Web Controls

Introduction

- These classes duplicate the functionality of the basic HTML element and extend it with a more consistent and meaningful set of properties and methods.

The `WebControls` Namespace

- The `System.Web.UI.WebControls` name space defines the various available web controls.
- The available controls automatically generate the necessary HTML for creating the user interface.
- The available controls allow us to set various events on the server side.

Web Control Properties

- When configuring the properties using the visual studio 2010 properties window our edits are shown within the opening tag of the control.

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The Control Objects

- When placing a specific control on our page during the execution of our code an object will be created on the server side to represent that very specific control.
- Member variables we can find in the code behind will hold the references for the control objects.

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The `WebControl` Class

- The `System.Web.UI.WebControls.WebControl` is the base class from which all ASP.NET web controls extend.
- The `System.Web.UI.WebControls.WebControl` estends from `System.Web.UI.Control`.
- These two classes define properties common to all server side controls.

Server Side Events Handling

- The events driven model when developing web applications in ASP.NET involves with requests coming from the web browsers and responds sent back to it.

The `AutoPostBack` Property

- Many of the ASP.NET web controls (e.g. CheckBox and RadioButton) have the `AutoPostBack` property.
- This property enables (or disables) immediate post back to the server. The default value is `false`, which fits the common case. We are usually not interested in automatic immediate post back to the server.

The `AutoPostBack` Property

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="AutoPostBackSolution.WebForm1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
    <div>
        <asp:ListBox ID="ListBox1" runat="server" Width="130px"></asp:ListBox>
        <br />
        <asp:TextBox ID="TextBox1" runat="server" AutoPostBack="True"
            ontextchanged="TextBox1_TextChanged"></asp:TextBox>
    </div>
    </form>
</body>
</html>
```

The AutoPostBack Property

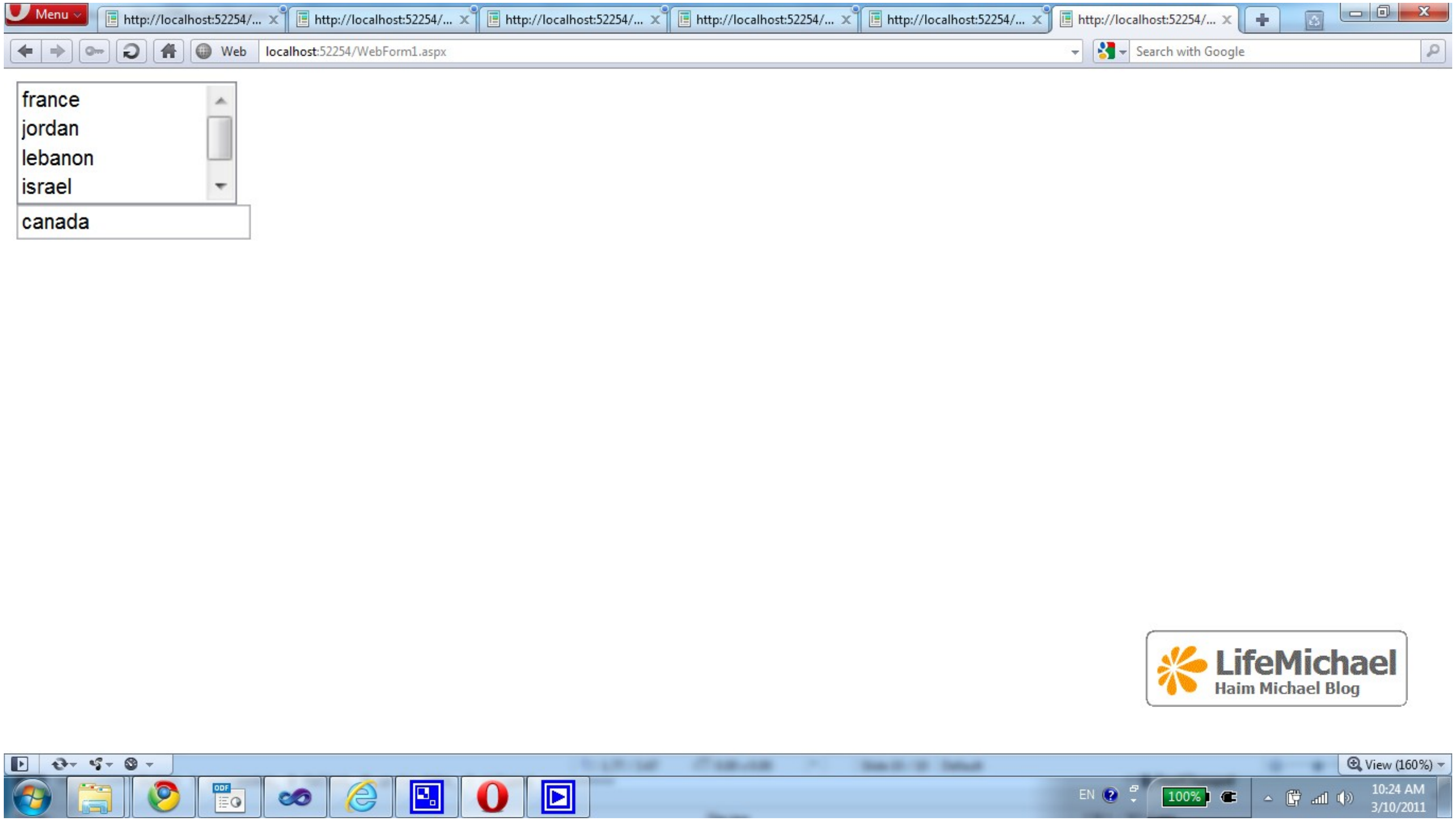
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace AutoPostBackSolution
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void TextBox1_TextChanged(object sender, EventArgs e)
        {
            this.ListBox1.Items.Add(TextBox1.Text);
        }
    }
}
```

