1. Write a C# program to read two integer values using the methods Console. ReadLine() and int.Parse() and then display their
   - Sum
   - Difference
   - Product
   - Integer Division
   - Modulus Division

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex1
{
    class Program
    {
        static void Main(string[] args)
        {
            int first_integer, second_integer, sum, difference,
product, interger_division, modulus_division;
            Console.WriteLine("Enter the first Number : ");
            first_integer = int.Parse(Console.ReadLine());

            Console.WriteLine("Enter the Second Number : ");
            second_integer = int.Parse(Console.ReadLine());

            sum = first_integer + second_integer;
            difference = first_integer - second_integer;
            product = first_integer * second_integer;
            interger_division = first_integer / second_integer;
            modulus_division = first_integer % second_integer;

            Console.WriteLine("Sum :" + sum);
            Console.WriteLine("Difference :" + difference);
            Console.WriteLine("Product :" + product);
            Console.WriteLine("Division :" + interger_division);
            Console.WriteLine("Modulus :" + modulus_division);
        }
    }
}
```

OUTPUT:

Enter the first Number :

10

Enter the Second Number :

20

Sum :30

Difference :-10

Product :200

Division :0

Modulus :10

2. Programs in C# using if statement, if..else statement, nested if..else statement.

IF STATEMENT

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex2_if_statement
{
    class Program
    {
        static void Main(string[] args)
        {
            int age;
            Console.WriteLine("Enter your age :");
            age = int.Parse(Console.ReadLine());

            if(age>=18)
            {
                Console.WriteLine("You are an adult...");
            }
        }
    }
}
```

OUTPUT:

```
Enter your age :
18
You are an adult...
```

IF...ELSE STATEMENT

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex2_if_else_statement
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter the temperature : ");
            int temperature = int.Parse(Console.ReadLine());
            if(temperature>30)
            {
                Console.WriteLine("It's hot outside.");
            }
            else
            {
                Console.WriteLine("It's not too hot.");
            }
        }
    }
}
```

OUTPUT:

Enter the temperature :

40

It's hot outside.

NESTED IF…ELSE STATEMENT

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex2_nested_if_else_statement
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter your Score : ");
            int score = int.Parse(Console.ReadLine());
            if(score>=90)
            {
                Console.WriteLine("You got an A");
            }
            else if(score>=80)
            {
                Console.WriteLine("You got a B");
            }
            else if (score >= 70)
            {
                Console.WriteLine("You got a C");
            }
            else
            {
                Console.WriteLine("You need to improve your
score.");
            }
        }
    }
}
```

OUTPUT:

```
Enter your Score :

75

You got a C
```

3. Write a C# program to print the multiplication table using do..while loop.

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex_3_Mltiplication_table
{
    class Program
    {
        static void Main(string[] args)
        {
            int number, i = 1;
            Console.Write("Enter a number to display its multiplication table :
");
            number = int.Parse(Console.ReadLine());

            if(number<=0)
            {
                Console.WriteLine("Please enter a positive integer.");
                return;
            }
            Console.WriteLine($"Multiplication table of {number} : ");
            do
            {
                Console.WriteLine($"{number} * {i} = {number * i}");
                i++;
            } while (i <= 5);
            Console.ReadLine();
        }
    }
}
```

OUTPUT:

Enter a number to display its multiplication table : 2

Multiplication table of 2 :

2 * 1 = 2

2 * 2 = 4

2 * 3 = 6

2 * 4 = 8

2 * 5 = 10

4. Programs in C# using pass by value and pass by reference methods.

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex_4_PassByValue_and_Reference
{
    class Program
    {
        static void Main(string[] args)
        {
            int value = 10, reference = 10;
            Console.WriteLine("Before calling PassByValue : " + value);
            PassByValue(value);
            Console.WriteLine("After calling PassByValue : " + value);
            Console.WriteLine();
            Console.WriteLine("Before calling PassByReference : " + reference);
            PassByReference(ref reference);
            Console.WriteLine("After calling PassByReference : " + reference);
            Console.ReadKey();
        }
        static void PassByValue(int x)
        {
            x = 20;
            Console.WriteLine("Inside PassByValue : " + x);
        }
        static void PassByReference(ref int x)
        {
            x = 20;
            Console.WriteLine("Inside PassByReference " + x);
        }
    }
}
```

OUTPUT:

