Customize the ArcWeb
Company Weather Report Application

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ArcWeb Services allow users to access data and functionality hosted at ESRI. This tutorial will teach users how to install and customize the Company Weather Report application. This ArcWeb showcase application enables users to view current weather information for multiple locations in the United States. The main weather report includes summary information (e.g., current temperature and conditions) along with a national precipitation map. Users can click through to a specific report for any office, revealing weather details (e.g., humidity, visibility, dew point, air pressure, and wind speed) as well as a close-up precipitation map.

The Company Weather Report application, an ArcWeb showcase application, displays current weather information for multiple locations in the United States.

Getting Started

This part of the exercise will install and configure the default application.

1. After downloading from the *ArcUser Online* Web site, unzip the archive. The archive will create a folder called weather that should contain two folders called web and classes. The directory structure for the weather folder is shown in Figure 1.

2. Create a virtual directory for your Web site. Open Internet Information Services by clicking the Windows Start button and choosing Control Panel > Administrative Tools. Browse to (local computer) > Web Sites > Default Web Site.

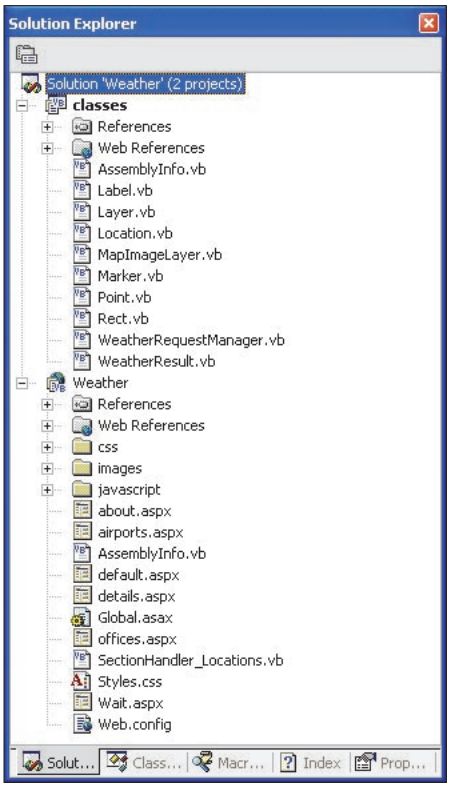


Figure 1: Directory structure for weather folder

3. Right-click Default Web Site, select New > Virtual Directory. Click Next.

4. Type weather as your alias and click Next.

5. Browse to the Web directory of the application and click Next.

6. Click Finish and close Internet Information Services.

7. Browse to the installation folder. Within the Web directory, open the Web.config file and replace YOUR_USERNAME with your ArcWeb account user name. Also replace YOUR_PASSWORD with your ArcWeb account password. Save and close the Web.config file.

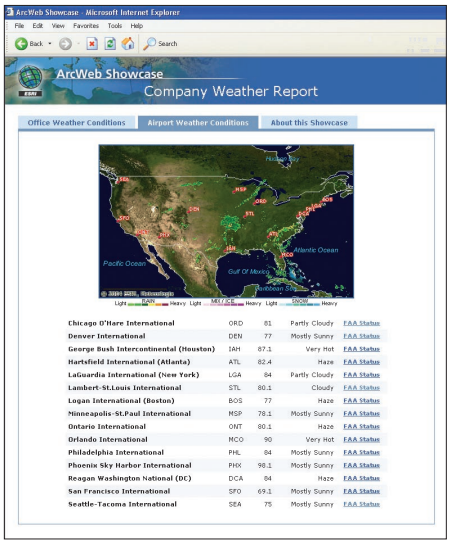
8. Test the sample in a browser by typing the following URL: http://localhost/weather/

Customize Locations

This section customizes the application to view reports for your own locations such as regional offices.

What You Will Need

- An ArcWeb Services account is required. To sign up for a free evaluation, visit the ESRI ArcWeb Services Web page at **www.esri.com/software/arcwebservices/evaluate.html**.
- Microsoft Internet Information Services (IIS)
- Microsoft .NET Framework version 1.1
- The sample dataset for this tutorial downloaded from the *ArcUser Online* Web site (**www.esri.com/arcuser**)
- An unzipping utility such as WinZip
- To customize the application by including a new variable in the reports, Microsoft Visual Studio .NET (2002 or 2003)



The Company Weather Report application also shows weather conditions for airports.

