OVERVIEW OF THE WEB TECHNOLOGIES

Introduction

There are many Web technologies, from simple to complex, and explaining each in detail is beyond the scope of this article. However, to help you get started with developing your own Web sites, beyond simple WYSIWYG designing of Web pages in FrontPage, this article provides brief definitions of the major Web technologies along with links to sites where you can find more information, tutorials, and reference documentation.

**Important**   The links included in this article are only a representative set of resources that are available on the Internet. Where appropriate, this article cites Microsoft resources, but you can also find many links to non-Microsoft resources. You can locate additional resources by performing your own Web searches.

Markup Languages

Markup is used to in text and word processing documents to describe how a document should look when displayed or printed. The Internet uses markup to define how Web pages should look when displayed in a browser or to define the data contained within a Web document.

There are many different types of markup languages. For example, Rich Text Formatting (RTF) is a markup language that word processors use. This section describes the most common markup languages that are used on the Internet.

HTML

HTML stands for Hypertext Markup Language. HTML is the primary markup language that is used for Web pages. HTML tells the browser what to display on a page. For example, it specifies text, images, and other objects and can also specify the appearance of text, such as bold or italic text.

The [World Wide Web Consortium](http://go.microsoft.com/fwlink/?linkid=19847) (W3C) defines the specification for HTML. The current versions of HTML are [HTML 4.01](http://go.microsoft.com/fwlink/?linkid=25320) and [XHTML 1.1](http://go.microsoft.com/fwlink/?linkid=25951).

**Note**   DHTML stands for Dynamic HTML. DHTML combines cascading style sheets (CSS) and scripting to create animated Web pages and page elements that respond to user interaction.

For more information on HTML, see the following resources.

* [HTML for Beginners](http://go.microsoft.com/fwlink/?linkid=42222)
* [HTML Basics on HTML Goodies](http://go.microsoft.com/fwlink/?linkid=28883)
* [HTML Reference on Blooberry](http://go.microsoft.com/fwlink/?linkid=28884)
* [Rex Swain's HTML Sampler](http://go.microsoft.com/fwlink/?linkid=28885)
* [HyperText Markup Language (HTML) Home Page](http://go.microsoft.com/fwlink/?linkid=28887)

CSS

CSS stands for cascading style sheets. Cascading style sheets provide the ability to change the appearance of text (such as fonts, colors, spacing) on Web pages. Using CSS, you can also position elements on the page, make certain elements hidden, or change the appearance of the browser, such as changing the color of scroll bars in Microsoft Internet Explorer.

Cascading style sheets can be used similar to FrontPage Themes. For example, you can apply a cascading style sheet across all the pages in a Web site to give the site a uniform look and feel. Then all you need to do is to change the CSS style formatting in a single file to change the look and feel of an entire Web site.

For more information on CSS, see the following resources.

* [Using Cascading Style Sheets on Your Web Site](https://msdn.microsoft.com/en-us/library/office/aa140116(v=office.11).aspx)
* [CSS Attributes](https://msdn.microsoft.com/en-us/library/office/ms531207.aspx)
* [Effective Use of Style Sheets](http://go.microsoft.com/fwlink/?linkid=28888)
* [CSS Reference on Blooberry](http://go.microsoft.com/fwlink/?linkid=28889)
* [CSS on BasicTips.com](http://go.microsoft.com/fwlink/?linkid=28890)
* [CSS Frequently Asked Questions](http://go.microsoft.com/fwlink/?linkid=28891)
* [Cascading Style Sheets Home Page](http://go.microsoft.com/fwlink/?linkid=28892)
* [CSS Zen Garden](http://go.microsoft.com/fwlink/?linkid=30825)

XML

XML stands for Extensible Markup Language. Similar to HTML, XML is a markup language designed for the Internet. However, unlike HTML, which was designed to define formatting of Web pages, XML was designed to describe data. You can use XML to develop custom markup languages.

As with HTML, the W3C defines the specifications for XML. See [Extensible Markup Language](http://go.microsoft.com/fwlink/?linkid=25098) on the W3C Web site.

For more information on XML, see the following resources.

