

PHP Background:

PHP originally stood for Personal Home Page but it now stands for the recursive initial PHP: Hypertext Preprocessor is a general-purpose programming language originally designed for web development. It is use to internet programming language or web page development. PHP Server-side programming language or is an open source program. PHP is a scripting language that is executed from a web server.

PHP is a general-purpose, procedural, imperative Internet programming language developed in 1994, originally created by Rasmus Lerdorf. The PHP reference implementation is now produced by The PHP Group. Rasmus Lerdorf, who wrote the original Common Gateway Interface (CGI) component, together with Andi Gutmans and Zeev Suraski, who rewrote the parser that formed PHP 3.

PHP 5 was released, powered by the new Zend Engine II. PHP 5 included new features such as improved support for object-oriented programming, the PHP Data Objects (PDO) extension (which defines a lightweight and consistent interface for accessing databases), and numerous performance enhancements. During 2014 and 2015, a new major PHP version was developed, which was numbered PHP 7.

PHP has now become a widely used professional language for various reasons.

- Easy to learn and install setup/environment.
- Structured and object-oriented programming language
- It produces Dynamic web Development With connected many databases engine.
- Easy to handle and manage for web development application with different Frameworks.

Web Server

A web server is server software application. That is an interpreter for server side languages or scripts like PHP, ASP, Java Servlet and others. The primary function of a web server is to store, process and deliver web pages to clients. The communication between client and server takes place using the Hypertext Transfer Protocol (HTTP). Pages delivered are most frequently HTML documents, which may include images, style sheets and scripts in addition to the text content.

The process is an example of the client/server model. All computers that host Web sites must have Web server programs. Leading Web servers include Apache (the most widely-installed Web server), Microsoft's Internet Information Server (IIS) and nginx (pronounced engine X) from NGNIX. Other Web servers include Novell's NetWare server, Google Web Server (GWS) and IBM's family of Domino servers.



File servers, database servers, mail servers, and web servers use different kinds of server software. Each of these applications can access files stored on a physical server and use them for different purposes. The job of a web server is to serve websites on the internet. To achieve that goal, it acts as an intermediary between the server and client machines.

Apache Web Server.

Apache is an open-source and free web server software. The official name is Apache HTTP Server, and it is maintained and developed by the Apache Software Foundation. It allows website owners to serve content on the Web, hence the name “web server”. It is one of the oldest and most reliable web servers, with the first version released in 1995. When someone wants to visit a website, they enter a domain name into the address bar of their browser. Then, the web server delivers the requested files by acting as a virtual deliveryman.

Although we call Apache a web server, it is not a physical server, but rather software that runs on a server. Its job is to establish a connection between a server and the browsers of website visitors (Firefox, Google Chrome, Safari, etc.) while delivering files back and forth between them (client-server structure). Apache is cross-platform software; therefore, it works on both UNIX and Windows servers.

When a visitor wants to load a page on your website, for instance, the homepage or your “About Us” page, their browser sends a request to your server and Apache returns a response with all the requested files (text, images, etc.). The server and the client communicate through the HTTP protocol and Apache is responsible for the smooth and secure communication between the two machines.

Scripting language

An embedded style language is a kind of computer language whose commands appear intermixed with those of a base language. Such languages can either have their own syntax, which is translated into that of the base language, or can provide an API with which to invoke the behaviors of the language. Embedded domain-specific languages are common examples of embedded style languages that rely upon translation. Embedded style languages that are invoked via an API are distinguished from software libraries by the existence of a runtime system.

JavaScript and PHP both referred to as embedded languages because code for both languages is embedded within a Web Page (either an HTML document). You type this code directly into a Web page as a separate section or block. A Web page document containing PHP code must have an extension of .php. Whenever a request is made for a document with an extension of .php, the Web server sends the file to the scripting engine for processing. The scripting engine then processes any PHP code it encounters. Although PHP files use an extension of .php, they can contain the same HTML elements you would find in a static Web page. The scripting engine ignores any non-PHP code it encounters, and only processes the PHP code it finds with PHP code blocks. The web server then returns the result of the PHP script and any HTML elements found in the PHP file to the client, where the client’s Web browser renders the file. This mean means that PHP code is never sent to a client’s Web browser; only the resulting Web page that is generated from the PHP code and HTML elements found within the PHP file are returned to the client.

What is XAMPP?

