S@ifur's Solutions

Lecture Sheet on "PHP+MySQL"
Day-1: (Orientation + First Class)

Objectives	Topics
❖ Introduction with each other ❖ Overview of PHP ❖ Overview of MySQL ❖ Install necessary software ❖ Know the basics of XAMPP, SQLyog, Dreamweaver and phpMyAdmin ❖ Testing all installations ❖ Define a new site in Dreamweaver	❖ Introduction ❖ Overview of PHP ❖ Overview of MySQL ❖ Installing XAMPP ❖ Installing SQLyog ❖ Installing Dreamweaver ❖ Testing the installations ❖ Define site in Dreamweaver

1. Introduction & getting introduced

2. History:

PHP originally stood for **P**ersonal **H**ome **P**age. It began in 1994 as a set of Common Gateway Interface binaries written in the C programming language by the Danish/Greenlandic programmer **Rasmus Lerdorf**. Lerdorf initially created these Personal Home Page Tools to replace a small set of Perl scripts he had been using to maintain his personal homepage.

3. What is PHP?

PHP (*a recursive acronym for PHP: **Hypertext Preprocessor***) is a computer scripting language, originally designed for producing dynamic web pages. It is for server-side scripting, but can be used from a command line interface or in standalone graphical applications.

While PHP was originally created by Rasmus Lerdorf in **1995**, the main implementation of PHP is now produced by The PHP Group and serves as the de facto standard for PHP as there is no formal specification. Released under the PHP License, the Free Software Foundation considers it to be free software.

PHP is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP is installed on more than 20 million websites and 1 million web servers. It is also the most popular Apache module among computers using Apache as a web server. The most recent major release of PHP was version **5.2.6** on May 1, 2008.

	PHP 4	PHP 5	.NET
Software price	Free	Free	Free
Platform price	Free	Free	$$$
Speed	Strong	Strong	Weak
Efficiency	Strong	Strong	Weak
Security	Strong	Strong	Strong
Webserver	Strong	Strong	Weak(IIS only)
Platform	Any	Any	Win32(IIS only)
Source available	yes	Yes	no

4. PHP vs. ASP?

ASP is not really a language in itself, it's an acronym for Active Server Pages, the actual language used to program ASP with is Visual Basic Script or JScript. The biggest drawback of ASP is that it's a proprietary system that is natively used only on Microsoft Internet Information Server (IIS). This limits it's availability to Win32 based servers. ASP is said to be a slower and more cumbersome language than PHP, less stable as well. Some of the pros of ASP is that since it primarily uses VBScript it's relatively easy to pick up the language if you're already know how to program in Visual Basic. ASP support is also enabled by default in the IIS server making it easy to get up and running. The components built in ASP are really limited, so if you need to use "advanced" features like interacting with FTP servers, you need to buy additional components.

5. Is there an ASP to PHP converter?

Yes, the server-side **» asp2php** <http://asp2php.naken.cc/> is the one most often referred to as well as **» the client-side** <http://www.design215.com/toolbox/translator/> option.

6. PHP vs. Cold Fusion?

PHP is commonly said to be faster and more efficient for complex programming tasks and trying out new ideas. PHP is generally referred to as more stable and less resource intensive as well. Cold Fusion has better error handling, database abstraction and date parsing although database abstraction is addressed in PHP 4. Another thing that is listed as one of Cold Fusion's strengths is its excellent search engine, but it has been mentioned that a search engine is not something that should be included in a web scripting language. PHP runs on almost every platform there is; Cold Fusion is only available on Win32, Solaris, Linux and HP/UX. Cold Fusion has a good IDE and is generally easier to get started with, whereas PHP initially requires more programming knowledge. Cold Fusion is designed with non-programmers in mind, while PHP is focused on programmers. A great summary by Michael J Sheldon on this topic has been posted to the PHP mailing list. A copy can be found at » http://marc.theaimsgroup.com/?l=php-general&m=95602167412542&w=1.

