Web service

This tutorial shows how to create a Pocket PC application that uses Web services to display weather information.

Your application will display weather information of the airport stations around the world, retrieved from the **GlobalWeather** Web service.

Creating an Device Application Project

1. On the **File** menu, point to **New**, and then select **Project**. The **New Project** dialog box opens.
2. In the **Project Types** pane, select **Visual** C#, **Smart Device**, **Windows Mobile 5.0 Pocket PC.** In the **Templates** pane, **Device Application** is selected.
3. Enter **Name** and **Location** for the new project, and click **OK**.

Adding a Reference to the GlobalWeather Web Service

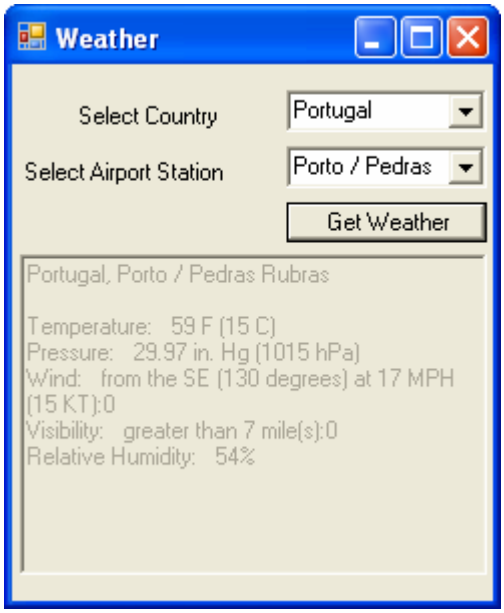
1. On the **Project** Menu, select **Add Web Reference**.
2. In the **Add Web Reference** dialog, do the following:
    a. In the URL field, enter the following Web service URL: "*http://www.webservicex.net/globalweather.asmx?WSDL*" and click **Go.**
    b. The service description appears in the left area. Change the Web reference name to **GlobalWeatherWS** and click **Add Reference**.

Adding Controls to the Weather Portal Component

1. Open your application form in the design view.
2. From the Toolbox, drag a number of controls onto your portal component form and set their properties, as described in the following table:

Control type	**ID**	**Properties**
Label	lblCountries	**Text**: Select Country
Label	lblStations	**Text:** Select Airport Station
TextEdit	txtWeather	**ReadOnly**: true **Mutiline**:true
ComboBox	cbCountry	**Width:** 150
ComboBox	cbStation	**Width:** 150
Button	btnGet	**Text**: Get Weather

3. Arrange the controls inside the table as shown below:



Adding Code to Use the Web Services

We will use two services:

- string *GlobalWeather.GetCitiesByCountry(string CountryName)* – returns a list of countries, if given an empty string.
- string *GlobalWeather.GetWeather(string CityName, string CountryName)* – returns a weather report of the selected city and country.

```
using System;
using System.Collections;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;
using System.Net;
using System.Xml;


namespace WebServiceGW
{
    public partial class Form1 : Form
    {
        private GlobalWeatherWS.GlobalWeather weatherWS;
        private string selectedCountry="",selectedCity="";

        public Form1()
        {
            InitializeComponent();
            weatherWS = new GlobalWeatherWS.GlobalWeather();

        }
       private void BindStations()
```

```
            {
            DataSet ds = new DataSet();
            ds.ReadXml(new
System.IO.StringReader(weatherWS.GetCitiesByCountry(selectedCountry)));
            SortedList sl = new SortedList();
            for (int i = 0; i < ds.Tables[0].Rows.Count; i++)
            {
                string city = ds.Tables[0].Rows[i][1].ToString();
                sl.Add(city, city);
            }
            cbStations.DataSource = sl.GetValueList();
            }

        private void cbCountry_SelectedIndexChanged(object sender, EventArgs e)
        {
            selectedCountry = cbCountry.SelectedItem.ToString();
            BindStations();
        }


        private void Form1_Load(object sender, EventArgs e)
        {
            try
            {
                DataSet ds = new DataSet();
                ds.ReadXml(new System.IO.StringReader(weatherWS.GetCitiesByCountry("")));
                SortedList sl = new SortedList();
                for (int i = 0; i < ds.Tables[0].Rows.Count; i++)
                {
                    string country = ds.Tables[0].Rows[i][0].ToString();
                    if (!sl.Contains(country))
                    {
                        sl.Add(country, country);
                    }
                }
                cbCountry.DataSource = sl.GetValueList();
            }
            catch (Exception ex)
            {
               txtWeather.Value = ex.Message;
            }
        }
        private void button1_Click(object sender, EventArgs e)
        {
            try
            {
                if(selectedCountry!="" && selectedCity!="")
                {
                    MessageBox.Show(selectedCountry + " : " + selectedCity);
                    string weather = weatherWS.GetWeather(selectedCity,selectedCountry);
                    if (weather.ToLower() != "Data Not Found".ToLower())
                    {
                        XmlDocument xDoc = new XmlDocument();
                        xDoc.LoadXml(weather);
                        txtWeather.Text = selectedCountry + ", " + selectedCity + "\r\n"
+ "\r\n";
                        txtWeather.Text += "Temperature:  " +
xDoc.SelectSingleNode("//CurrentWeather/Temperature").InnerText + "\r\n";
                        txtWeather.Text += "Pressure:  " +
xDoc.SelectSingleNode("//CurrentWeather/Pressure").InnerText + "\r\n";
                        txtWeather.Text += "Wind:  " +
xDoc.SelectSingleNode("//CurrentWeather/Wind").InnerText + "\r\n";
                        txtWeather.Text += "Visibility:  " +
xDoc.SelectSingleNode("//CurrentWeather/Visibility").InnerText + "\r\n";
                        txtWeather.Text += "Relative Humidity:  " +
xDoc.SelectSingleNode("//CurrentWeather/RelativeHumidity").InnerText;
                    }
                    else
                    {
                        txtWeather.Text = "Data is not available for the selected
station";
```

```
                    }
                }
            }
            catch (WebException wex)
            {
                txtWeather.Text=wex.Message;
            }
            catch (Exception)
            {
                txtWeather.Text = "Data is not available for the selected station";
            }
        }

        private void cbStations_SelectedIndexChanged(object sender, EventArgs e)
        {
            selectedCity = cbStations.SelectedItem.ToString();
        }
    }

}
```