The XAMP stand for X will change depending on the operating system Apache, MariaDB/MySQL, PHP and Perl. It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. XAMPP is the most popular PHP development environment. XAMPP is a completely free Apache distribution containing MariaDB, PHP, and Perl. The XAMPP open source package has been set up to be incredibly easy to install and to use.

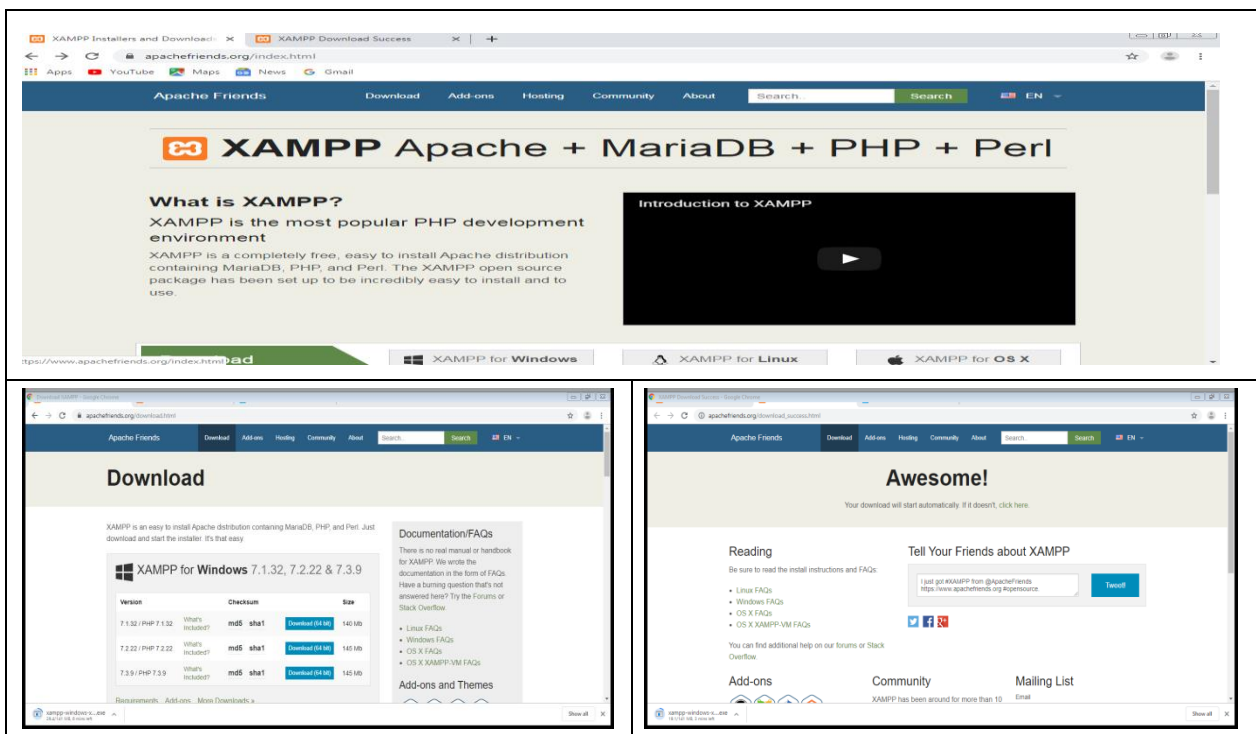
Understanding how to install and configure the software required for creating and delivering is consider a critical skill for Web developers. Even if you have access to a remote server running Apache, PHP, and MYSQL, you may prefer to develop and test your PHP scripts on a local server before uploading them to the production environment.

Firstly we refer to you install XAMPP package because this package install and configure PHP web development environment. This is open source package for you can download and install Web server running the Apache web server, the MySQL database management system tool, and PHP scripting engine with open source package, referred to as a XAMP. You can install WAMP on a window computer, LAMP on a Linux computer, and MAMP on Macintosh computer.

