LESSON H1_EN. INTRODUCTION TO PHP AND MYSQL FOR eBUSINESS / eCOMMERCE. PHP AND MYSQL INSTALLATION.

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After the learning this lesson you will be richer with following knowledge.
 PHP AND MYSQL INSTALLATION.

CONTENT OF THE LESSON
 1. Overview
 2. Introduction to PHP and MySQL.
 3. Apache PHP and MySQL installation
 4. Text/code editor

LEARNING OBJECTIVES:
After learning this lesson you will accomplish the ability:
 To explain what are PHP, MySQL and Apache.
 To explain why you need Apache, PHP, MySQL and a text editor to develop a web site.
 To install Apache, PHP and MySQL.

1. Overview

Welcome, to the world of **PHP** and **MySQL**!

If you are a beginner in web development, with the help of these five lessons you have the possibility to learn quickly and with minimum efforts what are your needs and how to:
 develop your own ebusiness/ecommerce web site
 develop your own estore under an ebusiness/ecommerce website named www.magazinvirtual.ro.

These lessons are not a substitute of PHP and MySQL official documentations, which contains all the facilities and functions.

This content was written in such a way to allow beginners to be acquainted with few PHP and MySQL bases elements. We hope to start writing simple scripts and make a small database in a few hours.

So, let's start and see that is true what we've said!

2. Introduction to apache, php and mysql for eBusiness / eCommerce.

2.1. What is and why using apache?

To have a web site visible over the internet, you need a web server. A web server is an application that manipulate html files. The web server is responsible to accept requests from the users, through a web browser. When you, as a user, type an URL (Uniform Resources Locator) in the browser you are making a request of a html file. This request will arrive at the server where the site is hosted. The web server understands your request and analyze it. As a result the web server will send to your browser requested page. The communication between web server and your browser is made via a protocol named HTTP.

The most popular web server on the internet is Apache. Certainly we will use it, too.

We choosed Apache and not another solution for the following reasons:
 Apache is free.
 Apache is open source
 Apache is a web server that works fine with UNIX Windows, and other platforms.
 Apache is the most popular web server on the Internet.

2.2. What is and why using php?

PHP (short for Hypertext Pre-processor) is one of the most popular scripting languages. PHP code can be embedded within your HTML code. Web pages containg PHP scripts are dinamically pages and ought have the extension ".php".

If a PHP page is accessed, the PHP code is detected, the commands inside of PHP code is executed by the web server and result is transformed into common HTML code which can be read by the browser. Because of this the users can not view the PHP code in the source of the page.

PHP is a powerful tool for making dynamic and interactive web pages. It is used, for example, into an ecommerce web site with product catalogs. It allows you to get and put products information in a database and showing products information on HTML pages.

We have chosen PHP and not another solution for the next reasons:
- PHP is free.
- PHP runs on Linux, Windows, Unix and other platforms.
- PHP can manage databases of all sorts, like MySQL, MS SQL, Oracle, etc.
- PHP is compatible with Apache.
- There is a variety of technical support for PHP (that is very important for you).
- And essentially for you, is that PHP supports ecommerce site developments

2.3. What is and why using mysql?

MySQL is a relational database management system and is the most powerful and popular open source database in the world. Under GNU general Public License (GPL) is available as free software. However, there exists a second license under commercial licensing when MySQL is used in commercial web sites.

A relational database memorizes the records in separated tables instead of one. MySQL is capable to support about millions of records. The tables are the key for an efficiently, flexible and fast complex relational database. The tables are interconnected through relations. They allow you, in one query, to select and put up associated records.

MySQL is a multi-user server (permits the access to data of several users at the same time) and multi-thread (several queries at the same time).

A database allows you to get in, to search, to sort and to retrieve lots of data in a very efficient way. A database is absolutely necessary to be used in an ecommerce web site.