* [A Guide to XML and Its Technologies](https://msdn.microsoft.com/archive/default.asp?url=/archive/en-us/dnarxml/html/xmlguide.asp)
* [XML Developer Center](https://msdn.microsoft.com/xml)
* [XML for Absolute Beginner - A Short Tutorial](http://go.microsoft.com/fwlink/?linkid=28893)
* [XML in 10 points](http://go.microsoft.com/fwlink/?linkid=28895)

XSLT

XSLT is an abbreviation for XSL Transformations. XSLT uses the Extensible Stylesheet Language (XSL), which you use to define the appearance of an XML document or change an XML document into another kind of document—XML, HTML, or another markup language format.

As with other Web markup languages, the W3C defines the specifications for [XSL](http://go.microsoft.com/fwlink/?linkid=28896) and [XSLT](http://go.microsoft.com/fwlink/?linkid=28897).

For more information on XSLT, see the following resources.

* [What is XSLT? on Webopedia](http://go.microsoft.com/fwlink/?linkid=28898)
* [What is XSLT? on XML.com](http://go.microsoft.com/fwlink/?linkid=28899)
* [Your First XSLT Page](http://go.microsoft.com/fwlink/?linkid=28900)
* [XSLT Elements Reference](http://go.microsoft.com/fwlink/?linkid=28901)
* [Extensible Stylesheet Language (XSL) on Cover Pages](http://go.microsoft.com/fwlink/?linkid=28902)

Programming Languages and Technologies

Programming languages enable you to create custom applications and add functionality that is not already part of an application. On the Internet, programming languages enable you to create visual animation, respond to user actions, validate forms, interact with databases, and provide e-commerce solutions.

Programming languages come in two flavors: interpreted and compiled. Most scripting languages are interpreted, which means that you write the code and the browser or server understands what to do with it. Compiled languages require an added step that translates the code into machine language code, which is then stored in a separate file with either a .dll or .exe file name extension.

Compiled languages are generally used for server-side processing for Web applications, such as form processing, that require interaction with databases or other server processes. With some exceptions, interpreted languages are generally used for client-side processing, such as image mouse overs and client-side form validation. [ActiveX controls](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_activexcontrols) that are embedded into HTML pages are an exception.

Programming technologies generally use one or more programming language to create end-to-end solutions for Web applications. Technologies usually have server dependencies, so before choosing which technology to use for your Web sites, you should determine which services your host Web server provides.

Because the needs of an organization or an individual may differ, no one language or technology is right for every Web project. Each language and technology has advantages and disadvantages. This section briefly describes the most common languages used on the Internet with links to places where you can get more information or training.

JavaScript (JScript/ECMAScript)

JavaScript is an interpreted scripting language commonly used on the Internet for creating Web pages that respond to user actions, such as when a user moves a mouse pointer over an image or clicks a form button. Combined with HTML and CSS, JavaScript allows you to create Dynamic HTML pages.

JavaScript is generally used for client-side scripting; as a result, users can easily view JavaScript code along with the HTML code in a page. Although it may be used for server-side scripting, JavaScript works best for visual animation (such as changing an image when a user moves the mouse pointer over it) or for validating form fields.

Various browsers may implement the JavaScript scripting objects differently, but most popular browsers support JavaScript.

The biggest disadvantage of JavaScript is that users can turn it off in the browser, which makes pages that use it not function as expected.

Netscape developed the JavaScript programming language. JScript is the Microsoft implementation of ECMAScript, as defined by the specification of [Ecma International](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx" \l "odc_fpgettingstartedwithwebdev_ecmainternational). Both JavaScript and JScript are ECMAScript-compliant languages.

For more information on JavaScript and JScript, see the following resources.

* [JScript Users Guide and Language Reference](https://msdn.microsoft.com/en-us/library/office/hbxc2t98.aspx)
* [Instant JavaScript](https://msdn.microsoft.com/en-us/library/office/ms970257.aspx)
* [The JavaScript Primers on HTML Goodies](http://go.microsoft.com/fwlink/?linkid=28903)
* [JavaScript/JScript Articles, Tutorials, and Other Resources on Developer.com](http://go.microsoft.com/fwlink/?linkid=28904)
* [JavaScript Developer Central on Netscape DevEdge](http://go.microsoft.com/fwlink/?linkid=28905)
* [JavaScript Kit](http://go.microsoft.com/fwlink/?linkid=28906)
* [HotSyte](http://go.microsoft.com/fwlink/?linkid=28907)

VBScript

VBScript is an interpreted scripting language that is a subset of Microsoft Visual Basic. As a result, the structure and syntax are similar to Visual Basic, making VBScript an easy scripting language to learn.