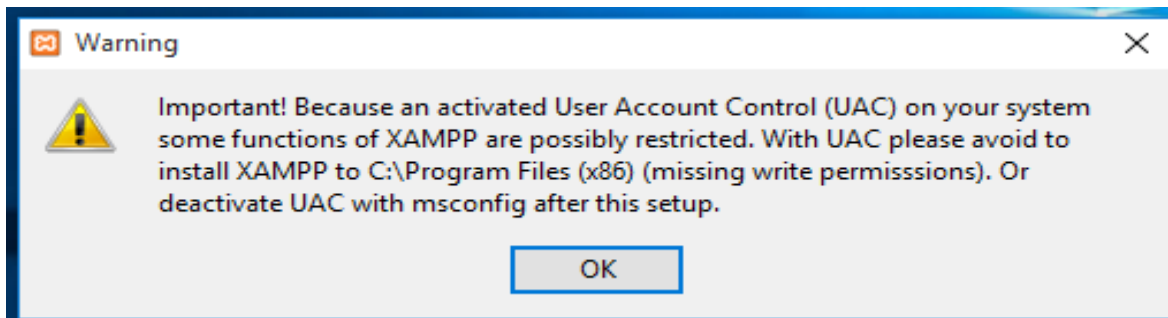
To install **XAMPP** package on a windows computer:

Setup & Installation

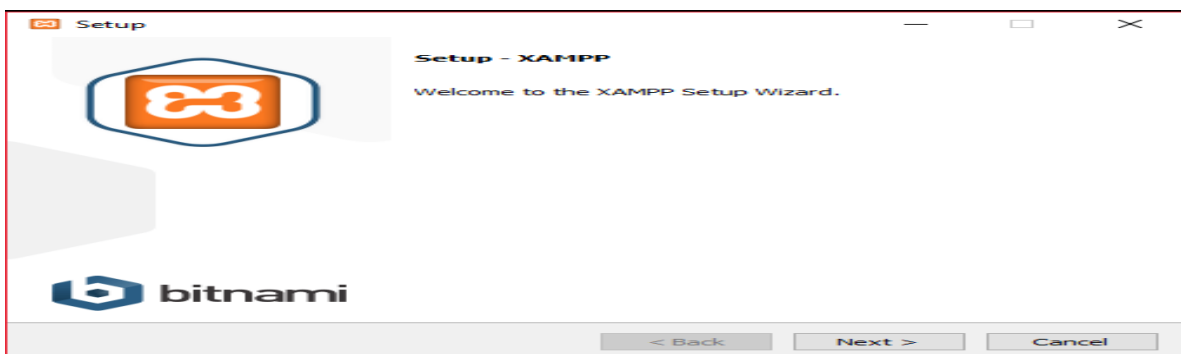
1. Type this URL **<https://www.apachefriends.org/index.html>** on address bar of your browser. Click the download link, and select download XAMPP Package then save the ***xampp-windows-x64-7.1.30-4-VC14-installer*** executable file on your download folder.



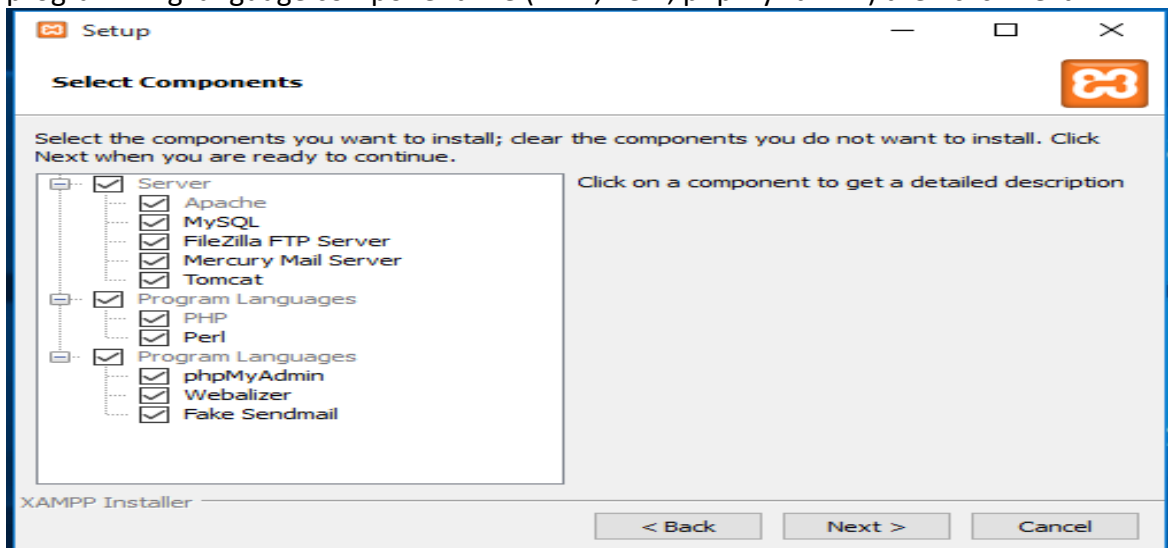
2. After the download completes, run the *xampp-windows-x64-7.1.30-4-VC14-installer* application file on your computer then to begin the installation process. If you have previous version of XAMPP installed on your computer, you may be prompted to delete the older version before continuing.
3. You will see splash screen BITNAMI and display warning alert then Click OK button.