MySQL uses SQL (Structured Query Language) which is the most common, simple and popular standard language for databases interrogation. With SQL commands you can to add, modify and delete data in database. Together with HTML and PHP languages, MSQL becomes an even greater tool for building dynamic web pages.

We have chosen MySQL and not another solution for the following reasons:
- MySQL is free, but it is necessary to purchase a licence when you create websites for commercial purposes.
- MySQL is easy to use, flexible, fast and safe.
- MySQL is one of the best and in the same time the most used database in the world.

3. Apache, PHP and MySQL installation

3.1. Apache, PHP and MySQL installation for windows

To install an Apache web server and moreover to add MySQL and PHP it is not so easy. Nevertheless, to install XAMPP, which is a fully featured AMPP (**A**pache **M**ySQL, **P**HP, **P**erl) package, is really easy. So to install XAMPP you must follow the next steps:

1. Create a new folder in your computer in your Local Disk (C:), named "apachefriends", where Apache, PHP and MySQL will be installed.

2. Go to URL: http://www.apachefriends.org/en/xampp-windows.html, scroll down to section **XAMPP for Windows 1.5.0-pl1,** and click on link: **Installer [MD5]** - 26 MB Installer.
(the figure 3.1. will help you to localize where you must click the link above)

Fig. 3.1. Screenshot showing the **XAMPP for Windows 1.5.0-pl1** version for download

(*Note:* "**Installer [MD5]"** *can be different at time when you try to download Apache. From time to time, a new version is available. Choose the most recent. (XAMPP is regularly updated to incorporate the latest releases of Apache/MySQL/PHP*)

3. Now you will be taken to http://prdownloads.sourceforge.net/xampp/xampp-win32-1.5.0-pl1-installer.exe?download , in which you will be appeal to select a mirror. You can choose any mirror you want. Click on link: "Download"

4. Wait to finish the download (it takes a few minutes). When download is complete (see fig.3.2.), click RUN button, and go on with the installation.
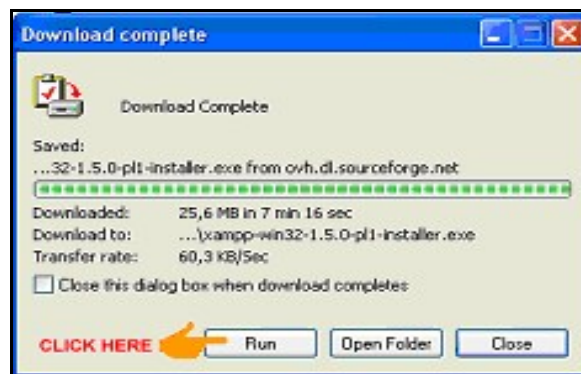

Fig. 3.2. Screenshot showing that the download of XAMPP is complete

5. Execute file named **xampp-win32-1.5.0-pl1-installer,** clicking on the "Next >" button (see fig. 3.3.).

6. Choose the location of the destination folder clicking "Browse" button and select your created folder C:\apachefriends (see fig. 3.4.) Then click "OK" and then "Install" buttons and follow the instructions on the screen.
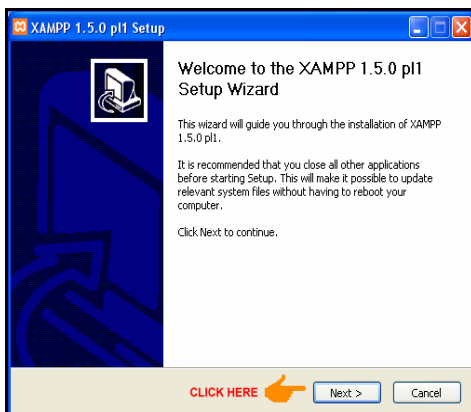

