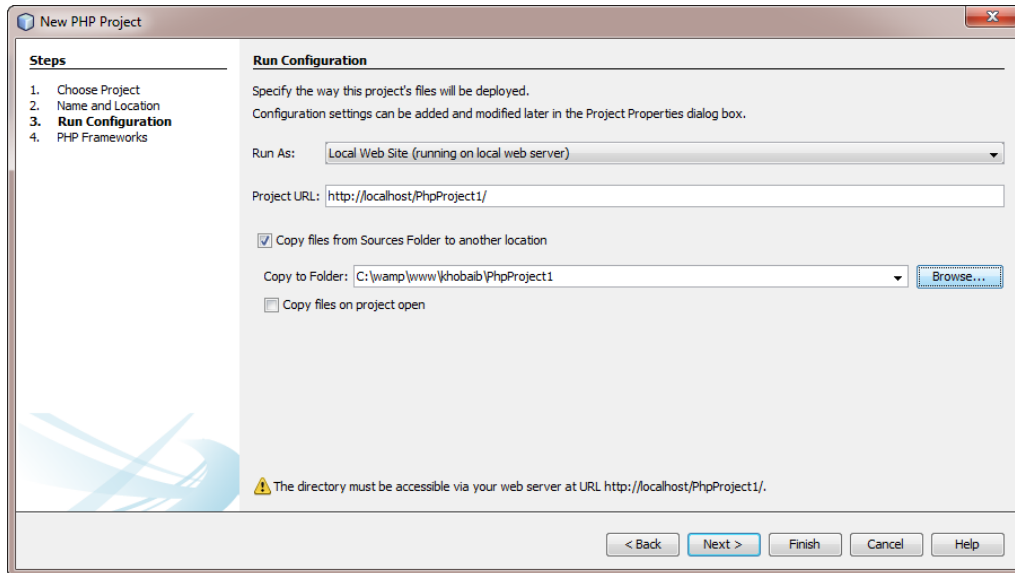


3. Choose PHP and PHP Application then click Next
4. Choose you Project name, Sources Folder and leave everything else for defaults:

