**Exercise 1**

**Objective**

Provide an appropriate level of commenting on the code below.

using System;

using System.Collections.Generic;

using System.Web;

using System.Data;

using System.Data.OleDb;

public partial class EstabChanges : System.Web.UI.Page

{

    protected void Page\_Load(object sender, EventArgs e)

    {

        int last, secLast;

        Dictionary<int, int> output = new Dictionary<int, int>();

        OleDbCommand cmd;

//Connect to Database with id and password

        OleDbConnection con = new OleDbConnection("Provider=ASEOLEDB;Data Source=Millar:5000;Initial Catalog=PSA\_NZ\_Unison;User Id=intranet;Password=in01tra963;");

        OleDbDataAdapter adptr = new OleDbDataAdapter(null, con);

//For putting in the result

        DataSet data = new DataSet("data");

        string estabNo = Request.QueryString["estabNo"];

//Query the amount of member which are in the same organisation registed this month by the establish number.

        cmd = new OleDbCommand("select em.estab\_name,sum(ss.total\_members) as estab\_members from MOST..sitestats ss,employer\_master em where ss.estab\_no = em.estab\_no and (em.group\_estab\_no = " + estabNo + " or em.estab\_no = " + estabNo + ") and ss.sequence\_no = (select min(ss2.sequence\_no) from MOST..sitestats ss2 where ss2.date\_time\_created >= '" + DateTime.Now.ToString("yyyy-MM-01") + "') group by em.estab\_no");

        cmd.Connection = con;

        adptr.SelectCommand = cmd;

        con.Open();

//put the result as a table into a dataset

        adptr.Fill(data, "last");

        con.Close();

//Query the amount of member which are in the same organisation registed last and this month by the establish number.

        cmd = new OleDbCommand("select em.estab\_name,sum(ss.total\_members) as estab\_members from MOST..sitestats ss,employer\_master em where ss.estab\_no = em.estab\_no and (em.group\_estab\_no = " + estabNo + " or em.estab\_no = " + estabNo + ") and ss.sequence\_no = (select min(ss2.sequence\_no) from MOST..sitestats ss2 where ss2.date\_time\_created >= '" + DateTime.Now.AddMonths(-1).ToString("yyyy-MM-01") + "') group by em.estab\_no");

        cmd.Connection = con;

        adptr.SelectCommand = cmd;

        con.Open();

//put the result as a table into a dataset

        adptr.Fill(data, "secLast");

        con.Close();

//last = the amount of members this month

        last = Convert.ToInt32(data.Tables["last"].Rows[0]["estab\_members"]);

        //secLast = the amount of members last and this month

secLast = Convert.ToInt32(data.Tables["secLast"].Rows[0]["estab\_members"]);

//show the result as a table in HTML

//Start with the header of the table.

        Response.Write("<table><th colspan=100%>Biggest membership gains and losses</th><tr><tr>");

//show each column name

        Response.Write("<tr><td>Employer</td><td>" + DateTime.Now.AddMonths(-2).ToString("MMM yyyy") + "</td><td>" + DateTime.Now.AddMonths(-1).ToString("MMM yyyy") + "</td><td>Difference</td><td>Percentage Change</td></tr>");

        Response.Write("<tr></tr>");

//show the data from the server

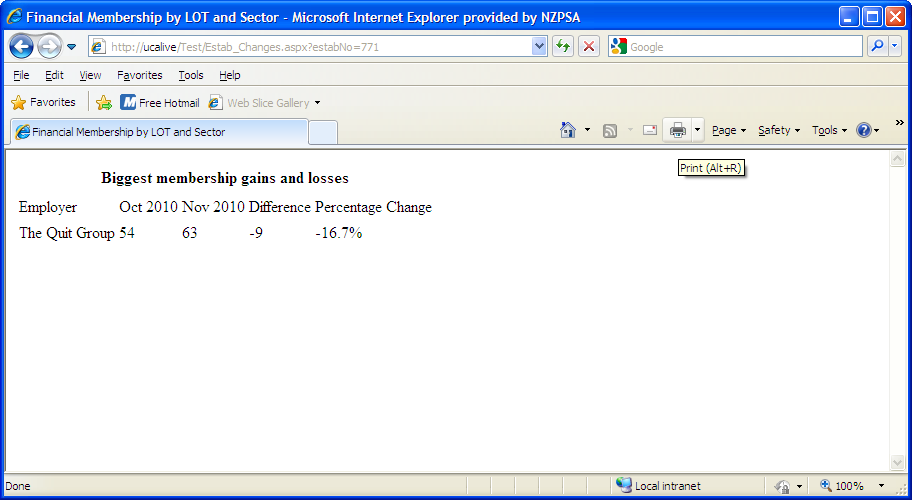
        Response.Write("<tr><td>" + data.Tables["secLast"].Rows[0]["estab\_name"].ToString() + "</td><td>" + secLast + "</td><td>" + last + "</td><td>" + (secLast - last) + "</td><td>" + Math.Round((double)100 \* (secLast - last) / secLast, 1).ToString() + "%</td></tr>");

        Response.Write("</table>");

    }

}

**The screen shot below shows the output of the code above.**



**Exercise 2**

**Objective**

Create a web based report that would sit on the PSA intranet. The report needs to display the active sites for an employer selected from a dropdown box on the webpage.