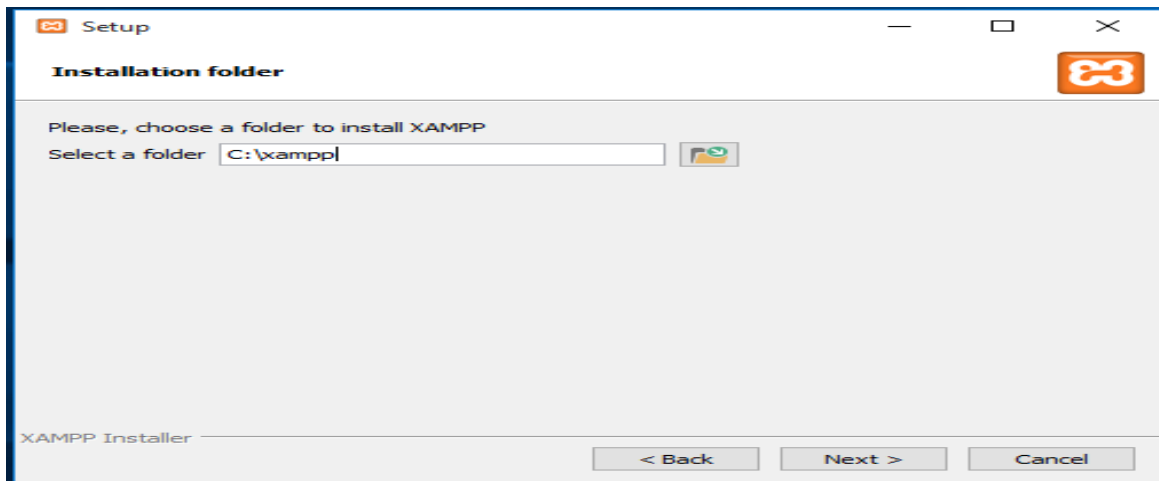
4. You will see setup screen and then Click Next.



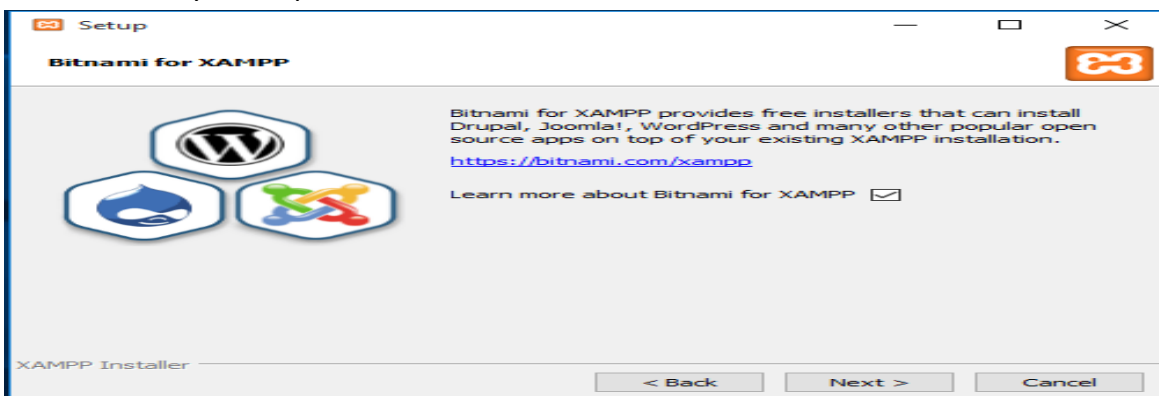
5. You will see next screen for select component and you select check boxes for required component for server like (Apache , MySQL, FileZilla FTP server, Tomcat), and other programming language component like (PHP, Perl , phpMyAdmin) then click next.



- Next screen appear choose the installation folder, by default `c:\xampp` then Click Next button.



