



ARM Based Microcontroller Web Development

Lecture 17



Advanced RISC Machines

Introduction

01

Web Development

Light Bulb

we will make a light-bulb web page to send values to a text document file and retrieve values to connect it with the kit.



Light Bulb



PHP

PHP is a general-purpose scripting language geared towards web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. The PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive initialism PHP: Hypertext Preprocessor.



HTML

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.

HTML 02

Web Development

HTML

HTML (HyperText Markup Language) is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation (CSS) or functionality/behavior (JavaScript).

"Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.

HTML uses "markup" to annotate text, images, and other content for display in a Web browser. HTML markup includes special "elements" such as `<head>`, `<title>`, `<body>`, `<header>`, `<footer>`, `<article>`, `<section>`, `<p>`, `<div>`, ``, ``, `<aside>`, `<audio>`, `<canvas>`, `<datalist>`, `<details>`, `<embed>`, `<nav>`, `<output>`, `<progress>`, `<video>`, ``, ``, `` and many others.

HTML Syntax

```
o.html
Users > abdelrahmanhossam > Desktop > o.html > ...
1  <!DOCTYPE html>
2  <HTML lang="en">
3      <head>
4          <meta charset="UTF-8">
5          <meta name="viewport" content="width=device-width, user-scalable=
6              no-initial-scale=1.0, maximum-scale=1.0, minimum-scale=1.0">
7          <meta http-equiv="X-UA-Compatible" content="ie=edge">
8          <title>IOT</title>
9      </head>
10     <body>
11
12     </body>
13 </HTML>
```


HTML Syntax

```
10  <body>
11      <form method="" action="">
12          <input type="radio" name="iot" value="on">
13          <label>on</label>
14          <br>
15          <input type="radio" name="iot" value="off">
16          <label>off</label>
17          <br>
18
19          <input type="submit" value="click">
20      </form>
21  </body>
```

Open Tag

Sent to PHP

name="value" its called Attribute

Closing Tag

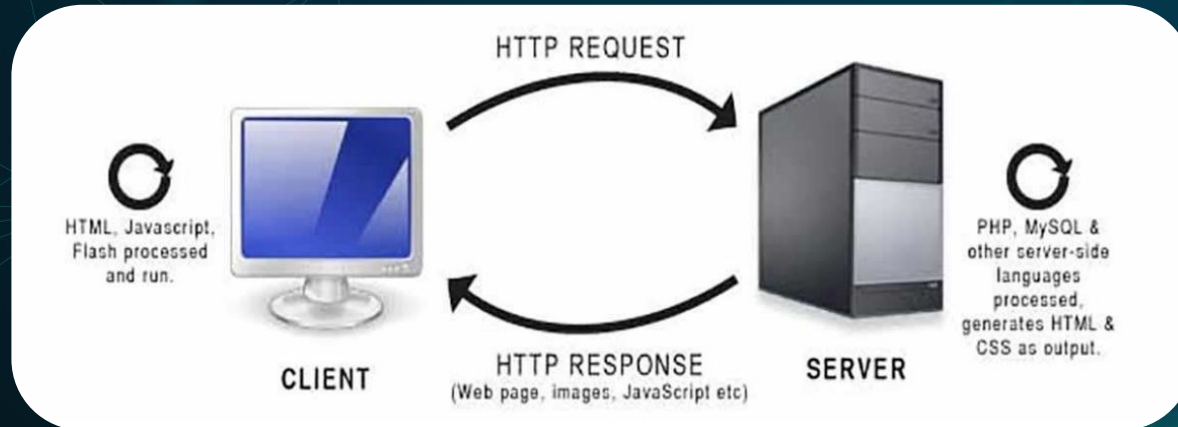
PHP 03

Web Development

PHP

PHP is a popular general-purpose scripting language that is especially suited to web development. It's a powerful tool for making dynamic and interactive Web pages, a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP. PHP 8 is the latest stable release.

Fast, flexible and pragmatic, PHP powers everything from your blog to the most popular websites in the world.