The `AutoPostBack` Property



france
jordan
lebanon
israel

canada

The `System.Web.UI.Control` Class

- This class is the base class for all web browser controls. It includes the definition for various properties, methods and events that allow our code to interact with the web browsers on our page.

The `Controls` Property

- This property was defined in `System.Web.UI.Control` and it holds a `ControlCollection` object that holds references for all childs.
- We can use this property for iterating all childs a specific control has.

The `Panel` Control

- We can use the panel control for placing together a group of controls. Each one of them is considered to be a child of the panel.

The `Panel` Control

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="PanelDemo.WebForm1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
```

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The Panel Control

```
<body>
    <form id="form1" runat="server">
    <div>
        <asp:Panel ID="Panel1" runat="server">
        </asp:Panel>
        <asp:Label ID="Label1" runat="server" Text="rows: "></asp:Label>
        <asp:TextBox ID="TextBoxRows" runat="server" Text="4"></asp:TextBox>
        <asp:Label ID="Label2" runat="server" Text="cols: "></asp:Label>
        <asp:TextBox ID="TextBoxCols" runat="server" Text="4"></asp:TextBox>
        <asp:Button ID="Button1" runat="server" Text="generate" />
    </div>
    </form>
</body>
</html>
```

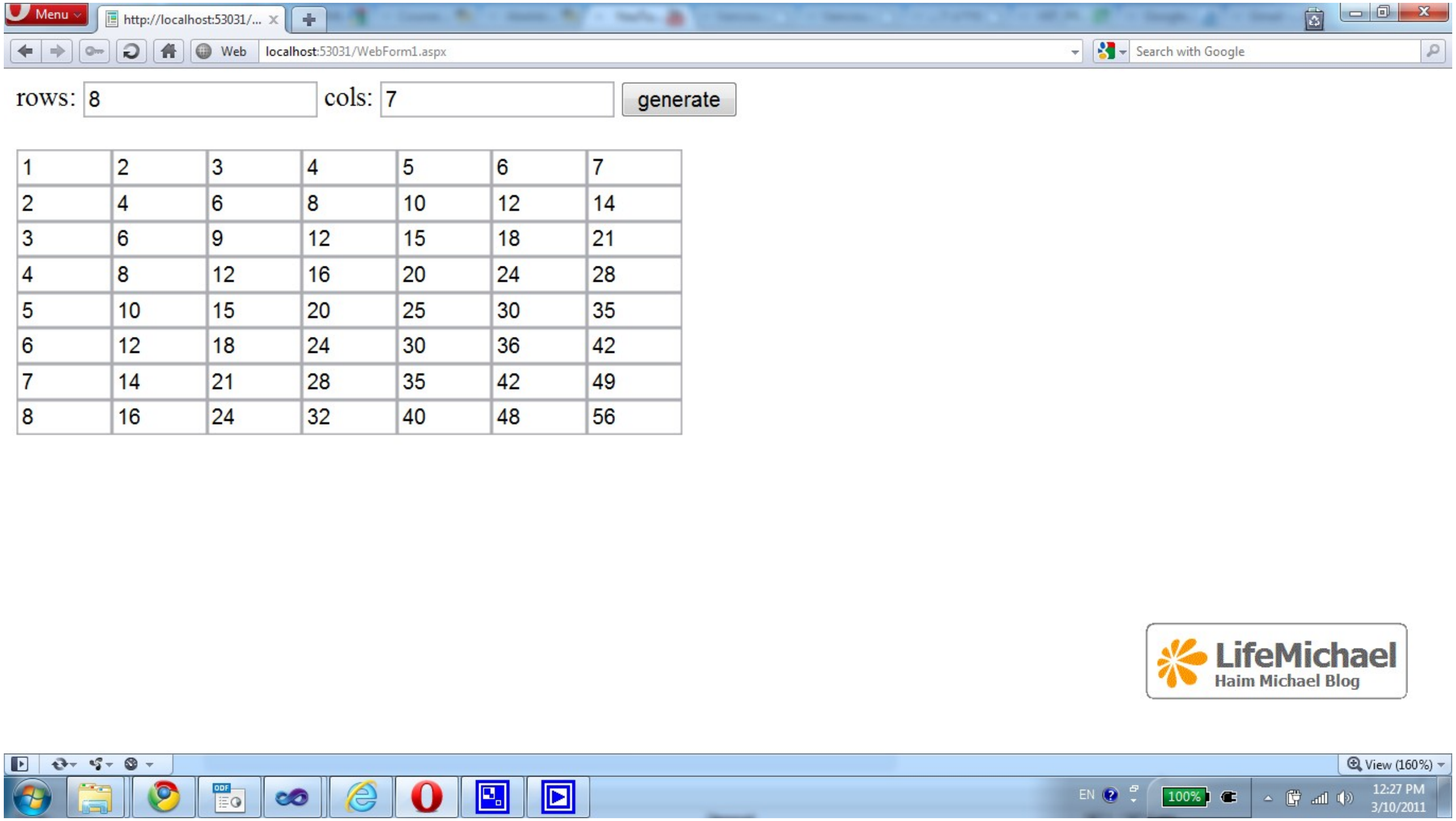
The `Panel` Control

```
namespace PanelDemo
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            int rows = int.Parse(TextBoxRows.Text);
            int cols = int.Parse(TextBoxCols.Text);
            form1.Controls.Add(new LiteralControl("<br/>"));
            for(int r=1; r<=rows; r++)
            {
                Panel panel = new Panel();
```

The `Panel` Control