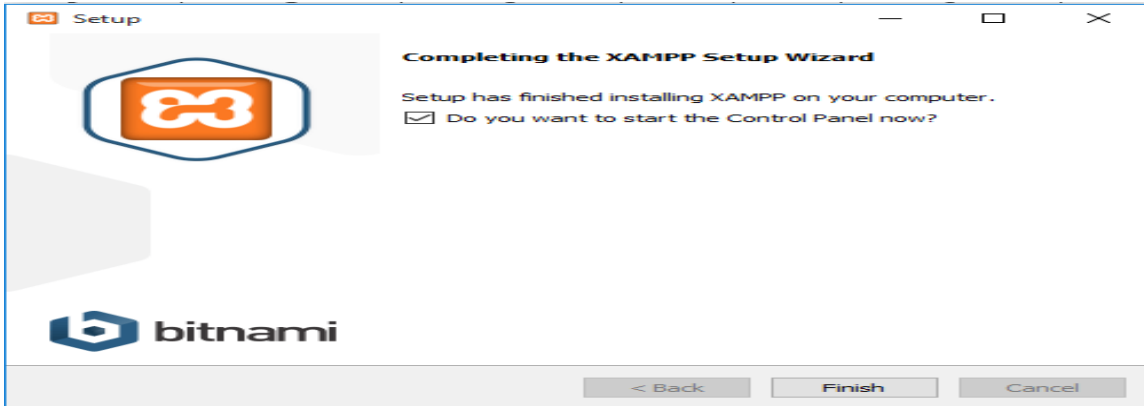
- In the next screen provide Bitnami for *xampp* free installers that can install Drupal, Joomla, WordPress and many other popular open source apps on top of your existing *xampp* installation. If your required then click check box otherwise no then Click Next button.



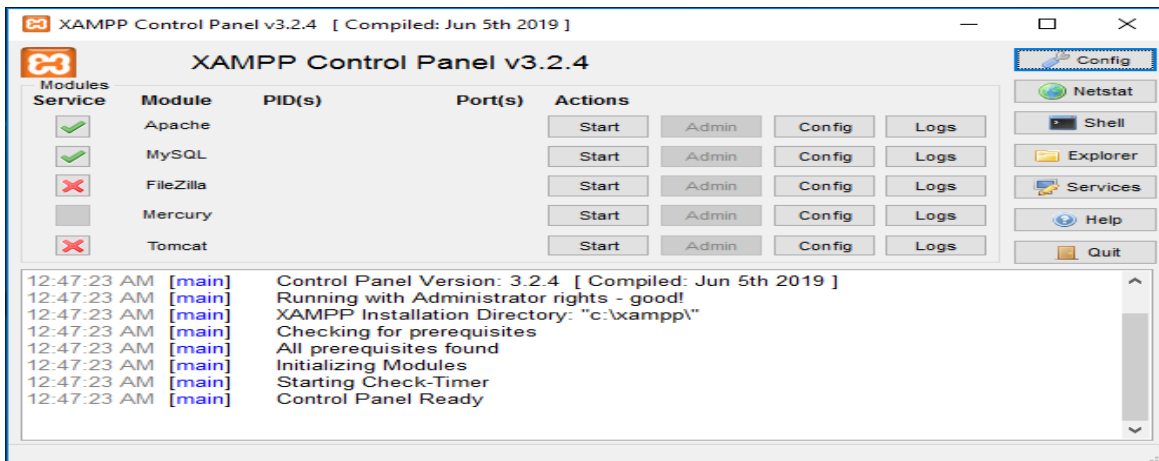
- The next screen ready to installation then click next button and then start installation process on your computer.