Before calling PassByValue : 10

Inside PassByValue : 20

After calling PassByValue : 10

Before calling PassByReference : 10

Inside PassByReference 20

After calling PassByReference : 20

5. Write a C# program that uses a method to sort an array of integers.

PROGRAM:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Ex_5_sorting
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter the number of elements in the
array :");
            int n = int.Parse(Console.ReadLine());
            int[] array = new int[n];
            Console.WriteLine("Enter the elements of the array :");
            for(int i=0;i<n;i++)
            {
                array[i] = int.Parse(Console.ReadLine());
            }
            Console.WriteLine("\nOriginal array : ");
            PrintArray(array);
            SelectionSort(array);
            Console.WriteLine("\nSorted array : ");
            PrintArray(array);
        }
        static void SelectionSort(int[] arr)
        {
            int n = arr.Length;
            for(int i=0;i<n-1;i++)
            {
                int minIndex = i;
                for(int j=i+1;j<n;j++)
                {
                    if(arr[j]<arr[minIndex])
                    {
                        minIndex = j;
                    }
                }
                int temp = arr[minIndex];
                arr[minIndex] = arr[i];
                arr[i] = temp;
            }
```

```
        }
        static void PrintArray(int[] arr)
        {
            foreach(int num in arr)
            {
                Console.Write(num + " ");
            }
            Console.WriteLine();
        }
    }
}
```

OUTPUT:

Enter the number of elements in the array :

5

Enter the elements of the array :

58

99

11

62

24

Original array :

58 99 11 62 24

Sorted array :

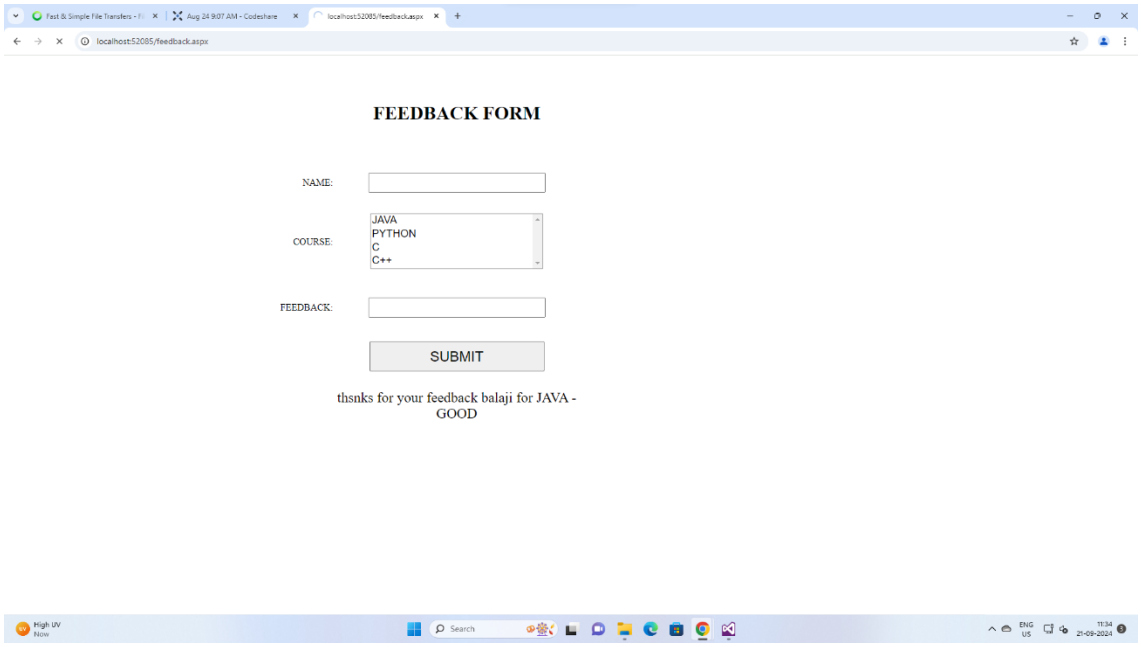
11 24 58 62 99

6. Write a program to display the following feedback form. The different options for the list box must be ASP-XML, DotNET, JavaPro and Unix,C,C++. When the Submit Form button is clicked after entering the data, a message as seen in the last line of the above figure must be displayed.

PROGRAM:

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

public partial class feedback : System.Web.UI.Page
{


    protected void Button1_Click(object sender, EventArgs e)
    {
        string name = TextBox1.Text;
        string selectlist = ListBox1.SelectedItem.Text;
        string feed = TextBox2.Text;
        Label1.Text = string.Format("thsnks for your feedback {0} for {1} -{2}",
name, selectlist, feed);
        TextBox1.Text = "";
        TextBox2.Text = "";
        ListBox1.SelectedIndex = -1;
    }
}
```