```
               for(int c=1; c<=cols; c++)
                {
                   TextBox tb = new TextBox();
                   tb.ID = string.Format("cell{0}{1}",r,c);
                    tb.Text = (c*r).ToString();
                    tb.Width = 50;
                    panel.Controls.Add(tb);
                }
                form1.Controls.Add(panel);
            }
           form1.Controls.Add(new LiteralControl("<br/>"));
        }
    }
}
```

The `Panel` Control



rows: 8 cols: 7 generate

1	2	3	4	5	6	7
2	4	6	8	10	12	14
3	6	9	12	15	18	21
4	8	12	16	20	24	28
5	10	15	20	25	30	35
6	12	18	24	30	36	42
7	14	21	28	35	42	49
8	16	24	32	40	48	56

The `AdRotator` Control

- We can use this control for presenting ads rotated with each other each time the page refreshes.

The AdRotator Control

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication11.WebForm1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
    <div>
        <asp:AdRotator ID="AdRotator1" Target="_blank" runat="server"
            AdvertisementFile="ads.xml" />
    </div>
    </form>
</body>
</html>
```

we should specify an xml document that sets the AdRotator control

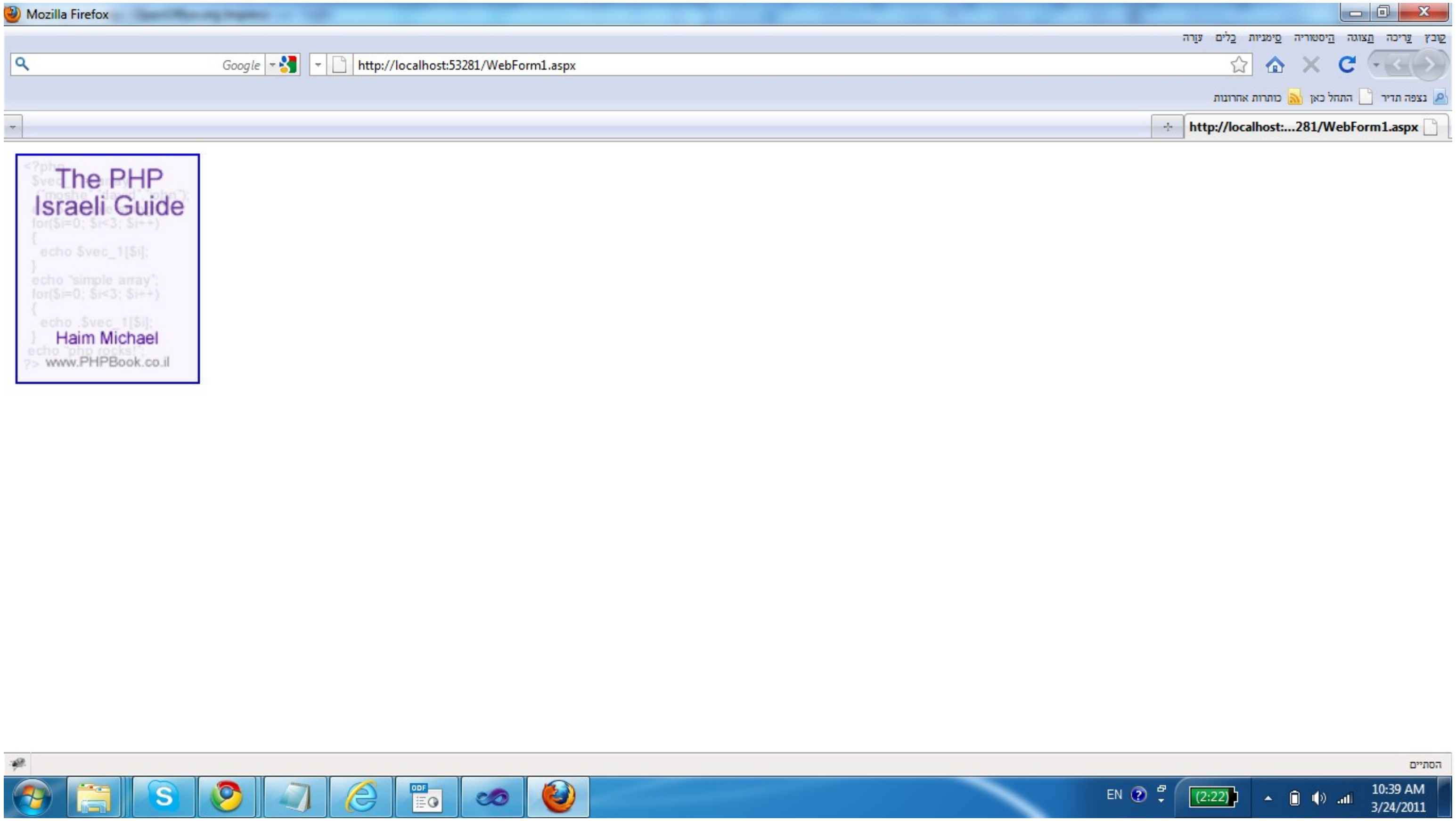
The AdRotator Control

```
<?xml version="1.0" encoding="utf-8" ?>

<Advertisements>
  <Ad>
    <ImageUrl>http://marketing.zindell.com/banners/JAVABOOK_128x160.jpg</ImageUrl>
    <NavigateUrl>http://www.javabook.co.il</NavigateUrl>
    <Impressions>30</Impressions>
    <Keyword>books</Keyword>
  </Ad>
  <Ad>
    <ImageUrl>http://marketing.zindell.com/banners/PHPBOOK_128x160.jpg</ImageUrl>
    <NavigateUrl>http://www.phpbook.co.il</NavigateUrl>
    <Impressions>30</Impressions>
    <Keyword>books</Keyword>
  </Ad>
```