Although VBScript can be used for client-side scripting in Internet Explorer, most other browsers do not include a VBScript interpreter. Therefore, VBScript is most commonly used in server-side scripting for Web pages that use classic [ASP](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_asp).

For more information on VBScript, see the following resources.

* [VBScript User's Guide](https://msdn.microsoft.com/en-us/library/office/sx7b3k7y.aspx)
* [VBScript Language Reference](https://msdn.microsoft.com/en-us/library/office/cc392193.aspx)
* [VBScript Tutorial on Intranet Journal](http://go.microsoft.com/fwlink/?linkid=28908)
* [VBScript Quick Reference on DevGuru](http://go.microsoft.com/fwlink/?linkid=28909)
* [Object-Oriented Language: VBScript on Cetus Links](http://go.microsoft.com/fwlink/?linkid=28910)
* [VisualBasicScript.com](http://go.microsoft.com/fwlink/?linkid=28911)

PHP

PHP is an interpreted scripting language that is used as an alternative to [ASP](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_asp) on UNIX-based servers. PHP is commonly used to access databases and provide server-side form and e-commerce processing. As with ASP code, PHP code is contained within the body of an HTML page.

PHP code typically runs on Linux-based and UNIX-based Web servers, and can run on Windows-based servers with an installed interpreter.

According to [WhatIs.com](http://go.microsoft.com/fwlink/?linkid=28912), "PHP, originally derived from *Personal Home Page* Tools, now stands for PHP: Hypertext Preprocessor."

For more information on PHP, see the following resources.

* [PHP Tutorial](http://go.microsoft.com/fwlink/?linkid=28913)
* [PHPBuilder.com](http://go.microsoft.com/fwlink/?linkid=28914)
* [The PHP Resource Index](http://go.microsoft.com/fwlink/?linkid=28915)
* [PHP Tutorials on Codewalkers.com](http://go.microsoft.com/fwlink/?linkid=28916)
* [PHP Kitchen](http://go.microsoft.com/fwlink/?linkid=28917)

C#

C# (pronounced "see sharp") is a compiled, object-oriented programming language that is commonly used for Web applications that leverage the Microsoft .NET Framework. C# is derived from the C programming language and is used for server-side processing of [ASP.NET](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx" \l "odc_fpgettingstartedwithwebdev_aspnet)Web applications.

C# Web applications are generally compiled into DLL files that are stored on the Web server along with any accompanying Web pages. With the weight of the .NET Framework behind it, C# developers can create extremely powerful ASP.NET Web applications.

You can create ASP.NET Web applications using C# in Microsoft Visual Studio .NET; however, you do not need Visual Studio .NET to create C# Web applications. When you download and install the [.NET Framework SDK](http://go.microsoft.com/fwlink/?linkid=28918), you get a C# compiler that you can use to compile C# applications that you create using any text editor, such as Notepad or Microsoft Office FrontPage 2003.

Microsoft designed C# in collaboration with the [Ecma International](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_ecmainternational) standards body; therefore, C# is an Ecma-compliant programming language.

For more information on C#, see the following resources.

* [Microsoft Visual C# Developer Center](http://go.microsoft.com/fwlink/?linkid=25139)
* [C# Coder](http://go.microsoft.com/fwlink/?linkid=28919)
* [C# Help](http://go.microsoft.com/fwlink/?linkid=28920)
* [C# Corner](http://go.microsoft.com/fwlink/?linkid=28921)
* [Developers Dex C# Directory](http://go.microsoft.com/fwlink/?linkid=28922)
* [General C# Programming on The Code Project](http://go.microsoft.com/fwlink/?linkid=28923)

Visual Basic .NET

Visual Basic .NET is the next generation of the Visual Basic programming language. Visual Basic .NET is a compiled, object-oriented language that leverages the .NET Framework for developing powerful ASP.NET Web applications.