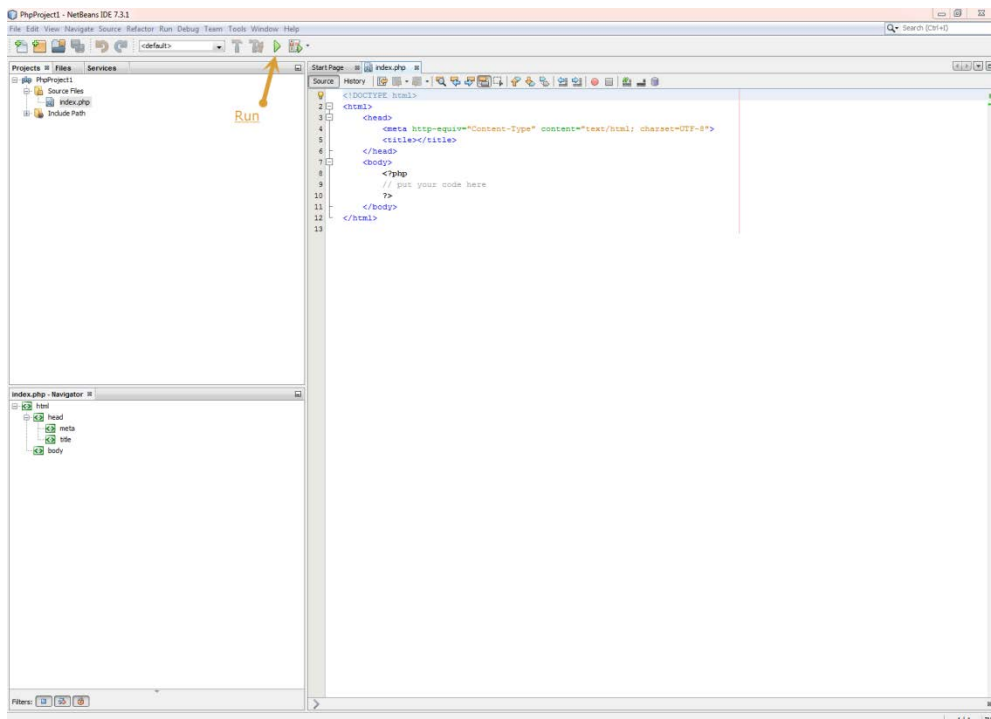


5. Click Next.

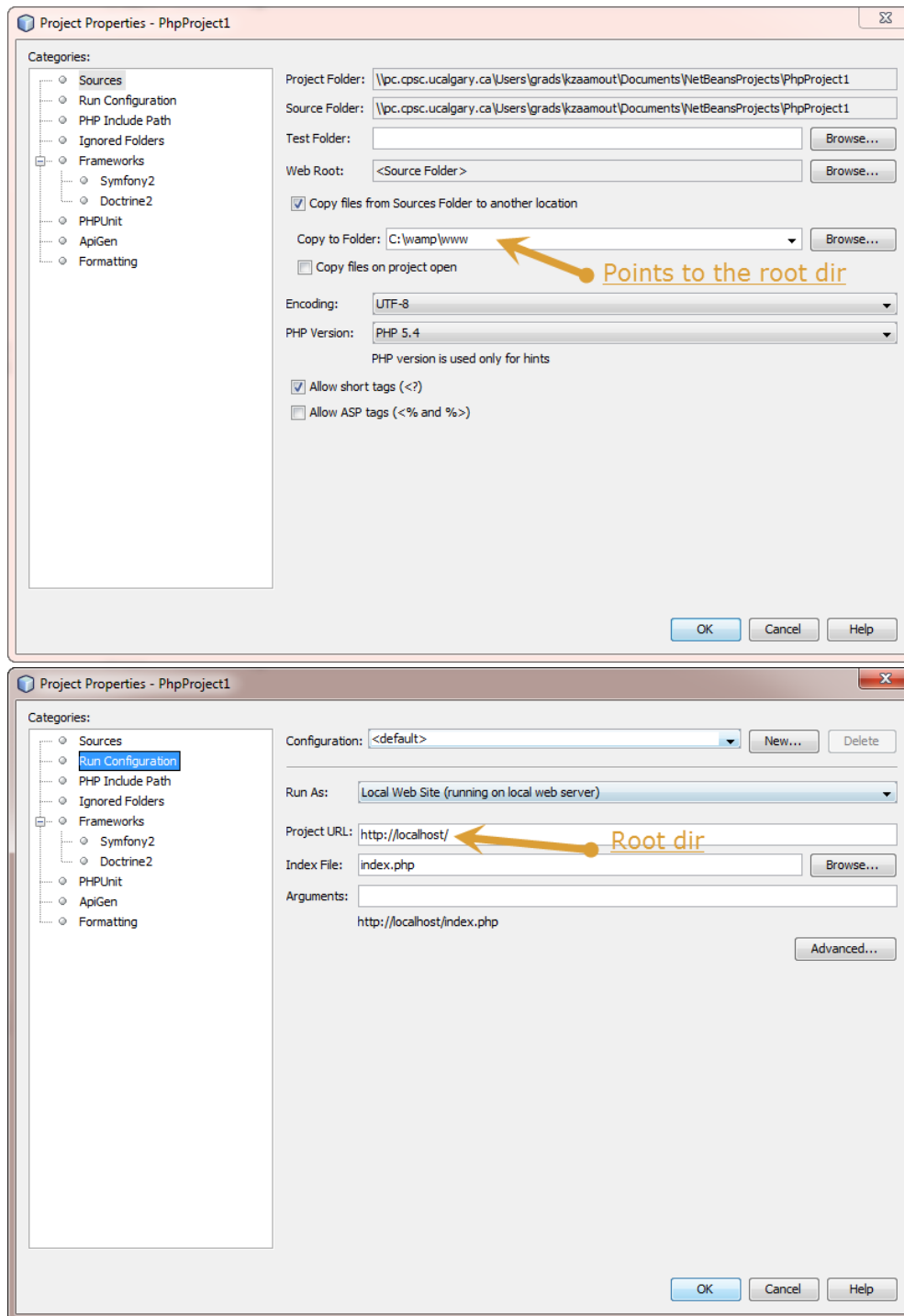
6. From this window, make sure you choose *Run As: Local Web Site (...)*. Notice that your Project URL reflects your project name. Do not change Project URL.



