AJAX - Technologies

The full form of AJAX is asynchronous Javascript and XML. It is a combination of web technologies that allows to establish asynchronous communication between the web server and the web browser. It creates a dynamic application that updates the content of the webpage dynamically without reloading the whole page.

AJAX is not a programming language or script language, but it combines multiple web-related technologies like HTML, XHTML, CSS, JavaScript, DOM, XML, XSLT and XMLHttpRequest object. Due to the combination of these technologies, the AJAX model allows web developers to create web applications that can dynamically interact with the user and can able to quickly make a background call to web servers to retrieve the required application data and then update the small portion of the web page without refreshing the whole web page.

AJAX does not use any new language to create dynamic web applications, it uses the technologies that are already present in the market. So makes it easier for the developers to create a dynamic web application without learning or installing new technologies. Hence the web technologies used by the AJAX model are −

Javascript − It is a scripting language for HTML and the web application. It creates a connection between HTML, CSS, and XML. It is used to create client-side functionality. It also plays an important role in AJAX. It is also used to create AJAX applications or join all the AJAX operations together.

```
<script src = "myexample.js"></script>
```

XML or JSON − XML stands for extensible markup language whereas JSON stands for JavaScript Object Notation. Both JSON and XML are used on the client side to exchange data between the web server and the client.

```
<?xml version = "1.0">
<root>
    <child>
        //Statements
    </child>
</root>
```

XMLHttpRequest − It is used to perform asynchronous data exchange between a web browser and a web server. It is a javascript object that performs asynchronous operations.

```
variableName = new XMLHttpRequest();
```

HTML and CSS — HTML stands for hypertext markup language whereas CSS stands for cascading style sheets. HTML provides markup and style to the webpage text. Or we can say it provides a structure to the web page whereas CSS is used to create more interactive web pages. It provides various styling components that define the look of the web page. CSS is independent of HTML and can be used with any XML-based markup language.

```html
<!DOCTYPE html>
<html>
<head>
    // Header of the web page
</head>
<body>
    // Body of the web page
</body>
</html>
```

DOM — AJAX also has a powerful tool known as DOM(Document Object Model). It is used to interact with and alter the webpage layout and content dynamically. Or we can say that DOM is used to create a logical representation of the elements that are used to markup HTML pages. It is provided by the web browser. It is not a part of JavaScript, but using javaScript we can access the methods and the properties of DOM objects. Using DOM methods and properties we can create or modify HTML pages.

```html
<!DOCTYPE html>
<html>
<head>
    // Header of the web page
</head>
<body>
    <p></p>
    <script></script>
</body>
</html>
```

Conclusion

So these are the technologies using which AJAX can able to create a dynamic web page. While using these technologies, AJAX has to keep updated its external libraries and frameworks. Now in the next article, we see the Action performed by the AJAX.