Visual Basic .NET uses the same syntax as earlier versions of Visual Basic but also leverages the namespaces and classes that are part of the .NET Framework. As with VBScript and earlier versions of Visual Basic, Visual Basic .NET is a relatively easy programming language to learn.

For more information on Visual Basic .NET, see the following resources.

* [Microsoft Visual Basic Developer Center](http://go.microsoft.com/fwlink/?linkid=29350)
* [About Visual Basic .NET on GotDotNet.com](http://go.microsoft.com/fwlink/?linkid=28924)
* [The Essential Guide on VisualBasic.Net](http://go.microsoft.com/fwlink/?linkid=28925)
* [Visual Basic – Bringing .NET Programming To You on About.com](http://go.microsoft.com/fwlink/?linkid=28926)
* [VB.NET Heaven](http://go.microsoft.com/fwlink/?linkid=28927)

Perl

Perl is an interpreted scripting language that can also be compiled into executable files. The Perl language is similar to the C programming language. Perl scripting is often used for [CGI](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_cgi) programming on UNIX-based servers, although Perl can also run on Windows-based servers.

For more information on Perl, see the following resources.

* [The Perl Directory](http://go.microsoft.com/fwlink/?linkid=28929)
* [Perl.com on O'Reilly Network](http://go.microsoft.com/fwlink/?linkid=28928)
* [Comprehensive Perl Archive Network](http://go.microsoft.com/fwlink/?linkid=28930)
* [How PERL Works on HowStuffWorks](http://go.microsoft.com/fwlink/?linkid=28931)
* [About Perl and PHP on About.com](http://go.microsoft.com/fwlink/?linkid=28932)
* [Online manual for Perl version 4 on Carnegie-Mellon University](http://go.microsoft.com/fwlink/?linkid=28933)

Java

Java is a compiled object-oriented programming language that was designed for use on the Internet. In 1995, Sun Microsystems designed the Java programming language and introduced it to Web developers as a way to include animation and dynamic elements in Web pages. Java syntax is similar to C++ but is considered easier to learn.

Java code is generally used for server-side processing but can also be run on the client by using the [Java virtual machine](http://go.microsoft.com/fwlink/?linkid=28934).

For more information on Java, see the following resources.

* [How Java Works on HowStuffWorks](http://go.microsoft.com/fwlink/?linkid=28935)
* [Java Technology on Sun Developer Network](http://go.microsoft.com/fwlink/?linkid=28936)
* [Java Technology on IBM developerWorks](http://go.microsoft.com/fwlink/?linkid=28937)
* [Java Boutique on Internet.com](http://go.microsoft.com/fwlink/?linkid=28938)
* [JavaWorld](http://go.microsoft.com/fwlink/?linkid=28939)

ActiveX Controls

ActiveX controls require that a compiled file be downloaded and installed on the client machine. ActiveX controls can be installed and run only on Windows-based computers, and Internet Explorer is the only browser that natively supports ActiveX controls. In addition, because ActiveX controls are installed on the client computer, browsers that support ActiveX controls generally allow users to accept or deny installing ActiveX controls, which means that if an ActiveX control is not installed on a client machine, the page that contains it often does not function as expected. Therefore, ActiveX controls are best used in a controlled environment, such as an intranet site, in which Internet Explorer is the standard browser in use.

* [ActiveX Controls](http://go.microsoft.com/fwlink/?linkid=30827)
* Introduction to ActiveX Controls
* [The Unofficial ActiveX Guide](http://go.microsoft.com/fwlink/?linkid=30829)
* [ActiveX Control on Webopedia](http://go.microsoft.com/fwlink/?linkid=30830)

ASP

ASP is an abbreviation for Active Server Pages. ASP is a server-side scripting technology that you can use to create dynamic Web pages. ASP code is generally embedded in the HTML within a page, and HTML pages that contain ASP have an .asp file name extension; however, because processing is done on the server, the ASP code is not sent to the browser, and visitors to your site never see your ASP code. Client computers receive only the resulting HTML.

Although ASP is generally used with VBScript, you can also use ASP with JavaScript. When used with [VBScript](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_vbscript), you can use ASP for database processing, form processing, and other Web applications that require server interaction, such as sending mail and reading or changing the contents of files that are located on the server.

