ASP.NET Web Introduction

Prepared for Vth semester DDU-CE students 2022-23 WAD

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Common Cold, not common!

- Most grown-ups have two to four colds a year; children can easily get six to 10.

- More than 200 viruses are responsible for the cold.

- While a person's breath can travel 4.5 feet per second, droplets from a sneeze can travel (insert shudder here) at about 100 miles per hour.

- Rhinoviruses (the most common virus) survive for three hours outside of the body, and can sometimes live for up to 48 hours on touchable surfaces, including everything from doorknobs and subway poles to shopping carts and light switches.

- A single sneeze can spray 100,000 germs into the air, which is why you should keep a six-foot distance from a sneezing sick person.

Namespace

- Logical group of types + Container

- .NET Framework uses namespaces to organize its many classes

- System.Console.WriteLine("Hello World!");

- Own namespaces

  – control the scope of class and method names

- Named group of classes

Visual Studio

- Rich environment
  - Page Design
  - Automatic error detection
  - ~~Automatic error correction!~~
  - Debugging tools
  - Intellisense

Lets start with Web

Stateless Server

- A server that treats each request as an independent transaction that is unrelated to any previous request
  - Simple server design
    - No need to dynamically allocate/ de-allocate storage
    - Necessary to include additional information

HTTP

- Stateless server
- Request (URLs+?+...)
  - No context, Memory of previous requests
  - Track users' progress
    - Cookies
    - Sessions
    - Hidden variables
    - Query strings (URL-rewriting using URI-encoded parameters)

ASP.NET Page Postback and Roundtrip

- Web application : Distributed execution model
  - Client side scripts
  - Server side scripts
    1. User requests a Web form from the Web server
    2. Web Server responds back with the requested Web form
    3. User enters the data and submits the form to the Web server
    4. Web Server processes the form and sends the result back to the user
- Step 3 is a page **postback**
- Steps 3 and 4 are collectively referred to as a **roundtrip**.
  - A roundtrip involves making a complete trip over the network to the Web server and getting the response back.

AutoPostBack

- Property in ASP.NET – For every web control
- __doPostBack()
  - JavaScript function
  - When Called, it triggers a PostBack, sending data back to the web Server

<input type = "hidden" name = "_EVENTTARGET" value="" />

<input type = "hidden" name = "_EVENTARGUMENT" value="" />

- The __doPostBack() function has the responsibility for setting these values with the appropriate information about the event and then submitting the form.

Cont.

- AutoPostBack=true
  - __doPostBack(), onclick, onchange
- __doPostBack()
  - ASP.NET: client side javascript event into
    server side ASP.NET event

```
<asp:DropDownList        id="id"        runat="server"
   AutoPostBack="true"
   OnSelectIndexChanged="..."/>
```

```
<asp:DropDownList ID="ddlFruits" runat="server"
  AutoPostBack = "true" OnSelectedIndexChanged =
  "OnSelectedIndexChanged">
    <asp:ListItem Text="Mango" Value="1" />
    <asp:ListItem Text="Apple" Value="2" />
    <asp:ListItem Text="Banana" Value="3" />
    <asp:ListItem Text="Guava" Value="4" />
    <asp:ListItem Text="Orange" Value="5" />
</asp:DropDownList>
```

```csharp
protected void OnSelectedIndexChanged(object
    sender, EventArgs e)
    {

        string message = ddlFruits.SelectedItem.Text
+ " - " + ddlFruits.SelectedItem.Value;

    ClientScript.RegisterStartupScript(this.GetType(),
    "alert", "alert('" + message + "');", true);
    }
```

Mango ▼

Mango
Apple
Banana
Guava
Orange

localhost:50750 says

Mango - 1

OK