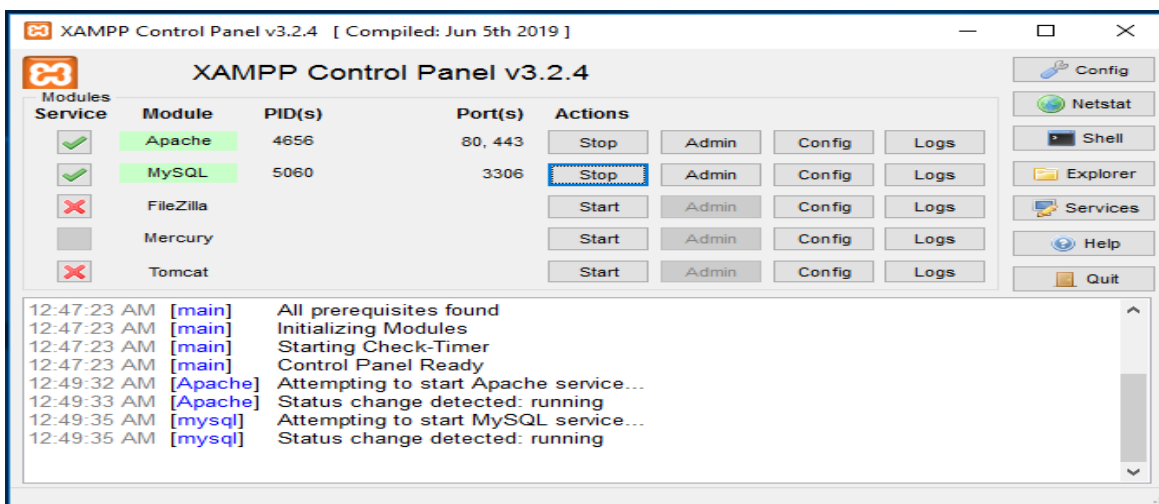
- After installation process complete, you see completing the *xampp* setup wizard and click the finish button.



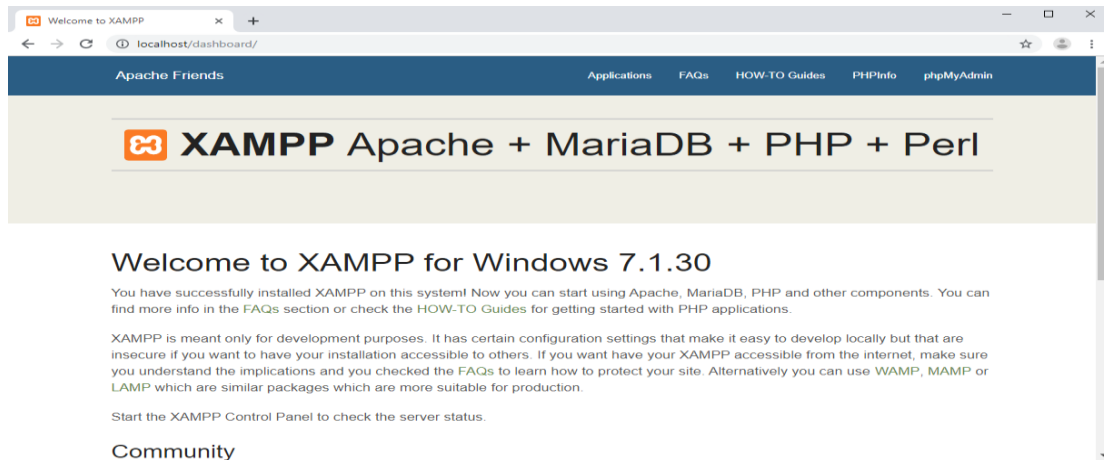
10. After the select language US or other then select US and Click Save button and will show **xampp-control panel** here you can start and stop services of Apache , MySQL and others apps.



11. We can from here start or stop services of different servers After Apache and MySQL services Start



it mean your xampp app successfully install and configure. Now you start PHP and MySQL programming.



After you install the *xampp* package, you can launch the application as you would any other Windows application. Click the start button on the taskbar and select programs XAMP package app start. The xampp app icon appears in the system tray on the taskbar. With the application running, you can click the xampp packager icon to display available menu option. If you click apache or MySQL under the xampp-control panel, you can the verify that service is running.

Testing the first PHP program Hello world!

