The .NET Framework

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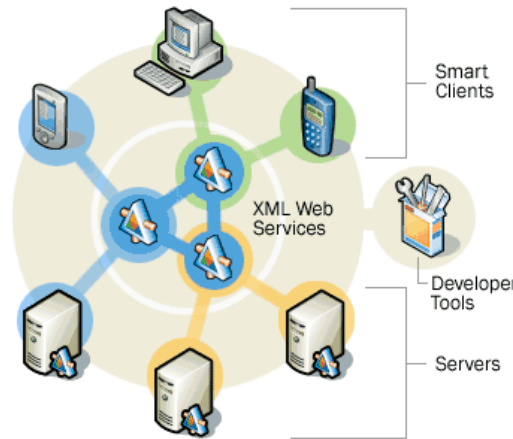# Contents

- Basic Elements
- Tools
- How .NET Works
- Differnces betwen ASP and ASP.NET

Information from http://www.microsoft.com/net/

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Defining the Basic Elements of .NET

- connecting your information, people, systems, and devices

- software integration through the use of XML Web services

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Smart Clients

- "Smart" client application software and operating systems enable PCs and other smart computing devices to act on XML Web services, allowing anywhere, anytime access to information.

- Browser, Cell phone,...

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XML Web services

- XML Web services or used directly with smart client applications
  - authentication
  - calendaring
  - location intelligence, ...

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Servers

- .NET Enterprise Servers-for deploying, managing, and orchestrating XML Web services

- IIS or the **personal Web-Server** shipped with MS Windows
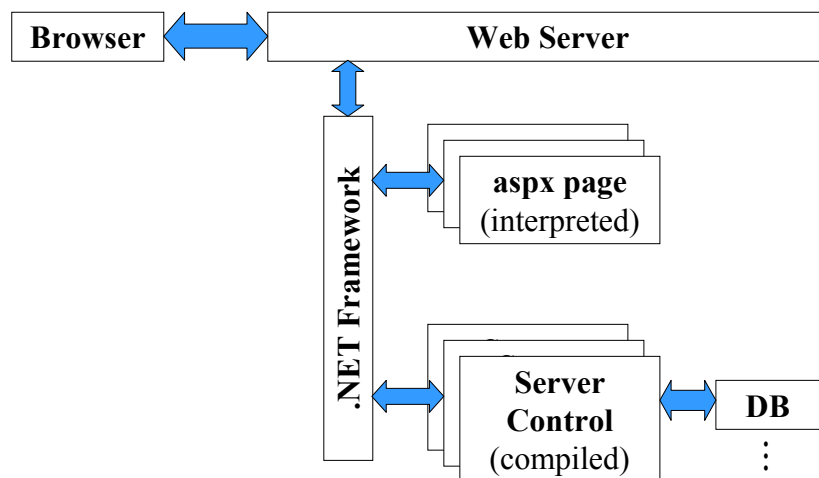
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Developer Tools

Developer tools

- Microsoft Visual Studio® .NET
- **Microsoft .NET Framework**
- **ASP.NET Web Matrix**

- Languages
  - **Visual Basic Script**
  - C# (C Sharp)
  - JScript.NET

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How ASP.NET works

| Browser | ⟷ | Web Server |

.NET Framework

aspx page (interpreted)

Server Control (compiled) ⟷ **DB**

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Differences between ASP and .NET

- ASP.NET is more event-driven (server side)

- ASP.NET separates code from HTML

- ASP.NET code is compiled

- Configuration and deployment is simplified

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Differences cont. - Scripting

ASP example: `HelloWorld1.asp`
```
<html><body>
<h1>Hello World</h1>
Time and date is <%=Now%>.
</body></html>
```

ASP.NET example: `HelloWorld2.aspx`
```
<%@ Page Language="VB" %>
<html><body>
<h1>Hello World</h1>
Time and date is <%=DateTime.Now()%>.
</body></html>
```

More: http://www.asp.net/Tutorials/quickstart.aspx   10

Differences cont. - Server Controls

Compiled server-side programs (components)

Example: Form (`intro4.aspx`**)**

```
<form action="intro4.aspx" method="post"
  runat=server>
<h3> Name: <asp:textbox id="Name" runat="server"/>
Category: <asp:dropdownlist id="Category"
  runat=server>
  <asp:listitem >psychology</asp:listitem>
  <asp:listitem >business</asp:listitem>
  <asp:listitem >popular_comp</asp:listitem>
</asp:dropdownlist> </h3>
<asp:button text="Lookup" runat="server"/>
</form>
```

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Differences cont. - Application/Session

- The `global.asax` File contains event handlers for application start/end, session start/end

```
<script language="VB" runat="server">
Sub Application_Start(Sender As Object, E As
  EventArgs)
' Application startup code goes here
End Sub


Sub Session_Start(Sender As Object, E As EventArgs)
 Response.Write("Session is Starting...<br>")
Session.Timeout = 1
End Sub
</script>
```

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Differences cont. - Configuration

- Base configuration settings for machine.

```
C:\WinNT\Microsoft.NET\Framework\v.1.00\c
  onfig\machine.config
```

- Overridden by the configuration settings for the site (or the root application).

```
C:\inetpub\wwwroot\web.config
```

- Overridden by application configuration settings.

```
D:\MyApplication\web.config
```

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