

ASP.NET

Lecture 15

CS 638 Web Programming



Review



- ❑ ASP.NET project creation
- ❑ Debugging an ASP.NET page
- ❑ Adding controls to an ASP.NET page
- ❑ Adding event handlers
- ❑ Modifying the look of controls
- ❑ ASP.NET tables
- ❑ Dynamic controls (controls added via code)
- ❑ Master pages

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Tracing / Profiling Pages



- ❑ Add `Trace="True"` to Page directive
- ❑ Causes thorough
 - ❑ Profiling of the lifecycle of the page
 - ❑ Dump of
 - ❑ ASP.NET controls
 - ❑ Session state
 - ❑ Cookies in and out
 - ❑ Headers in and out
 - ❑ Query string

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Tracing / Profiling

Click Me

```
protected void Page_Load(object sender, EventArgs e)
{
    System.Threading.Thread.Sleep(100);
    Session["Foo"] = "Bar";
}

protected void SubmitClick(object sender, EventArgs e)
{
    System.Threading.Thread.Sleep(500);
    int tripCounter = 0;

    if (Request.Cookies["Trip Counter"] != null)
        tripCounter = Convert.ToInt32(Request.Cookies["Trip Counter"].Value);

    tripCounter++;
    Response.Cookies.Add(new HttpCookie("Trip Counter", tripCounter.ToString()));
}
```

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Profiling

Trace Information

Category	Message	From File(s)	From Line(s)
asp+page	Begin Init	0.00026127463844224	0.000195
asp+page	End Init	0.000380491284121	0.000119
asp+page	Begin Init	0.0004992452232946	0.000119
asp+page	End Init	0.0006468008492495	0.000169
asp+page	Begin InitComplete	0.0007629615741761	0.000144
asp+page	End InitComplete	0.00097826679089101	0.000195
asp+page	Begin LoadState	0.0011778841471232	0.000195
asp+page	End LoadState	0.00126177794105117	0.000113
asp+page	Begin ProcessPostData	0.001412105232886	0.000128
asp+page	End ProcessPostData	0.00152624146364971	0.000112
asp+page	Begin PreLoad	0.0016302388945087	0.000111
asp+page	End PreLoad	0.0017472320948816	0.000111
asp+page	Begin Load	0.001860217394893	0.000209
asp+page	End Load	0.0019115758463	0.000209
asp+page	Begin ProcessPostData Second Try	0.002027394893	0.000209
asp+page	End ProcessPostData Second Try	0.0021407194219437	0.000116
asp+page	Begin Raise ChangeEvents	0.00225421194219437	0.000114
asp+page	End Raise ChangeEvents	0.002367408827773	0.000113
asp+page	Begin Raise PostBackEvent	0.002480591212121	0.000111
asp+page	End Raise PostBackEvent	0.00259378318813	0.000114
asp+page	Begin LoadComplete	0.002706969991	0.000184
asp+page	End LoadComplete	0.002820154447206	0.000112
asp+page	Begin PreRender	0.002933341206362	0.000111
asp+page	End PreRender	0.00304653420817	0.000116
asp+page	Begin PreRenderComplete	0.003159714718	0.000111
asp+page	End PreRenderComplete	0.003272902947542	0.000110
asp+page	Begin SaveState	0.0033860714817812	0.000096
asp+page	End SaveState	0.00350026114542497	0.000094
asp+page	Begin SaveStateComplete	0.0036134321113411	0.000112
asp+page	End SaveStateComplete	0.003726613205632	0.000110
asp+page	Begin Render	0.003839791712846	0.000110
asp+page	End Render	0.0039529731707649	0.000049