PHP Syntax

o.html a.php

Users > abdelrahmanhossam > Desktop > a.php

```
1  <?php
2  $action = '';
3  if(isset($_GET['iot'])){
4      $action=$_GET['iot'];
5  }else{
6      $action='0';
7  }
8  if($action == '1'){
9      echo '<img src ="on.png" style="height:50vh;display:block;margin:0 auto">';
10     file_put_contents (filename: 'value.txt', $action);
11 }elseif($action == '0'){
12     echo '<img src ="off.png" style="height:50vh;display:block;margin:0 auto">';
13     file_put_contents (filename: 'value.txt', $action);
14 }
15 ?>
16
```

XAMPP 04

Web Development

XAMPP

To make a new server side project and local server to test your simple web page go to <https://www.apachefriends.org/index.html> And download it .



The screenshot shows the XAMPP Apache Friends website. The header includes navigation links: Apache Friends, Download, Add-ons, Hosting, Community, About, and a search bar. The main heading is "XAMPP Apache + MariaDB + PHP + Perl". Below this, there is a section titled "What is XAMPP?" which states that XAMPP is the most popular PHP development environment and is a completely free, easy-to-install Apache distribution containing MariaDB, PHP, and Perl. To the right of this text is a video player titled "Introduction to XAMPP" showing the XAMPP logo. At the bottom, there are three download buttons for Windows, Linux, and OS X, all version 7.4.7 (PHP 7.4.7). A green button labeled "Download" with the text "Click here for other versions" is also present.

Apache Friends Download Add-ons Hosting Community About Search.. Search EN

XAMPP Apache + MariaDB + PHP + Perl

What is XAMPP?

XAMPP is the most popular PHP development environment

XAMPP is a completely free, easy to install 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.

Introduction to XAMPP

Download
Click here for other versions

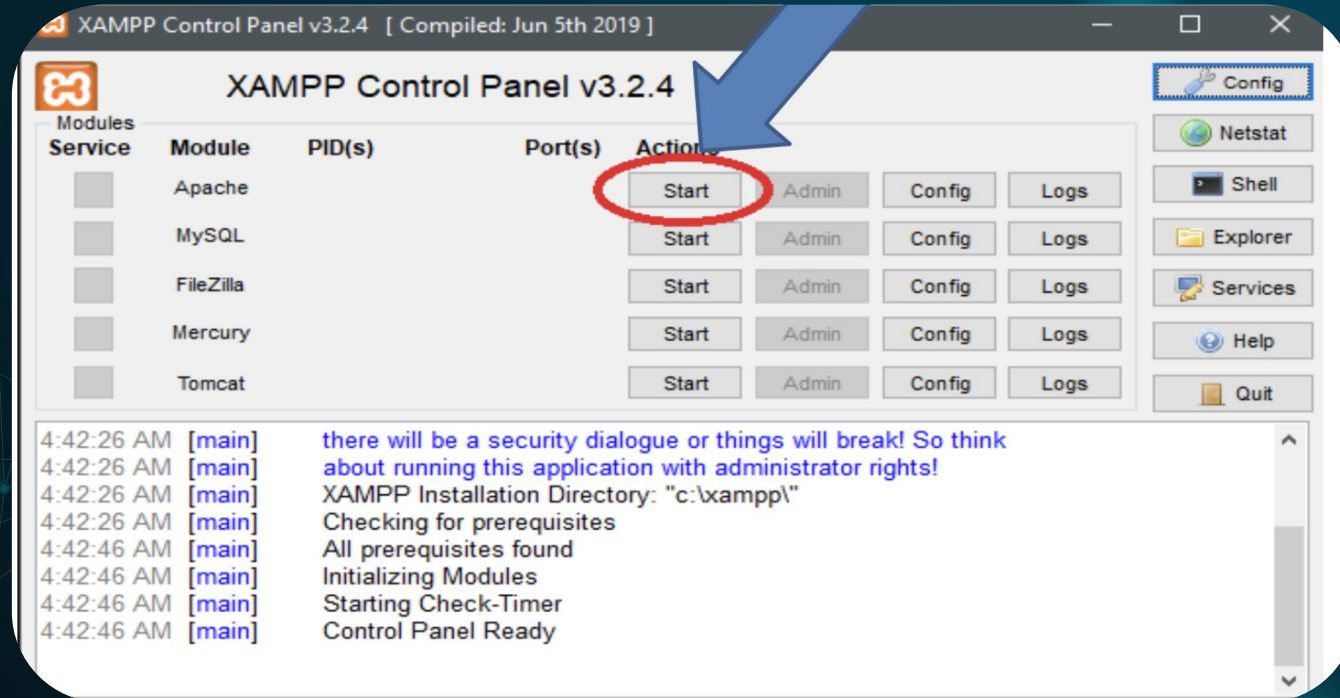
XAMPP for Windows
7.4.7 (PHP 7.4.7)

