

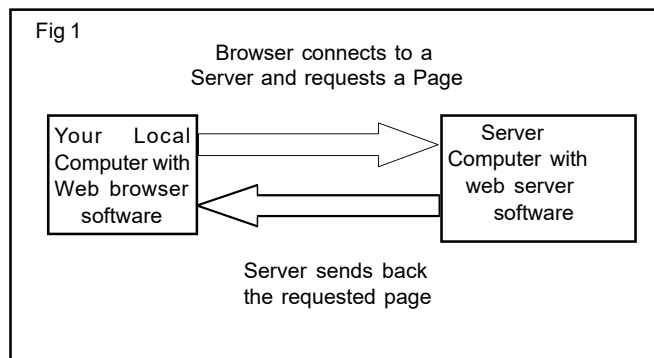
Introduction to Web servers and External JavaScript files

Objectives : At the end of this lesson you shall be able to

- explain Web servers and their features
- explain external JavaScript files.

What is Web Server and how it works?

Web servers are core for any web hosting. (Fig 1)



Web server is a program that uses **HTTP** to serve files that create web pages to users in response to their requests, which is sent by their computers HTTP connection. Any server that delivers an **XML document** to another device can be a web server. A better definition might be that a web server is an Internet server that responds to HTTP requests to deliver content and services. Always a web server is connected to the internet. Every web server that connects to the Internet will be having an **unique address** which contains a series of four numbers between 0 and 255. A period (.) separates these numbers. Also, web server enables the **hosting providers** to manage multiple domains(users) on a single server. A web host is a company that leases out space on a cluster of servers to empower people to serve their own content & webpages.

Different types of web servers

In open market there are different types of web servers available. Let's discuss about the most popular web servers. Apache, IIS, Nginx and Lite Speed are few of them.

Apache web server

One of the most popular web server in the world developed by the Apache Software Foundation. Apache is an open source software which supports almost all operating systems including Linux, Unix, Windows, FreeBSD, Mac OS X and more. About 60% of machines run on Apache Web Server. (Fig 2)



Customization of apache web server is easy as it contains a modular structure. It is also an open source which means that can add the own modules to the server when to require and make modifications that suit the requirements. It is more stable than any other web servers and is easier to solve administrative issues. It can be installed on multiple platforms successfully. Recent apache releases provide the feasibility of handling more requests when compare to its earlier versions.

IIS web server

IIS is a Microsoft product. This server has all the features just like apache. But it is not an open source and more over adding personal modules is not easy and modification becomes a little difficult job. (Fig 3)



Microsoft developed this product and they maintains, thus it works with all the windows operating system platforms. Also, they provides good customer support if it had any issues.

Nginx web server

Another free open source web server is Nginx, it includes IMAP/POP3 proxy server. Nginx is known for its high performance, stability, simple configuration and low resource usage. (Fig 4)

Fig 4



This web server doesn't use threads to handle requests rather a much more scalable event-driven architecture which uses small and predictable amounts of memory under load. It is getting popular in the recent times and it is hosting about 7.5% of all domains worldwide. Most of the web hosting companies are using this in recent times.

External JavaScript files: Writing JavaScript within HTML code sometimes creates confusion, and changing HTML files may also affect JavaScript files. So better to segregate HTML and JavaScript files so that, changes in one file does not affect other files.

The external JavaScript files should be written separately as follows:-

File **myjs.js** Contents:

```
function popup() {  
    alert("Hello World");  
}
```

Now we can import the file in HTML file as follows:-

Importing an external file is relatively painless. First, the file you are importing must be valid JavaScript, and only JavaScript. Second, the file must have the file extension ".js". Lastly, you must know the location of the file.

Let us assume we have a file "myjs.js" that contains a one line Hello World alert function. Also, let us assume that the file is the same directory as the HTML file we are going to code up. To import the file you would do the following in your HTML document.

JavaScript Code:

```
<html>  
<head>  
<script src="myjs.js">  
</script>  
</head>  
<body>  
<input type="button" onclick="popup()" value="Click Me!">  
</body>  
</html>
```

Now this HTML file imports myjs.js file and as a result it can access popup() function from HTML button element.