Microsoft introduced ASP as an alternative to traditional CGI server-side processing. Although classic ASP is still largely used on the Internet, [ASP.NET](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_aspnet) has replaced it for larger, more robust Web applications.

ASP has a small and relatively simple object model and is, therefore, considered easy to learn; however, ASP pages can be processed only on Windows-based Web servers.

For more information on ASP, see the following resources.

* [Active Server Pages](http://go.microsoft.com/fwlink/?linkid=29351)
* [ASP Quick Lessons on LearnASP](http://go.microsoft.com/fwlink/?linkid=28940)
* [Classic ASP on AspAdvice.com](http://go.microsoft.com/fwlink/?linkid=28941)
* [ASP Coding Tips on 4GuysFromRolla.com](http://go.microsoft.com/fwlink/?linkid=28942)
* [What is ASP/VBScript? on Planet Source Code](http://go.microsoft.com/fwlink/?linkid=28943)

ASP.NET

ASP.NET is the next generation of server-side processing for [ASP](https://msdn.microsoft.com/en-us/library/office/aa218647(v=office.11).aspx#odc_fpgettingstartedwithwebdev_asp) programming. You can write ASP.NET code in C#, Visual Basic .NET, or any language that is supported by the .NET Framework. Because ASP.NET is part of the .NET Framework, you can develop ASP.NET applications that utilize any of the namespaces and classes in the .NET Framework.

If you plan to develop Web applications with ASP.NET, you should verify that your Web server has the most recent version of the .NET Framework installed.

For more information on ASP.NET, see the following resources.

* [Microsoft ASP.NET Developer Center](http://go.microsoft.com/fwlink/?linkid=29352)
* ASP.NET Side-by-Side Overview
* [ASP to ASP.NET Migration Guide](http://go.microsoft.com/fwlink/?linkid=29353)
* [JSP to ASP.NET Migration Guide](http://go.microsoft.com/fwlink/?linkid=29354)
* [ASP.NET Web](http://go.microsoft.com/fwlink/?linkid=29159)
* [ASP.NET Tutorial on W3 Schools](http://go.microsoft.com/fwlink/?linkid=29160)

CGI

CGI stands for Common Gateway Interface. Similar to ASP and PHP, CGI is used for server-side processing for Web applications. Because CGI is designed to be server-agnostic, you can develop CGI applications that run on Windows, UNIX, Macintosh, or other server operating systems. You can write CGI applications in C, C++, Java, and Perl. ASP is an alternative to traditional CGI programming.

For more information on CGI, see the following resources.

* [How CGI Scripting Works on HowStuffWorks](http://go.microsoft.com/fwlink/?linkid=29191)
* [Introduction to CGI on Jay Eckles](http://go.microsoft.com/fwlink/?linkid=29192)
* [CGI Programming FAQ on HTML Help](http://go.microsoft.com/fwlink/?linkid=29193)
* [CGI: Common Gateway Interface on W3C](http://go.microsoft.com/fwlink/?linkid=29194)

Web Servers and Server Products

A Web server is the computer on which you host your Web site. It is connected directly to the Internet and sends hosted Web pages to the client using the Hypertext Transfer Protocol (HTTP). If you host your FrontPage site through an Internet service provider (ISP), Web presence provider (WPP), or Web host provider (WHP), you may have access to several different types of Web servers. The most common Web servers available are Windows-based servers running Microsoft Internet Information Services (IIS) and UNIX-based servers running Apache.

Depending on how you develop your Web site, you may have specific server requirements. For example, ASP requires a Windows-based Web server; PHP requires a PHP interpreter. You should discuss your needs with your provider or verify that your Web server provides the required resources\ for server-side processing.

This section covers the two most common Web servers and three Microsoft server products commonly used with FrontPage.

Internet Information Services

Internet Information Services (IIS) is a Web server designed to process HTTP and FTP requests on Windows operating systems. IIS is part of the Microsoft Windows NT, Microsoft Windows 2000, and Microsoft Windows 2003 operating systems, and you can install and enable IIS on Windows XP-based computers for testing ASP and ASP.NET applications.

For more information on IIS, see the following resources.