- Before you Click Next, Check the option *Copy files from Sources Folder to another location*
Then Browse to the following directory C:/wamp/www/YourProject
Notice how your project URL changes with your selections.
This option automates the process of copying your source code into the “Published” directory so that you can test your code via internet browser by type for example:
localhost/MyProject/mypage.php
- Click Finish.
- After you click Finish, the workbench will open. You should see a window such as the one below:

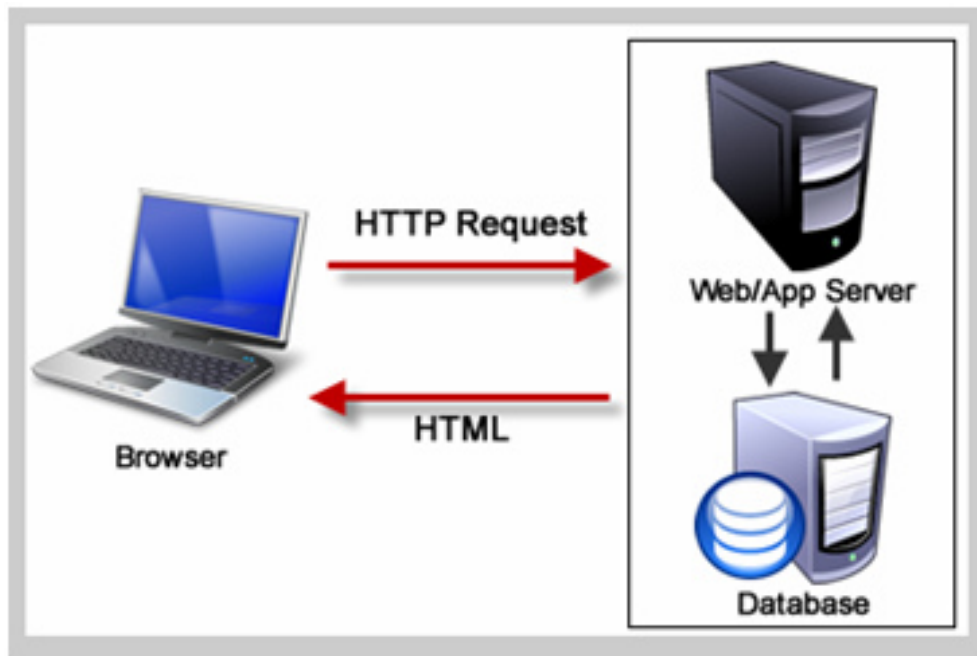


10. You will find an example already made for you. Click on run to see the example
11. After you click run, you should see a blank page. If you see an error message such as file not found or something like that, make sure your Copy to Folder and your Project URL match. That is as shown in the figures below:

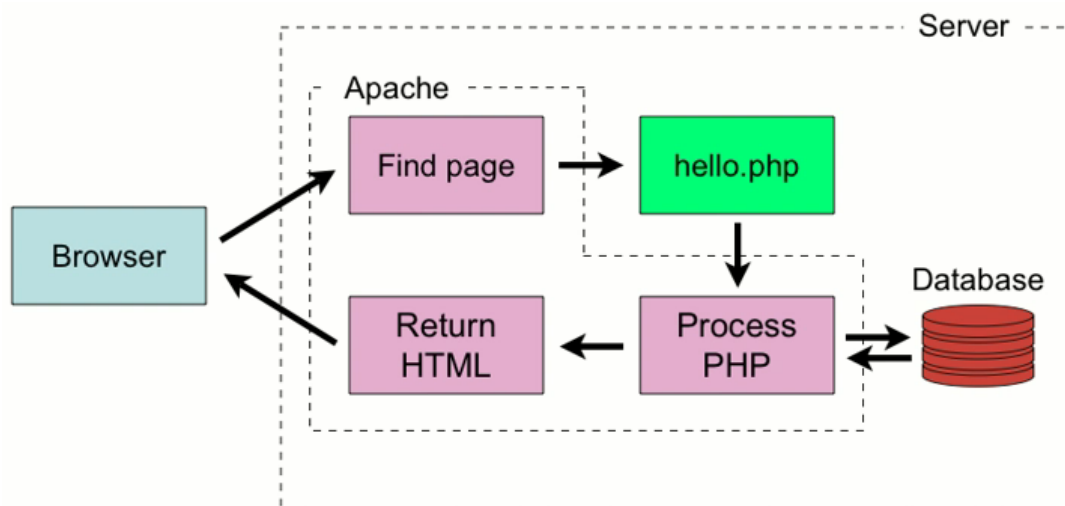


12. Your Copy to Folder is set to c:\wamp\www\MyProject then your Project URL should be <http://localhost/MyProject>
13. Now you are finished configuring and you are ready for development.