7. PHP vs. Perl?

The biggest advantage of PHP over Perl is that PHP was designed for scripting for the web where Perl was designed to do a lot more and can because of this get very complicated. The flexibility / complexity of Perl makes it easier to write code that another author / coder has a hard time reading. PHP has a less confusing and stricter format without losing flexibility. PHP is easier to integrate into existing HTML than Perl. PHP has pretty much all the 'good' functionality of Perl: constructs, syntax and so on, without making it as complicated as Perl can be. Perl is a very tried and true language, it's been around since the late eighties, but PHP is maturing very quickly.

8. What is MySQL?

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by MySQL AB. MySQL AB is a commercial company, founded by the MySQL developers. It is a second generation Open Source company that unites Open Source values and methodology with a successful business model. The MySQL Web site (http://www.mysql.com/) provides the latest information about MySQL software and MySQL AB.

9. MySQL is a database management system.

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, data-base management systems play a central role in computing, as standalone utilities, or as parts of other applications.

10. MySQL is a relational database management system.

A relational database stores data in separate tables rather than putting all the data in one big storeroom. This adds speed and flexibility. The SQL part of "MySQL" stands for "Structured Query Language." SQL is the most common standardized language used to access databases and is defined by the ANSI/ISO SQL Standard.

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11. MySQL software is Open Source.
Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything. If you wish, you may study the source code and change it to suit your needs. The MySQL software uses the GPL (GNU General Public License), http://www.fsf.org/licenses/, to define what you may and may not do with the software in different situations.

12. The MySQL Database Server is very fast, reliable, and easy to use.
If that is what you are looking for, you should give it a try. MySQL Server also has a practical set of features developed in close cooperation with our users. MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

13. MySQL Server works in client/server or embedded systems.
The MySQL Database Software is a client/server system that consists of a multi-threaded SQL server that supports different backends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs). MySQL AB also provides MySQL Server as an embedded multi-threaded library that you can link into your application to get a smaller, faster, easier-to-manage standalone product.

14. A large amount of contributed MySQL software is available.
It is very likely that your favorite application or language supports the MySQL Database Server. The official way to pronounce "MySQL" is "My Ess Que Ell" (not "my sequel"), but we don't mind if you pronounce it as "my sequel" or in some other localized way.

15. Uses:
MySQL is popular for web applications and acts as the database component of the LAMP, BAMP, MAMP, and WAMP platforms (Linux/BSD/Mac/Windows-Apache-MySQL-PHP/Perl/Python), and for open-source bug tracking tools like Bugzilla. Its popularity for use with web applications is closely tied to the popularity of PHP and Ruby on Rails, which are often combined with MySQL. PHP and MySQL are essential components for running popular content management systems such as Drupal, e107, Joomla!, WordPress and some BitTorrent trackers. Wikipedia runs on MediaWiki software, which is written in PHP and uses a MySQL database. Our Bangladeshi Expert Hasin Hyder on PHP+MySQL informed that, facebook.com uses 800 MySQL database servers for its entire database(But not Oracle or DB2).

16. Top tips for web designs:
    a. Plan your website thoroughly, number of pages, page titles and design theme.
    b. Build your website to your target audience, in terms of style and content.
    c. Design consistency; keep the same design theme throughout your website.
    d. Keep all related website files in the same folder/working directory. This allows you to find any files related to your website and to create a back-up easily.
    e. Always use lowercase for your file/page name.
    f. Use a popular font for your website text as not all computers have the same fonts installed.
    g. Popular fonts are: Arial, Times New Roman, Verdana, Scan Serif, and Tahoma.
    h. Check your website on different PC's at different resolution settings. What might look good on your computer may not be the same as others.
    i. Menu navigation should be very easy to use!
    j. Titles and page heading are very important. Keep them different on all pages.
    k. Meta keywords and met description should also be different and concise on all pages. Keep keywords down to around 10-15 related words and separate with a comma.
    l. Never use a black background on a sales or selling website!

m. Always check spelling and grammar on your website copy text.
n. Always keep a back-up copy of all your website files on a CD which is kept somewhere safe!
o. There should be no spaces in filename.
p. All HTML files should be in .php extension.
q. No php file should be more than 8kb.
r. Avoid using large or multiple graphics on the same page. No image should be more than 40kb.
s. Spaces should be replaced with underscores.

When designing a website, you need to focus on two things over and above everything else:
1. Helping the visitor find the information they need as quickly as possible.
2. Presenting this information in the most readable format.

