

## HTML:

HTML (Hypertext Mark up Language) is the set of [mark up](#) symbols or codes inserted in a file intended for display on a World Wide Web [browser](#) page. The markup tells the Web browser how to display a Web page's words and images for the user. Each individual markup code is referred to as an element (but many people also refer to it as a [tag](#)). Some elements come in pairs that indicate when some display effect is to begin and when it is to end.

HTML is a formal Recommendation by the World Wide Web Consortium ([W3C](#)) and is generally adhered to by the major browsers, Microsoft's Internet Explorer and Netscape's Navigator, which also provide some additional non-standard codes. The current version of HTML is [HTML 4.0](#). However, both Internet Explorer and Netscape implement some features differently and provide non-standard extensions. Web developers using the more advanced features of HTML 4 may have to design pages for both browsers and send out the appropriate version to a user. Significant features in HTML 4 are sometimes described in general as [dynamic HTML](#). What is sometimes referred to as HTML 5 is an extensible form of HTML called Extensible Hypertext Markup Language ([XHTML](#)).

## CSS:

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

## Bootstrap:

Bootstrap is a free front-end framework for faster and easier web development

Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins

Bootstrap also gives you the ability to easily create responsive designs

## What is Responsive Web Design?

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

## Bootstrap History

Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub.

## Advantages of Bootstrap:

**Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap.

**Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops.

**Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework.

**Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera).

### Create First Web Page With Bootstrap

#### 1. Add the HTML5 doctype

Bootstrap uses HTML elements and CSS properties that require the HTML5 doctype.

Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
  </head>
</html>
```

#### 2. Bootstrap 3 is mobile-first

Bootstrap 3 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.

To ensure proper rendering and touch zooming, add the following `<meta>` tag inside the `<head>` element:

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

The `width=device-width` part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

The `initial-scale=1` part sets the initial zoom level when the page is first loaded by the browser.

#### 3. Containers

Bootstrap also requires a containing element to wrap site contents.

There are two container classes to choose from:

The **container** class provides a responsive fixed width container

The **container-fluid** class provides a full width container, spanning the entire width of the viewport.

## PHP:

PHP: Hypertext Preprocessor (or simply PHP) is a server-side scripting language designed for web development but also used as a general-purpose programming language. It was originally created by RasmusLerdorf in 1994.

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

```
<!DOCTYPE
<html>
<head>
<title>PHP Test</title>
</head>
<body>
<?php echo'<p>Hello World</p>';?>
</body>
</html>
```

## XAMPP:

XAMPP is a [free and open source cross-platform web server solution stack](#) package developed by Apache Friends, consisting mainly of the [Apache HTTP Server](#), [MariaDB database](#), and [interpreters](#) for scripts written in the [PHP](#) and [Perl programming languages](#). XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P).

XAMPP is a 5 primary component system/framework/platform

X means it is cross-platform

A is Apache: responsible for handling a request that comes in and pulls a thread from a worker pool and isolates the request on the thread and hands it off to the processor (PHP or perl)

As it turns out, this is a super complex and difficult problem to solve, it also handles parsing the request, caching, adding in response headers, buffering, input and output throttling, as well as BASIC auth Access.

M is MariaDB / MySQL which is used to store persistent data across requests / threads

P is PHP / Perl which is used to process a single request on a single thread and run business rules and access persistent data store.

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. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

## **MYSQL:**

MySQL is an [open-source relational database management system](#) (RDBMS). Its name is a combination of "My", the name of co-founder [Michael Widenius](#)'s daughter,<sup>[7]</sup> and "[SQL](#)", the abbreviation for [Structured Query Language](#).

A broad subset of ANSI SQL 99, as well as extensions

Cross-platform support

Stored procedures, using a procedural language that closely adheres to SQL/PSM

Triggers

Cursors

Updatable views

Online DDL when using the InnoDB Storage Engine.

Information schema

Performance Schema that collects and aggregates statistics about server execution and query performance for monitoring purposes.

A set of SQL Mode options to control runtime behavior, including a strict mode to better adhere to SQL standards.

## **Limitations**

When using some storage engines other than the default of InnoDB, MySQL does not comply with the full [SQL](#) standard for some of the implemented functionality, including foreign key references and check constraints.

Up until MySQL 5.7, triggers are limited to one per action / timing, meaning that at most one trigger can be defined to be executed after an INSERT operation, and one before INSERT on the same table. No triggers can be defined on views.

### Backup software

Mysql dump is a logical backup tool included with both community and enterprise editions of MySQL. It supports backing up from all storage engines. MySQL Enterprise Backup is a hot backup utility included as part of the MySQL Enterprise subscription from Oracle, offering native InnoDB hot backup, as well as backup for other storage engines.

Extra Backup is an open-source MySQL hot backup software program. Features include hot, non-locking backups for InnoDB storage, incremental backups, streaming, parallel-compressed backups, throttling based on the number of I/O operations per second, etc.