Architecture



1. A client will **submit a request** to access your site through his internet browser by typing your server's address www.myserver.com
2. The **address** gets **translated** into an **IP** address
3. Your **server** gets **located** and your webserver receives the request
4. Your **webserver fetches** the main page (index.html), see figure below
5. Your **webserver executes** the **PHP** components and retrieve needed data
6. Your **webserver sends** the page contents to the client in the form of **HTML**
7. The client internet browser constructs the page from the HTML code



Quick HTML Overview

1. HTML stands for Hyper Text Markup Language
2. Consists of tags that describes page structures and contents
3. Tags have the following form:

`<tag> ... </tag>`

Where the first tag is the opening tag and the last one is the closing tag

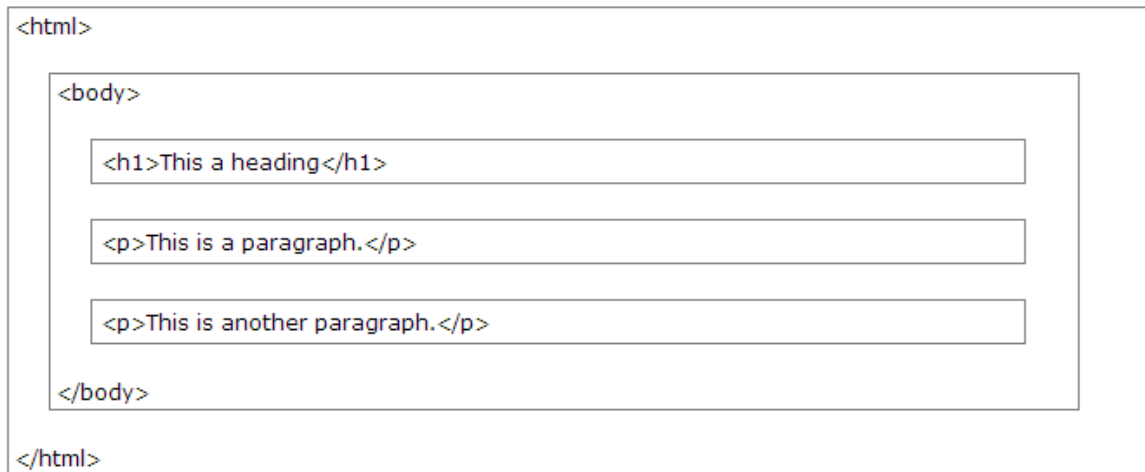
This form is not strictly enforced. Some other forms:

`<x ...>`

`<x .../>`

Some tags have attributes to further manipulate the contents

4. The general structure of an HTML page is as follows:



5. **Most commonly** used tags:
 - a. `<html> ... </html>` is the root tag to all HTML tags. It tells the browser that the content within the tag's start and end should be considered HTML code.
 - b. `< body > ... </body>` specifies the body of your HTML document.
 - c. `<h1> I am header </h1>` and all its derivatives:
Used to signify headers. Any text inside these tags will be enlarged, bolded, and italicized to accommodate the header level.
 - d. ` external link `
This tag allows you to create a link to an external website. This tag will produce a line "external link" that is clickable. When clicked, it will take you to ucalgary website

e. ``

This tag allows you to embed an image at the location where this tag is placed.

f. `
`

Adds a line break wherever it is found

Ex: `<p>I am learning
 HTML</p>`

g.

6. Tables

a. The following HTML block produces a table:

```
<table border="1">
  <tr>
    <td>row 1 - cell 1</td>
    <td>row 1 - cell 2</td>
  </tr>
  <tr>
    <td>row 2 - cell 1</td>
    <td>row 2 - cell 2</td>
  </tr>
</table>
```

7. HTML is static. Meaning you need to know beforehand the structure of the page, tables, data etc. so that you can present them.

How can we then retrieve data from a database then populate a table with this data?