The AdRotator Control

```
  <Ad>
    <ImageUrl>http://marketing.zindell.com/banners/UMLBOOK_128x160.jpg</ImageUrl>
    <NavigateUrl>http://www.umlbook.co.il</NavigateUrl>
    <Impressions>30</Impressions>
    <Keyword>books</Keyword>
  </Ad>
  <Ad>
    <ImageUrl>http://marketing.zindell.com/banners/CSHARPBOOK_128x160.jpg</ImageUrl>
    <NavigateUrl>http://www.csharpbook.co.il</NavigateUrl>
    <Impressions>30</Impressions>
    <Keyword>books</Keyword>
  </Ad>

</Advertisements>
```

The `AdRotator` Control


Mozilla Firefox
קובץ עריכה תצוגה היסטוריה סימניות כלים עזרה
Google
http://localhost:53281/WebForm1.aspx
נצפה תדיר התחל כאן כותרות אחרונות
http://localhost:...281/WebForm1.aspx
The PHP Israeli Guide
Haim Michael
www.PHPBook.co.il
הסתיים
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The `FileUpload` Control

- We can use this control for allowing the user to upload a file to our server.

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The FileUpload Control

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication16.WebForm1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
    <div>
        <asp:Button ID="Button1" runat="server" Text="Upload"
            OnClick="Button1_Click" />