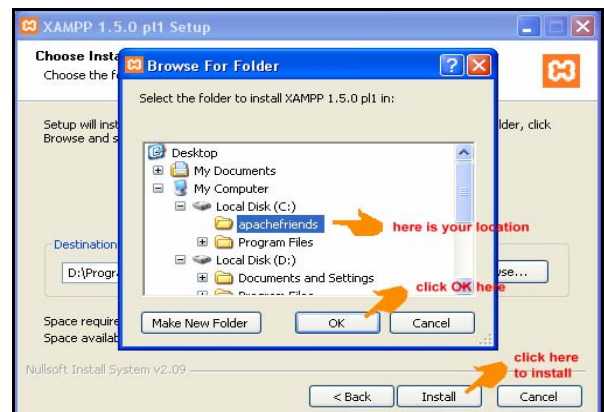Fig.3.3. Start the installation of XAMPP 1.5.0-pl1

Fig.3.4. Selecting the folder to install : C:\apachefriends

Whenever you need to work for your site execute program **xampp_start**. For this you must click on Start (to your computer) than follow the way: All programs >apachefriends>xampp>CONTROL XAMPP SERVER PANEL (see fig. 3.5.). Click on "Start" to Apache and MySQL (see fig. 3.6.) that Apache and MySQL are running.

Fig. 3.5. Control panel - Start: Apache and Mysql

Fig. 3.6. Control panel - Apache and MySQL are running
(From here you can stop: Apache and MySQL)

This is all. APACHE, PHP & MySQL are running now on your machine. To test this, Launch Internet Explorer and type the URL: http://localhost/. If you are redirected to the URL http://localhost/xampp then you are a winner. Your installation succeeded.

4. Text / code editor

As we said in addition with Apache, PHP and MySQL you need to have a text /code-editor.

We submit to your attention the following possibilities:
- using a simple text editor supplied with Windows; this one is Notepad
- using one more advanced code-editor, such as HTML-Kit

We have chosen to use HTML-Kit. It is a free, fully featured and highly customizable text editor. It can be used to create, edit, validate, preview and publish web pages and scripts, including PHP and HTML.
HTML-Kit will help you to create quickly your first professional site.

To work with HTML-Kit, you must download and install it. For this you must follow the next steps:
1. go to url:http://www.chami.com/html-kit/download/
2. scroll down to section *Download* **HTML-Kit Build 292** (292-2005.11.23)
3. click on link Download HTML-Kit save to your computer and launch file **HKSetup.exe** (see fig. 4.1.)
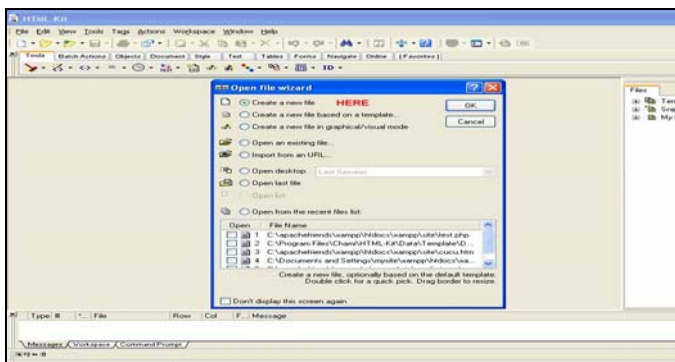

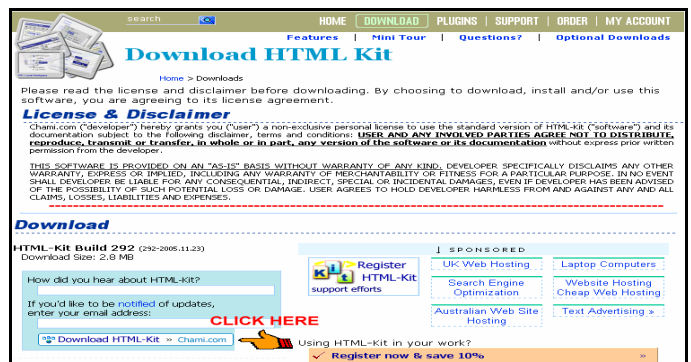Fig.4.1. Screenshot from where downloads HTML-kit