* [Internet Information Services](http://go.microsoft.com/fwlink/?linkid=29151)
* [Internet Information Services (IIS) 6.0: Technical Resources for IT Pros](http://go.microsoft.com/fwlink/?linkid=29152)
* [Internet Information Services (IIS) Security Center](http://go.microsoft.com/fwlink/?linkid=29153)
* [IIS Answers](http://go.microsoft.com/fwlink/?linkid=29154)
* [Internet Information Server on Dev Articles](http://go.microsoft.com/fwlink/?linkid=29155)

Apache

Apache is an open-source Web server that runs on UNIX operating systems, such as Solaris and Linux, but can also be installed on Windows-based servers. Apache Web servers provide simple HTTP processing.

For more information on Apache Web Servers, see the following resources.

* [The Apache Software Foundation](http://go.microsoft.com/fwlink/?linkid=29156)
* [Apache Week](http://go.microsoft.com/fwlink/?linkid=29167)

FrontPage Server Extensions

The FrontPage Server Extensions from Microsoft are a set of programs that support administering, authoring, and browsing a FrontPage-extended Web site. Users running the FrontPage client can create and manage professional-looking Web sites, whether they are creating personal Web pages or corporate Internet or intranet sites. FrontPage Server Extensions give you, as the administrator, tools for managing site security, organizing your content into sub sites, and checking site usage.

FrontPage Server Extensions are not required when hosting Web sites created in Microsoft Office FrontPage 2003; however, they do provide enhanced functionality for FrontPage Web sites and provide the ability for FrontPage users to publish Web sites from within FrontPage, and they allow FrontPage users to open and edit FrontPage Web sites directly on the server from inside FrontPage. They also provide access to special FrontPage features that provide database functionality, forms processing, hit counters, and other built-in FrontPage components that require server-side processing.

For more information on FrontPage Server Extensions, see the following resources.

* Microsoft FrontPage Server Extensions Overview
* [SharePoint Team Services and FrontPage 2002 Server Extensions Administrator's Guide](http://go.microsoft.com/fwlink/?linkid=29169)
* [UNIX Support for FrontPage Server Extensions on Read-to-Run Software](http://go.microsoft.com/fwlink/?linkid=29172)
* [Deploying FrontPage 2002 Server Extensions](http://go.microsoft.com/fwlink/?linkid=29176)
* [FrontPage 2002 Server Extensions Support Center](http://go.microsoft.com/fwlink/?linkid=29178)
* [Understanding FrontPage Server Extensions on PC Magazine](http://go.microsoft.com/fwlink/?linkid=29179)

SharePoint Team Services

SharePoint Team Services from Microsoft is a server technology designed for workgroup collaboration and includes features for sharing files and information over a corporate network. SharePoint Team Services incorporates the FrontPage 2002 Server Extensions. As a result, much of the documentation about SharePoint Team Services also contains information about administering FrontPage Server Extensions.

SharePoint Team Services can also be used on Internet Web servers to provide extranet capabilities for teams that span organizations and cross corporate network boundaries.

You can use FrontPage 2002 and FrontPage 2003 to edit and design Web sites based on SharePoint Team Services.

For more information on SharePoint Team Services, see the following resources.

* [SharePoint Team Services](http://go.microsoft.com/fwlink/?linkid=29181)
* [SharePoint Team Services and FrontPage 2002 Server Extensions Administrator's Guide](http://go.microsoft.com/fwlink/?linkid=29169)
* [SharePoint Team Services Support Center](http://go.microsoft.com/fwlink/?linkid=29182)
* [Microsoft FrontPage 2002 Solutions Toolkit for SharePoint Team Services](http://go.microsoft.com/fwlink/?linkid=29184)
* [Easy Collaboration with SharePoint Team Web Sites and Office](http://go.microsoft.com/fwlink/?linkid=29186)
* [Help from SharePoint Experts](http://go.microsoft.com/fwlink/?linkid=29187)
* [SharePoint Products and Technologies on MSDN](http://www.msdn.microsoft.com/library/default.asp?url=/nhp/default.asp?contentid=28001891&frame=true)

Windows SharePoint Services

Microsoft Windows SharePoint Services is the second generation of SharePoint Team Services. The same as SharePoint Team Services, Windows SharePoint Services is a server technology designed for workgroup collaboration over an intranet or extranet. Windows SharePoint Services includes many of the features that were part of SharePoint Team Services.