        <asp:FileUpload ID="FileUpload1" runat="server" />
        <br />
        <asp:Label ID="Label1" runat="server">  </asp:Label>
    </div>
    </form>
</body>
</html>
```

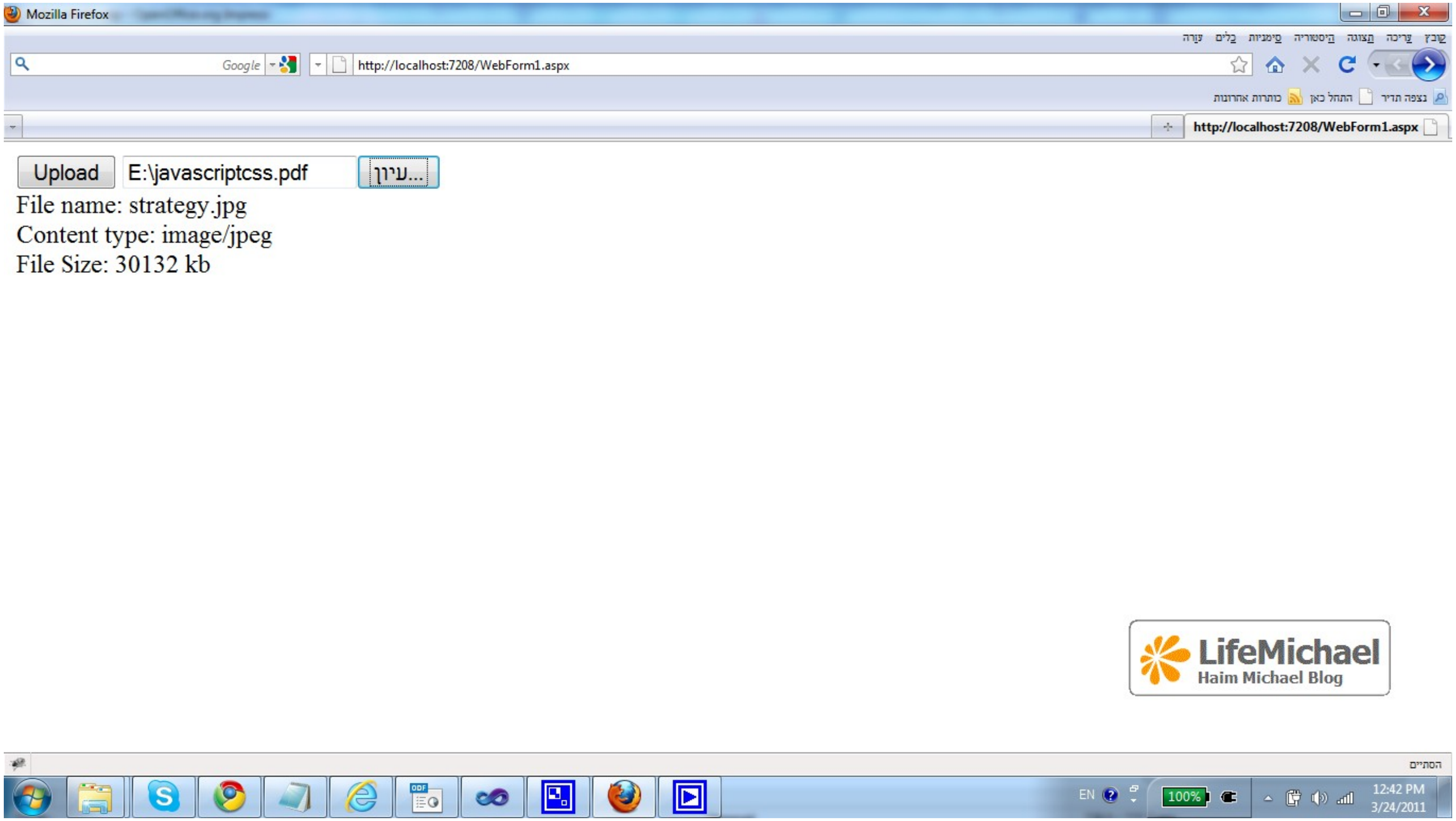
The FileUpload Control

```
namespace WebApplication16
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void Button1_Click(object sender, EventArgs e)
        {
            if (FileUpload1.HasFile)
            try
            {
                FileUpload1.SaveAs("e:\\uploaded_files\\" + FileUpload1.FileName);
                Label1.Text = "File name: " +
                    FileUpload1.PostedFile.FileName + "<br>" +
                    "Content type: " + FileUpload1.PostedFile.ContentType +
                    "<br>" + "File Size: " +
                    FileUpload1.PostedFile.ContentLength + " kb";
            }
```

The FileUpload Control

```
            catch (Exception ex)
            {
                Label1.Text = "ERROR: " + ex.Message.ToString();
            }
            else
            {
                Label1.Text = "You should specify a file.";
            }
        }
    }
}
```

The `FileUpload` Control



File name: strategy.jpg
Content type: image/jpeg
File Size: 30132 kb