17. Installation of XAMPP:

XAMPP is a free package available for download and use for various web development tasks. All **XAMPP** packages and add-ons are distributed through the Apache Friends website at the address: http://www.apachefriends.org/.

Once you got the **XAMPP-win32-1.6.6a-installer.exe** file, just install it like other windows applications. Usually your web directory will be **C:\Program Files\XAMPP\htdocs.** Now open your browser and write **localhost** in the address box. You will get a splash screen like this:

FIGURE 1: XAMPP splash screen.

Click on English to select the language as English and you are done! now you can create new database and tables using **phpMyAdmin**.

18. Installation of SQLyog:

It's easy to install like all other windows applications. Simply run the setup.exe file and follow the instructions.

19. Direct Connection using MySQL C API:

This is by far the fastest way to connect and manage your MySQL server. This is the preferred method if you are not concerned about your MySQL traffic being spoofed. However, this requires direct access to your MySQL server.

To connect using this method, just select Server tab in the connection window. Fill in all the details about the server you want to connect i.e. host address, user name, password and the port number. If you don't give any details SQLyog will try to connect to localhost with the default user as root and port number 3306. You must connect to a MySQL Server before you can perform any activities with the software. SQLyog's connection manager lets you to save unlimited Connection Details.
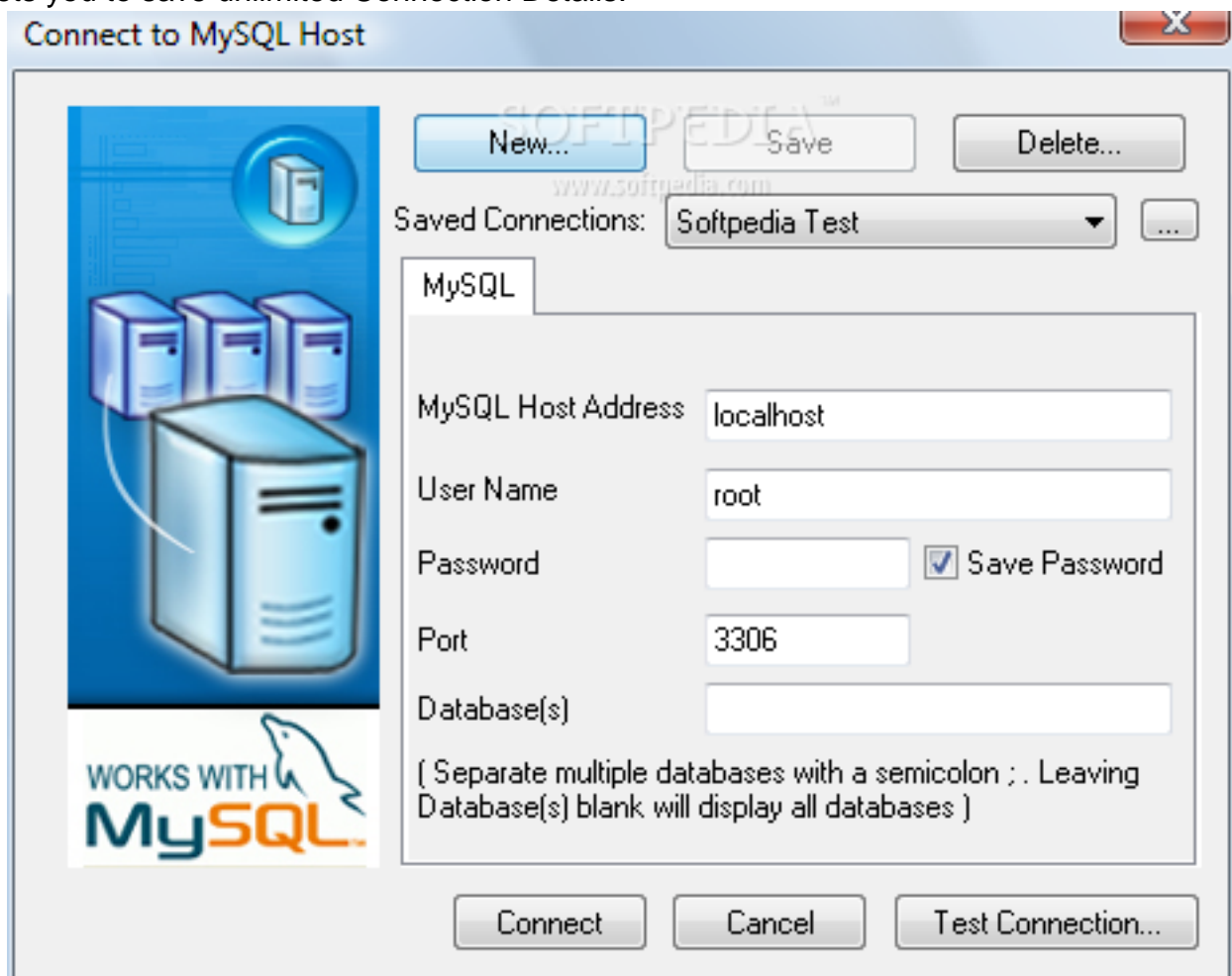