Unlike SharePoint Team Services, which you could install and run on Windows 2000 or Windows XP, you can install and run Windows SharePoint Services only on Windows Server 2003.

For more information on Windows SharePoint Services, see the following resources.

* [Windows SharePoint Services](http://go.microsoft.com/fwlink/?linkid=29188)
* [Windows SharePoint Services Support Center](http://go.microsoft.com/fwlink/?linkid=29189)
* [SharePoint Products and Technologies on MSDN](http://www.msdn.microsoft.com/library/default.asp?url=/nhp/default.asp?contentid=28001891&frame=true)

Databases

Databases allow you to store information for easy retrieval. On the Internet, databases are used to store users' logon information, product information, and customers' orders, among other things. There are almost as many database products as there are reasons and ways to use databases.

When you create a database from within FrontPage, FrontPage automatically creates a Microsoft Access database.

Access

Microsoft Access is an easy database application with which to work and provides powerful database capabilities. Because Access databases are file-based rather than server-based, all you need to work with Access databases is the database file itself, which has a file name extension of .mdb. You can easily transfer this file to the hosting Web server, and access the data inside the file by using ASP, PHP, or the Database Interface Wizard in FrontPage.

Although Access is commonly used for Web applications, it does have some limitations, including a maximum of 10 to 15 concurrent connections and 2 gigabytes of data. You may be able to establish more concurrent connections, but a greater number of concurrent connections degrades performance. If you anticipate the need for more concurrent user connections or more than 2 gigabytes of data storage, which may be the case for large e-commerce or financial applications, you should consider using Microsoft SQL Server.

For more information on Access, see the following resources.

* [Beginning Web Development in Access 2002](https://msdn.microsoft.com/en-us/library/office/aa139964(v=office.11).aspx)
* [Microsoft SQL Server: Microsoft Access 2000 Data Engine Options](https://msdn.microsoft.com/en-us/library/office/aa140017(v=office.11).aspx)
* [Northwind Traders Direct Sample Application](https://msdn.microsoft.com/en-us/library/office/aa140018(v=office.11).aspx)
* [Access Developer Center](http://go.microsoft.com/fwlink/?linkid=31462)
* [Access 2003 on Microsoft Office Online](http://go.microsoft.com/fwlink/?linkid=29318)
* [Access Support Center](http://go.microsoft.com/fwlink/?linkid=29320)
* [The Access Web on MVPs.org](http://go.microsoft.com/fwlink/?linkid=29322)
* [Microsoft Access Tips on PC Magazine](http://go.microsoft.com/fwlink/?linkid=29323)

SQL Server

Microsoft SQL Server is a secure, robust, and scalable database application that can grow with the needs of e-commerce and financial Web applications. If you choose to use the SQL Server database platform, you need SQL Server installed on the host Web server. If you do not control your host Web server, you need to verify that your ISP provides SQL Server database services.

For more information on SQL Server, see the following resources.

* [SQL Server Product Site](http://go.microsoft.com/fwlink/?linkid=29326)
* [SQL Server Developer Center](http://go.microsoft.com/fwlink/?linkid=31460)
* [SQL Server Resource Center](http://go.microsoft.com/fwlink/?linkid=29343)
* [SQL Server Magazine](http://go.microsoft.com/fwlink/?linkid=29344)
* [Get Help with SQL Server on DevX](http://go.microsoft.com/fwlink/?linkid=29346)
* [Microsoft SQL Server Resource Channel on Experts Exchange](http://go.microsoft.com/fwlink/?linkid=29348)

MySQL

MySQL is an open-source relational database management system that provides powerful and reliable database management for Web applications. MySQL can run on UNIX, Linux, and Windows-based Web servers.

PHP and MySQL are often used together to develop Web applications and perform server-side database processing. Because MySQL is an open-source software application, anyone can download and install it.

For more information on MySQL, see the following resources.