You need to set out the code you would write to generate such a report. We are looking for the overall logic of the code rather than the specifics so that you can write the code in say Java rather than C# - but remember this report is for an ASP.NET framework.

Below is an example of how the report might look if ACC is selected from the employer dropdown box.

Select employer **<< DROPDOWN BOX OF EMPLOYERS >>**

Employer: ACC

|  |  |
| --- | --- |
| **Site ID** | **Site Name** |
| 25 | ACC Auckland Office |
| 197 | ACC Dunedin Office |
| 329 | ACC Wellington Office |

The data for the report is held in a **Sybase database**. There are two tables that contain the relevant information for the report.

The tables are **site** and **employer\_master**

**site table**

Relevant columns:

**Column Name data type comments**

site\_id numeric(7,0) this is the site’s unique identifier in the data base

name varchar(50) this is the

linked\_estab\_no numeric(7,0) this is the estab\_no the site is linked to on the employer\_master table

date\_time\_deleted datetime the value is null if the site is still an **active site**

**employer\_master table**

In the **employer master table** there are two types of entries: estab which are linked to sites and estabs which are employers.

The employers are identified as having a ‘Y’ in the flag\_group\_employer column

The estabs linked to the employer have the employer estab\_no in their group\_estab\_no column (group employers have a null in that column)

Relevant columns:

**Column Name data type comments**

estab\_no numeric(7,0) this is the unique identifier for the table

flag\_group\_employer char a ‘Y’ in this column indicates the estab is a group employer, a ‘N’ indicates they are not a group employer but rather a estab linked to a site

group\_estab\_no numeric(7,0) this is the link between the site-estabs and the employer the site-estabs are under

date\_time\_deleted datetime the value is null if the estab is still an **active estab**

**The connection string to the database is:**

connectionString = "Provider=ASEOLEDB;Data Source=Kirwin:40;Initial Catalog=PSA\_Data\_Base;User Id=intranet;Password=intpwordj45;";

**Exercise 3**

**Objective**

Briefly state where each bit of the code is running (eg. client side or server side) and the type of code.

<!- - It’s a html page with VBScript inserted. Most of works in client side are done in html, and the works in server side are done in VBScript- ->

Sub ShowComments1(estab\_no)

%>

<!- - Here runs in javascript to show a window on the webpage, so it’s on client side. estab\_no in <% is from server side - ->

<script type="text/javascript">

function open\_com(){

window.open("comments.asp?estab\_no=<%=estab\_no%>","\_blank","toolbar=no, location=no, directories=no, status=no, menubar=no, height=400, width=600")}

</script>

<!- - Here runs in VBScript to read the file from the server side and parse it into a table in html - ->

<%

Set FSObject=CreateObject("Scripting.FileSystemObject")

Set CommentInfo = FSObject.OpenTextFile("c:\inetpub\UCAlive\prd\estab\_comments\comments1.txt",1,0)

edit\_found="no"

While Not CommentInfo.AtEndOfSTream

temp = CommentInfo.readline

if instr(temp,"|")>0 then

if left(temp,instr(temp,"|")-1) = estab\_no and len(right(temp,len(temp)-instr(temp,"|")))>0 then

temp=right(temp,len(temp)-instrrev(temp,"|"))

%>

<!- - Client side shows the comments in a html table - ->

<table border=2 bordercolor=black style="font-face:arial;font-size:10pt" cellpadding=10>

<tr><form><td bgcolor=black align=center><font size=3 color=white><b>Comments</b></td></tr>

<tr><td><%=temp%></td></tr>

</td></tr>

</table>

<!- - There is a button on the webpage allowing clients to open a window(use JavaScript) for editing previous comments - ->

<input type=hidden name="estab\_no" value="<%=estab\_no%>" >

<input type=button value="Edit Comments" onclick="open\_com()" style="font-face:arail;font-size:9pt">

<%

edit\_found="yes"

end if

end if

wend

CommentInfo.Close

set CommentInfo = Nothing

Set FSObject=Nothing

if edit\_found="no" then

%>

<!- - There is a button on the webpage allowing clients to open a window(use JavaScript) for adding comments if there is no comments - ->

<form><input type=hidden name="estab\_no" value="<%=estab\_no%>" >

<input type=button value="Add a Comment" onclick="open\_com()" style="font-face:arail;font-size:9pt">

<%

end if

end sub