Figure 2: SQLyog Connection

After you have connected to an instance of MySQL, you can make additional connections by selecting the New Connection option from the File menu.

Saved Connections: Select the connection name from the list.

MySQL Host Address: To Change the connection, click on the ellipsis button and edit the connection name, click OK button to save the changed connection name.
Specify a host name where the database is situated or the IP address of the server.

User Name: Specify a user name for connecting to the database server. Note: This is MySQL username. Not your FTP or web server username.

Password: Type MySQL user Password

Save Password: Check this option if you want SQLyog to save your MySQL password and to stop asking you to enter it in the future.

Port: Define a TCP/IP port for connecting to the database server.

Databases: Database name. You may enter several database names separated by semicolon (like db1,db2). If you do not enter the database name, all the database names would be listed, to select from.

20. Installation of DW:

It's easy to install like all other windows applications. Simply run the setup.exe file and follow the instructions.

21. Defining a Site in Dreamweaver to organize your site's file structure:

Dreamweaver is a tool to create websites. So the first thing you have to do is define a site. This helps Dreamweaver to organize the files used in this site.

Step 1 : Create a folder on your hard disk and name it. You can copy in a few images or files if you want.

Step 2 : Click on **Site>Manage Sites>New>Site**. The following window will appear where you can enter the site details under the category Local Info.
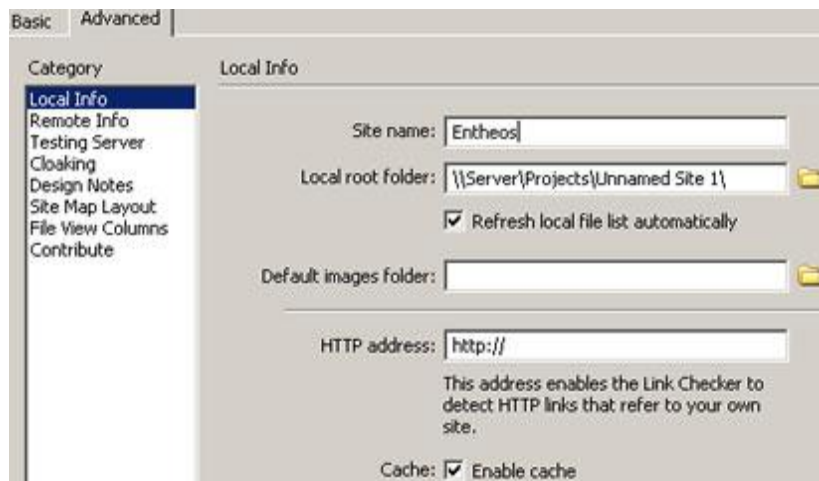

Figure 3: Site Definition

Site Name - Type in your site name here

Local Root Folder - This is where all the files for the site are stored, the one which you created earlier. Browse for this folder and click on select. Refresh local file list automatically - It's good to keep this option checked so that any new images or files added to your site will be refreshed automatically and you can access it.

HTTP Address - Enter your site url here so that Dreamweaver can check your links

Enable Cache - This will be default checked. Next click OK. Another screen will be displayed with your site name in the list. Click **Done**.

Step 3 : Now Dreamweaver displays the folder contents in the Files panel on the right side. The files are well organized now and Dreamweaver knows where to search for files. Now you are ready to start developing web pages.