1. Open the Web.config file located within the Web folder.

2. Replace the Office locations with your own using the following format:

```
<Location
id="[unique ID]"
name="[name of location that will be shown in application]"
x="[longitude]"
y="[latitude]"/>
```

You may have any number of office locations. They will be displayed in the main page of the application in order from left to right, top to bottom based on the order in this file.

3. Test the customized sample in a browser by typing the following URL: http://localhost/weather/

Include New Variable in Detailed Reports

This section requires Microsoft Visual Studio .NET 2002 or 2003. Up to this point you've customized the application without writing any code. The next steps will guide you through some simple source code customization to add

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Locate these lines	Type these lines below
In the declarations section Private m_dblTemperature As Double	Private m_dblFeelsLike As Double
Within the (New) sub ByVal Temperature As Double, _	ByVal HeatIndex As Double, _ ByVal WindChill As Double, _

Within the (New) sub
m_dblTemperature = Temperature
	If Temperature < 51 Then
	m_dblFeelsLike = WindChill
	ElseIf Temperature > 69 Then
	m_dblFeelsLike = HeatIndex
	Else
	m_dblFeelsLike = Temperature
	End If

Within the (New) sub Public ReadOnly Property Temperature() As Double Get Return m_dblTemperature End Get End Property	Public ReadOnly Property FeelsLike() As Double Get Return m_dblFeelsLike End Get End Property

Figure 2: Modifications to WeatherResult.vb

Locate these lines	Type these lines below
Within the arrReturn.Add section CDbl(GetRSetValue(objResultSet, i, "TEMPERATUR")),	CDbl(GetRSetValue(objResultSet, i, "HEATINDEX")), _ CDbl(GetRSetValue(objResultSet, i, "WINDCHILL")), _
Open the file details.aspx, right-click on the background, and select View Code tblResults.Rows.Add(_ CreateRow(_ "Temperature:", _ Math.Round(objWeatherResult.Temperature).ToString & "° F" _) _)	tblResults.Rows.Add(_ CreateRow(_ "Feels Like:", _ Math.Round(objWeatherResult.FeelsLike).ToString & "° F" _) _)

Figure 3: Modifications to WeatherRequestManager.vb

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a new variable called Feels Like to the detailed reports. This variable will report back either the wind chill when it is cold outside or the heat index when it is hot.

Nearly all of these code changes closely mimic existing lines of code directly above each new addition.

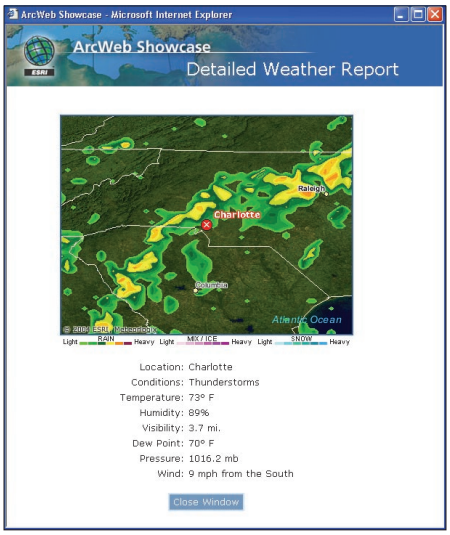
1. Use Visual Studio to open the solution file located at <installation directory>/web/Weather.sln. Make sure the startup project is RO_WEATHER.

2. Within Visual Studio, open the file WeatherResult.vb and make the modifications listed in Figure 2. Locate the code listed in the left column and type the code shown in the right column below.

3. Open WeatherRequestManager.vb and make the modifications listed in Figure 3.

4. Build the project by selecting Build Solution under the Build menu.

5. Open the application in a Web browser and view the changes by clicking one of the details links.



The detailed report provides additional information for each city in the report.

Additional Information

For more information on using ArcWeb Services, visit the ArcWeb Services Web page (www.esri.com/arcweb); take the ESRI Virtual Campus (campus.esri.com) training seminar *Introduction to ArcWeb Services;* or read through *ArcWeb Online,* the ArcWeb developer documentation (arcweb.esri.com/arcwebonline).