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Control Tree

Control Tree

Control UniqueID	Type	Render Size Bytes (excluding children)	ViewState Size Bytes (excluding children)	ControlState Size Bytes (excluding children)
__Page	ASP: trace/demos/asp	1025	0	0
c000c000	ASP: placeholder_placeholder	1025	0	0
c000c001	System.Web.UI.LiteralControl	175	0	0
c000c002	System.Web.UI.HtmlControls.HtmlHead	166	0	0
c000c003	System.Web.UI.HtmlControls.HtmlTitle	30	0	0
c000c004	System.Web.UI.HtmlControls.HtmlLink	62	0	0
asp\$Form	System.Web.UI.LiteralControl	14	0	0
c000c005	System.Web.UI.HtmlControls.HtmlForm	710	0	0
c000c006	System.Web.UI.LiteralControl	34	0	0
c000c007	System.Web.UI.LiteralControl	10	0	0
c000c008	System.Web.UI.WebControls.ContentPlaceholder	128	0	0
c000c009	System.Web.UI.WebControls.Button	124	0	0
c000c010	System.Web.UI.LiteralControl	2	0	0
c000c011	System.Web.UI.LiteralControl	6	0	0
c000c012	System.Web.UI.LiteralControl	0	0	0
c000c013	System.Web.UI.LiteralControl	0	0	0
c000c014	System.Web.UI.LiteralControl	0	0	0
c000c015	System.Web.UI.LiteralControl	0	0	0
c000c016	System.Web.UI.LiteralControl	0	0	0
c000c017	System.Web.UI.LiteralControl	0	0	0
c000c018	System.Web.UI.LiteralControl	0	0	0
c000c019	System.Web.UI.LiteralControl	0	0	0
c000c020	System.Web.UI.LiteralControl	0	0	0
c000c021	System.Web.UI.LiteralControl	111	0	0
c000c022	System.Web.UI.LiteralControl	20	0	0

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Session, Cookies and Form



Session State		
Session Key	Type	Value
Full	System.String	Bar

Request Cookies Collection		
Name	Value	Size
ASP.NET_SessionId	va5c5hauys2u5utmoead	42
Top Counter	2	14

Response Cookies Collection		
Name	Value	Size
Top Counter	3	14

Form Collection	
Name	Value
__VIEWSTATE	/wEPDwULLTlwMDIzMDY0MjYsZAAOF/Ku7FvUk23EW1TXvbiV0gB
cTRO0ContentPlaceHolder1\$btnSubmit	Click Me
EVENTVALIDATION	/wEWAgkShwWNBAL407wCfEh4y3Xf4qewW5u/ShueRbhG5

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ADO.Net (Review)



- ❑ You have already discussed
 - ❑ Relational databases
 - ❑ Data organized into tables
 - ❑ SQL
 - ❑ Structured Query Language
 - ❑ ODBC
 - ❑ Open Database Connectivity
 - ❑ MySQL
 - ❑ The database backend we are using

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ADO.Net (Review)



- ❑ OleDbConnection
 - ❑ Connection string
 - ❑ Specifies driver, host, user, password, database
 - ❑ Open
 - ❑ Close
- ❑ OleDbCommand
 - ❑ Specifies connection, SQL, and parameters
 - ❑ Use parameterized queries

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ADO.Net Data Sets, etc.



- ❑ DataSet, along with DataTable and DataAdapter create
 - ❑ In-memory
 - ❑ Random access
 - ❑ Optionally type-safe views onto potentially many tables
- ❑ Allows connection to be closed while the data is processed

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ADO.Net Data Sets, etc.



- ❑ Code review

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3rd Party Controls



- ❑ Many 3rd parties create controls for ASP.NET
- ❑ They make web sites beautiful and functional
- ❑ Try out these:
 - ❑ www.obout.com
 - ❑ www.essentialobjects.com
- ❑ Demos
 - ❑ about Grid (source code provided)
 - ❑ essential objects tab strip and multiview

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Changing Document Type



- ❑ A presentation (.aspx file) can be completely overridden to return non-HTML data
- ❑ For example:
 - ❑ XML data can be returned
 - ❑ SOAP
 - ❑ Web Services
 - ❑ Audio
 - ❑ Pictures
 - ❑ Code review

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