Fig. 4.2. HTML-Kit after installation

You can open a new file where you'll introduce your text / code. For this, you must check off "Create a new file" then click OK button.
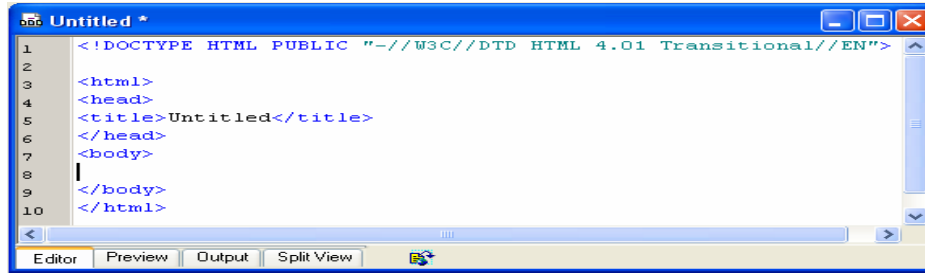
Fig. 4.3. New document, by default, in HTML-Kit

As you see HTML-Kit will help you from the beginning, it has by default the essential tag of html document.
Now with all installed on your computer you can continue with the next lessons and learn MySQL and PHP.

Key Point Summary Conclusions and Recommendations

XAMPP is very easy to install and to use. After you have installed on your computer go to http://localhost/xampp/. Open each links from the left frame to see what contains.
Having an advanced text editor as HTML-Kit, will be very helpful for you in your development. It will be better if you try try to learn how it works before starting developing your web site.

Study Guide
ESSENTIAL QUESTIONS FOR THE VERIFICATION OF THE ACCOMPLISHED KNOWLEDGE

1. What is Apache?
2. What is PHP?
3. What is MySQL?
4. What is XAMPP?
5. Why using XAMPP?
6. What is and why using HTML-Kit?

BIBLIOGRAPHY. REFERENCES.

[1.] Ben Laurie &Peter Laurie, *Apache, the Definitive Guide*, Publisher: O'Reilly; 2 edition (May 15, 1999), ISBN 1-56592-528-9
[2.] Peter Wainwright, *Professional Apache* 2.0, Publisher: WROX Press; 1st edition (May 2002), ISBN: 1-86100-722-1

SUPPLEMENTARY IMPORTANT BIBLIOGRAPHY. REFERENCES.

[SUP.1]http://www.apache.org/ - the Apache software foundation
[SUP.2]http://www.php.net/ - everything you need to know about PHP
[SUP.3]http://www.mysql.com/ - everything you need to know about MySQL
[SUP.4]http://www.chami.com/ - resources for web developers and Internet users
[SUP.5]http://www.chami.com/html-kit/license/ - HTML-Kit Personal License
[SUP.6]http://www.chami.com/html-kit/download/ - HTML-Kit you will find here for download

SUPPLEMENTARY INDICATIONS ABOUT THE CONTENT OF THE LESSON

Before to start with following lessons it will be very good for you to open HTML-Kit and get the feel of it. It will help you very much if you learn to work with it.

ANSWERS TO THE QUESTIONS

1. Apache is an open source HTTP web server that works fine with Unix, Windows, and other platforms.
2. PHP (short for Hypertext Pre-processor) is one of the most popular scripting languages. PHP code can be embedded within your HTML code
3. MySQL is a relational database management system. MySQL is a multi-user, multi-thread relational database management system.
4. XAMPP is a free software package containg Apache , MySQL, PHP and Pearl.
5. We are using XAMPP because it is free and its ease in installing Apache , MySQL and PHP.
6. HTML-Kit is an advanced code-editor for making web pages. It can be used to create, edit, validate, preview and publish web pages and scripts. HTML-Kit is a fully featured, highly customizable and free for individual end-users.

WORDS TO THE LEARNER:
A good beginning makes a good ending