

## Q1

### DHTML

Dynamic HTML, or DHTML, is an umbrella term for a collection of technologies used together to create interactive and animated websites by using a combination of a static markup language (such as HTML), a client-side scripting language (such as JavaScript), a presentation definition language (such as CSS), and the Document Object Model (DOM). Microsoft introduced the application of DHTML with the release of Internet Explorer 4 in 1997.

DHTML allows scripting languages to change variables in a web page's definition language, which in turn affects the look and function of otherwise "static" HTML page content, after the page has been fully loaded and during the viewing process. Thus, the dynamic characteristic of DHTML is the way it functions while a page is viewed, not in its ability to generate a unique page with each page load.

### XHTML

Extensible Hypertext Markup Language (XHTML) is part of the family of XML markup languages. It mirrors or extends versions of the widely used Hypertext Markup Language (HTML), the language in which Web pages are formulated. While HTML, prior to HTML5, was defined as an application of Standard Generalized Markup Language (SGML), a flexible markup language framework, XHTML is an application of XML, a more restrictive subset of SGML.

XHTML documents are well formed and may therefore be parsed using standard XML parsers, unlike HTML, which requires a lenient HTML-specific parser. XHTML 1.0 became a World Wide Web Consortium (W3C) recommendation on January 26, 2000. XHTML 1.1 became a W3C recommendation on May 31, 2001. The standard known as XHTML5 is being developed as an XML adaptation of the HTML5 specification.

## Q2

1. JavaScript – JavaScript (JS) is a high-level, interpreted programming language that conforms to the ECMAScript specification. It is a programming language that is characterized as dynamic, weakly typed, prototype-based and multi-paradigm. Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web. JavaScript enables interactive web pages and is an essential part of web applications. The vast majority of websites use it and major web browsers have a dedicated JavaScript engine to execute it.

As a multi-paradigm language, JavaScript supports event-driven, functional, and imperative (including object-oriented and prototype-based) programming styles. It has APIs for working with text, arrays, dates, regular expressions, and the DOM, but the language itself does not include any I/O, such as networking, storage, or graphics facilities. It relies upon the host environment in which it is embedded to provide these features.

2. VBScript – VBScript (Microsoft Visual Basic Scripting) is an Active Scripting language developed by Microsoft that is modelled on Visual Basic. It allows Microsoft Windows system administrators to generate powerful tools for managing computers with error handling, subroutines, and other advanced programming constructs. It can give the user complete control over many aspects of their computing environment.

VBScript is used to give functionality and interaction to web pages and can be used for client-side scripting. VBScript is a technology that requires Microsoft's Internet Explorer as it is the only one that can interpret it. VBS can also be used for server-side scripting. This requires the use of a Microsoft web server such as Personal Web Server (PWS), or Internet Information Server (IIS) and a packaging such as Active Server Pages (ASP).

3. AJAX – Ajax (Asynchronous JavaScript and XML) is a set of web development techniques using many web technologies on the client side to create asynchronous web applications. With Ajax, web applications can send and retrieve data from a server asynchronously (in the background) without interfering with the display and behaviour of the existing page. By decoupling the data interchange layer from the presentation layer, Ajax allows web pages and, by extension, web applications, to change content dynamically without the need to reload the entire page. In practice, modern implementations commonly utilize JSON instead of XML. Ajax is not a single technology, but rather a group of technologies. HTML and CSS can be used in combination to mark up and style information.