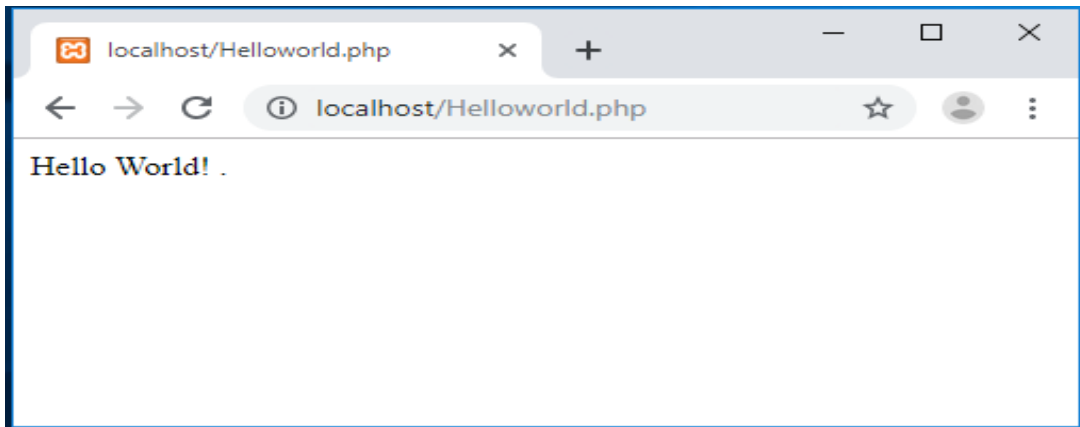
After installing your *xampp* server package, you should test your configuration to ensure that everything was installed correctly. Again, depending on the platform, the actual steps will vary by system. The following steps are the windows operating system.

Write a hello world program, first you open any type of text editor (Notepad) and type this program same as below and save Helloworld.php in the c:\xampp\htdocs folder.

```
<?php
    echo "Hello World! .";

?>
```

1. Navigate to the c:\xampp directory. You will see a number of files and folder that *xampp* package app requires to *xampp-control* panel run the application.
2. Open the *htdocs* folder this is a root Web folder on your local machine. By default, the Web folder contains one PHP file named "*Helloworld.php*". This file stored inside the *htdocs* folder it can be displayed in your browser.
3. To display *Helloworld.php* in the browser, open Chrome browser and enter *http://localhost/Helloworld.php* in the location URL bar. Than you will see the Helloworld.php program file runs on the browser.



4. If above result show on your browser it mean **xampp** environment successfully configure and Apache server is now running.

Exercise

Theory Questions.

1. What is a PHP?
2. State some features of “PHP” Language.
3. Write names most commonly of Web Server.
4. What are the reasons behind the development of PHP language?
5. Why we have to learn PHP programming, share your opinion?
6. What do understand by the term “Web Server”?
7. What is *xampp*?
8. Define protocols?
9. What do you mean by HTTP and IP protocols?
10. Explain why you do not see any PHP code when you view the source code of a PHP page in the browser.
11. Define the term “embedded language”?
12. What do you mean by scripting languages?

Practical Questions.

1. Write steps of xampp installation or setup process.
2. Write PHP code to display your Roll Number, Course Name and Technology Name on the browser.

Objective and MCQs:

1. What is the default extension that most Web server uses to process PHP script?
 - a) .html
 - b) .php
 - c) .xhtml
 - d) .ini
2. Who is invented of PHP language?
 - a) Denis Retchie
 - b) Rasmus Lerdorf
 - c) John Baker
 - d) Andi Gutmans
3. Latest version of PHP
 - a) 4.0
 - b) 5.0
 - c) 7.3
 - d) 7.0
4. Abbreviation of URL
 - a) Unified Resource location
 - b) Uni Resource locator
 - c) Uniform Resource Locator
 - d) United form locator

5. CGI stand for
 - a) Common Gateway Interface
 - b) Command Gateway interface
 - c) Circle Gate interface
 - d) Common Gate interface

6. PHP 7 version was developed.
 - a) 1995
 - b) 1999
 - c) 2014
 - d) 2018

7. The first version released of Apache.
 - a) 1990
 - b) 1992
 - c) 1995
 - d) 1999

8. Web Server acts as a middleman between the
 - a) Server and Browser
 - b) Server and Client machines.
 - c) Browser and Client.
 - d) Client to Client.

9. The apache official name is
 - a) Apache HTTP Server.
 - b) Apache Foundation
 - c) Apache Server
 - d) Apache Software Foundation.

10. WAMPP stand for
 - a) Linux, Apache, MariaDB/MySQL, PHP and Perl
 - b) Window, Apache, MariaDB/MySQL, PHP and Perl
 - c) Macintosh, Apache, MariaDB/MySQL, PHP and Perl
 - d) None all above.

11. PHP, originally derived from
 - a) Preprocessor Hyper Text Programming.
 - b) Personal Home Program
 - c) Personal Home Page
 - d) Hypertext preprocessor

12. PHP, program file save normally in _____ folder of Xampp environment
 - a) www
 - b) temp
 - c) php
 - d) htdocs