8. PHP helps you produce HTML code dynamically.

Full HTML Example

You can copy/paste this example into notepad, save it as name.html then open it with internet browser to see the results:

```
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>My Page</title>
  </head>

  <body>

    <h1> I am header </h1>
    <h2> I am smaller header </h2>
    <h3> I am even smaller header </h3>

    <a href="http://www.ucalgary.com"> I am an external link </a>

    <table border="1">

      <tr>
        <td>row 1 - cell 1</td>
        <td>row 1 - cell 2</td>
      </tr>
      <tr>
        <td>row 2 - cell 1</td>
        <td>row 2 - cell 2</td>
      </tr>
    </table>
  </body>
</html>
```

PHP

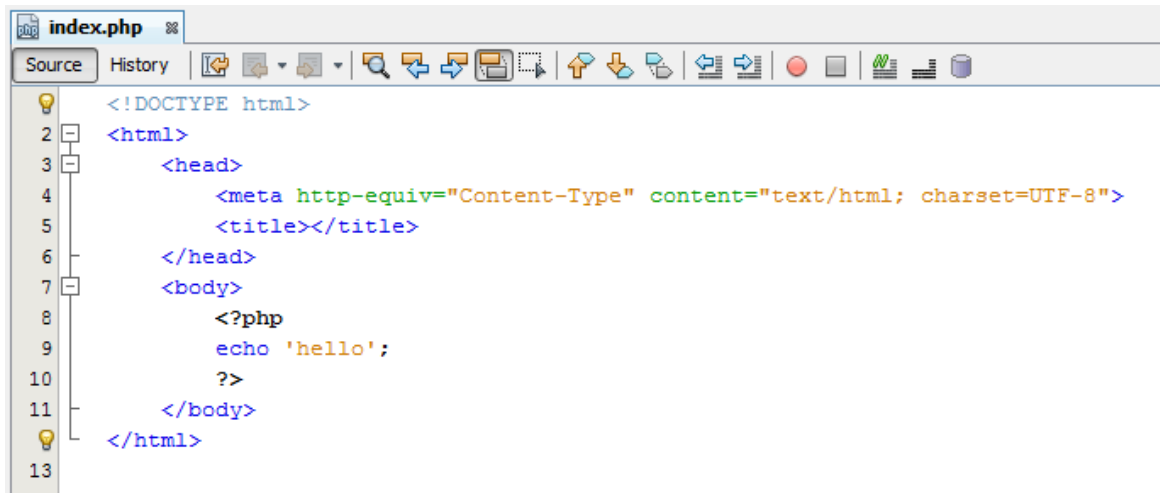
1. Must know HTML
 2. PHP Installation
 - a. Download and install wamp (includes php, mysql, and apache)
 3. Access\MySQL installation
-
1. **What is PHP?**
 - a. PHP is an acronym for "PHP Hypertext Preprocessor"
 - b. It is a server-side scripting language designed for web development but also used as a general-purpose programming language.
 - c. PHP is a widely-used, open source scripting language
 2. **What is a PHP File?**
 - a. PHP files can contain text, HTML, CSS, JavaScript, and PHP code
 - b. PHP code are executed on the server, and the result is returned to the browser as plain HTML
 - c. **PHP files have extension ".php"**
 3. **What Can PHP Do?**
 - a. PHP can generate dynamic page content
 - b. PHP can create, open, read, write, and close files on the server
 - c. PHP can collect form data
 - d. PHP can send and receive cookies
 - e. PHP can add, delete, and modify data in your database
 - f. PHP can restrict users to access some pages on your website
 - g. PHP can encrypt data
 - h. With PHP you are not limited to output HTML. You can output images, PDF files, and even Flash movies. You can also output any text, such as XHTML and XML.
 4. **Why PHP?**
 - a. Cross Platform: Runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
 - b. Compatible with almost all servers used today
 - c. Supports a wide range of databases
 - d. Free
 - e. Easy to learn

Hello Word!

1. Starting to write PHP

In order to start writing PHP code inside HTML, you need to write it within the following tag:

`<?php ... ?>`, see figure below for a hello world example:



The screenshot shows a code editor window titled 'index.php'. The code is as follows:

```

1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
5     <title></title>
6   </head>
7   <body>
8     <?php
9       echo 'hello';
10    ?>
11  </body>
12 </html>
13

```

2. Comments



The screenshot shows a code editor window titled 'index.php'. The code is as follows:

```

1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
5     <title></title>
6   </head>
7   <body>
8     <?php
9       // single line comment
10      # single line comment
11      /*
12         multiple lines comment
13         multiple lines comment
14      */
15      ?>
16    </body>
17 </html>
18

```

3. Writing PHP code is very similar in structure to writing javascript, java, c++ and c.

4. See examples