

Study on Web Development Languages and AJAX Enabled Web Applications

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ABSTRACT

This paper focus on various languages such as HTML, CSS, XML, JavaScript, PHP etc used in the design of web pages. A comparative study of these is also done. AJAX(Asynchronous JavaScript And XML) is used to update web pages asynchronously. Traditional web applications and AJAX enabled web applications are also compared.

Keyword: - AJAX, HTML, CSS, XML, PHP, JavaScript

1. INTRODUCTION

The most commonly used language to design a webpage is HTML. In order to apply more styles, colors, formatting etc to a webpage CSS (Cascading Style Sheet) are used. To create dynamic web pages/ to make web pages more interactive JavaScript is used. It is a client side scripting language. To perform server side scripting PHP(Hypertext Pre Processor) is used. XML is used to describe data. In order to perform working on a page and processing of requests simultaneously AJAX enabled web applications are used.

II. WEB DEVELOPMENT LANGUAGES

HTML

To design a webpage most commonly used language is HTML. It is a markup language that specifies structure and content of elements present in a web page. HTML has built in tags. Each tag has its own purpose. By using these tags web page can be formatted. Different versions of HTML are available each with a new set of tags and features. Different versions of HTML are HTML1.0, HTML2.0, HTML3.0, HTML3.2, HTML4.01, HTML5. HTML5 is the latest version of HTML. In HTML5 styles are applied using Cascading Style Sheet.[1][2]

CSS

CSS is Cascading Style Sheet. It is used to apply styles to webpage. The styles can be applied in various ways such as inline, internal and external. Inline styles are applied along with each tag, internal style sheets are stored within style tag in the html document itself whereas external stylesheets are stored as a separate file with .css extension and are linked to html document using link tag. Different versions of CSS are available. [2]

JAVASCRIPT

To create dynamic web pages or to make web pages more interactive JavaScript is used. It is a scripting language used for client side scripting. The script can be embedded in a html document. It is commonly used to perform client side validation.[2][3]

XML

XML is extensible markup language. It is used for storing and transportation of data. XML describes data in such a way that it can be read by human and can be processed by computers. XML document contains data and elements which represent structure of document. XML also contains tags. But they are not built in tags.[4]

PHP

PHP (Hypertext Preprocessor) is a server side scripting language used to create dynamic web pages. PHP is an open source platform independent technology. It can be implemented using Windows, Unix, Linux and MAC OS. The most popular database for PHP applications is MySQL. PHP codes are embedded between the delimiters `<? and ?>`. [4]

HTML vs XML

HTML is used to display data and it focus on the appearance of data. XML stores and transports data and gives more importance to what data is. HTML is a presentation language but XML is not. HTML is case sensitive but XML is not case sensitive. HTML uses predefined tags but XML has user defined tags. In XML all opening tag must have a closing tag. But in HTML it is not mandatory. [5]

JAVASCRIPT vs PHP

JavaScript is used for client side scripting where as PHP is used for server side scripting. But both of them are used to create dynamic web pages. Using JavaScript validation can be done at client side and server traffic can be reduced. PHP can access data from database using MySQL. [6]

AJAX

AJAX is Asynchronous JavaScript and XML. It is not a programming language. In AJAX if a part of a web page is changed, that part alone can be updated without reloading entire web page. Using AJAX client side interaction and server side processing can be run in parallel and hence delay in web page processing can be reduced. [4][7]

Traditional Web Application vs AJAX Application

In traditional web application user sends a request to a server. Server processes the request and result is send to client. During this time client waits for the request. Here the client server interaction is synchronous. Server waits for client request and after sending a request client waits for server response. [8]

In AJAX enabled web application client server interaction is asynchronous. Incremental updating of a web page can be done without reloading entire web page. So web page can be easily processed. AJAX is not a new technology; it is a combination of several technologies such as HTML, XML, JavaScript and XMLHttpRequest object. [8]

Working of AJAX

When an event occurs users browser sends an XMLHttpRequest to server using XMLHttpRequest object. Server processes the request and response is sending to web client. The response is processed by JavaScript and web page is reloaded. During this time web client is doing some other works. [7]

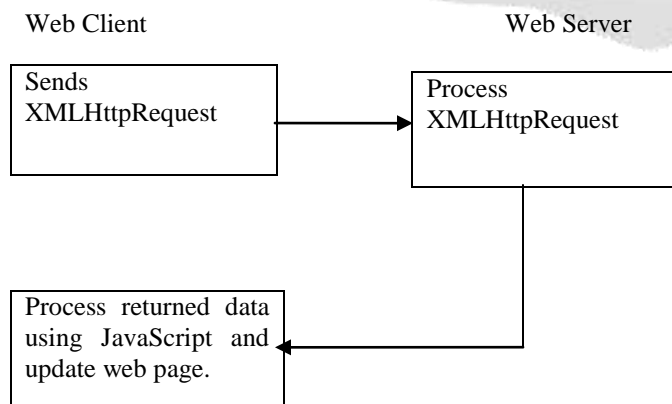


Fig: Working of AJAX

III. CONCLUSION

Here a study on web development languages and a comparison is done. The advantage of AJAX compared to traditional web applications is also mentioned.

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