XAMPP for Linux
7.4.7 (PHP 7.4.7)

XAMPP for OS X
7.4.7 (PHP 7.4.7)

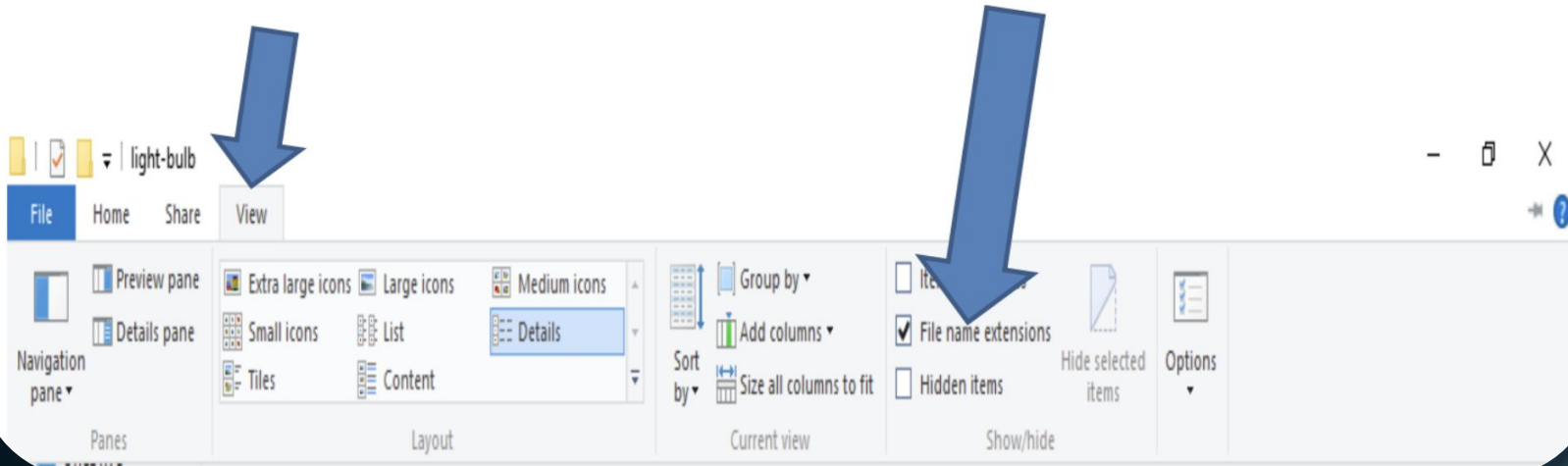
XAMPP

Setup Xampp and go to C:\xampp\htdocs to create your project To open your local server program Start Apache



XAMPP

Note: if extension is hide click at view -> file name extension





STM32
Is AWESOME

Session LAb

| Create your **Web
Design.**

*Time To
Code*

```

o.html a.php
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3 if(isset($_GET['iot'])){
4     $action=$_GET['iot'];
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14 }
15 ?>
16
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18 <HTML lang="en">
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20         <meta charset="UTF-8">
21         <meta name="viewport" content="width=device-width, user-scalable=
22             no-initial-scale=1.0, maximum-scale=1.0, minimum-scale=1.0">
23         <meta http-equiv="X-UA-Compatible" content="ie=edge">
24         <title>IOT</title>
25     </head>
26     <body>
27         <form method="" action="">
28             <input type="radio" name="iot" value="on">
29             <label>on</label>
30             <br>
31             <input type="radio" name="iot" value="off">
32             <label>off</label>
33             <br>
34             <input type="submit" value="click">
35         </form>
36     </body>
37 </HTML>

```



THANKS!

Do you have any questions?

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