* [What is MySQL?](http://go.microsoft.com/fwlink/?linkid=29357)
* [MySQL.com](http://go.microsoft.com/fwlink/?linkid=29358)
* [PHP/MySQL Tutorial on Webmonkey](http://go.microsoft.com/fwlink/?linkid=29363)
* [MySQL and PHP Tutorial on Vermont Web Wizard](http://go.microsoft.com/fwlink/?linkid=29365)

Oracle Database

Oracle Database is a powerful relational database management system developed by . Oracle, like SQL Server, is a database application for large, transaction-based and e-commerce Web applications.

For more information on Oracle, see the following resources.

* [Oracle Database on Oracle Technology Network](http://go.microsoft.com/fwlink/?linkid=29367)
* [Oracle Magazine](http://go.microsoft.com/fwlink/?linkid=29369)
* [Oracle/PLSQL Topics on Tech on the Net](http://go.microsoft.com/fwlink/?linkid=29371)

Business Applications

Web applications have a variety of business uses. The most common is e-commerce, but you may have need of other types of solutions that extend your business into the Internet or over a corporate intranet or extranet. For all of these types of business applications, the basic principles of Web development apply.

Because e-commerce is the most common type of Web application for the Internet, this section discusses e-commerce applications in general and e-commerce resources specifically for FrontPage.

E-commerce applications allow you to sell goods and services to anyone anywhere in the world. However, e-commerce is more than just posting a Web site of products. E-commerce solutions generally involve databases and credit card processing. Security is important for e-commerce applications, so you should carefully and thoroughly research security measures that you or your hosting company take on the Web server.

The following links provide general information about e-commerce. You can perform your own search to locate e-commerce vendors and hosting companies.

General E-commerce Resources

* [Ecommerce Guide on Internet.com](http://go.microsoft.com/fwlink/?linkid=29373)
* [E-Commerce Times](http://go.microsoft.com/fwlink/?linkid=29374)
* [CommerceNet](http://go.microsoft.com/fwlink/?linkid=29375)
* [Electronic Markets](http://go.microsoft.com/fwlink/?linkid=29376)

Microsoft and FrontPage E-commerce Resources

* [E-Commerce and FrontPage 2002](http://go.microsoft.com/fwlink/?linkid=29377)
* [Microsoft Small Business Solutions for Retail Businesses](http://go.microsoft.com/fwlink/?linkid=29378)
* [Secure Sockets Layer: Protect Your E-Commerce Web Site with SSL and Digital Certificates](http://go.microsoft.com/fwlink/?linkid=29379)
* [Add E-Commerce to Your App with XML and SQL Server 2000](http://go.microsoft.com/fwlink/?linkid=29380)

Organizations

In order for the Internet to be a viable form of communication and information, standards are required for the related technologies and languages. Three Internet standards organizations exist to define technologies, specifications, and languages and to develop standards for global communication networks, including Internet and networking protocols. These three organizations are described in the following sections along with links to each organization's Web site.

World Wide Web Consortium

The World Wide Web Consortium (W3C) provides standards, specifications, and guidelines for technologies that are commonly used on the Internet. Many major software companies, including Microsoft, are members of the W3C and work together to develop these standards and technologies, which enable Web developers, Web designers, and software companies to develop Web sites and Web-based products.

For more information on the W3C, see the following resource.

* [World Wide Web Consortium](http://go.microsoft.com/fwlink/?linkid=19847)

Ecma International

Ecma International is involved with developing global standards for information and communications systems technologies and for global communication networks, of which the Internet is part. (Prior to 1994, Ecma was known as the European Computer Manufacturers Association, or ECMA.) Ecma also provides standards for Internet scripting and programming languages. ECMAScript standards form the basis of the JavaScript, JScript, and C# programming languages.

For more information on Ecma International, see the following resource.

* [Ecma International](http://go.microsoft.com/fwlink/?linkid=29384)

IETF

IETF stands for Internet Engineering Task Force. The HTML Working Group of the IETF originally defined the HTML language specification. In 1996, the World Wide Web Consortium took over this task. However, the IETF continues to be an independent standards body with a large community of members dedicated to evolving Internet architecture and defining Internet protocols.

For more information on IETF, see the following resource.

* [IETF Home Page](http://go.microsoft.com/fwlink/?linkid=29385)

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