OUTPUT:

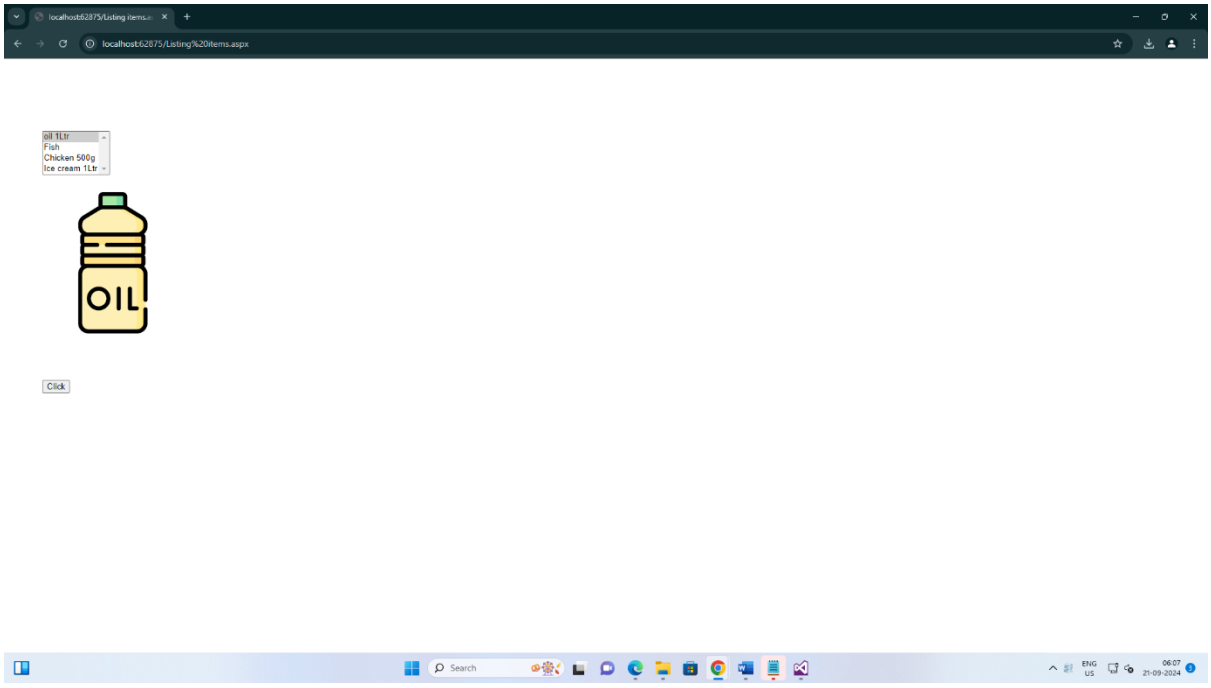


7. Write a program containing the following controls: A ListBox, a Button, an Image, a Label The listbox is used to list items available in a store. When the user clicks on an item in the listbox, its image is displayed in the image control. When the user clicks the button, the cost of the selected item is displayed in the control.

PROGRAM:

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

public partial class Listing_items : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        Label2.Text = " ";

    }

    protected void Button1_Click(object sender, EventArgs e)
    {
        Label2.Text = ListBox1.SelectedItem.Value;
    }

    protected void ListBox1_SelectedIndexChanged(object sender,
EventArgs e)
    {
        if (ListBox1.SelectedIndex == 0)
        {
            Image1.ImageUrl = "./oil.png";
        }
        else if (ListBox1.SelectedIndex == 1)
        {
            Image1.ImageUrl = "./fish.jpeg";
        }
        else if(ListBox1.SelectedIndex==2)
        {
            Image1.ImageUrl = "./chicken.jpeg";
        }
        else
        {
            Image1.ImageUrl = "./ice.png";
        }
    }
}
```

OUTPUT:


localhost:62875/Listing%20items.aspx
oil 1Ltr
Fish
Chicken 500g
Ice cream 1Ltr
OIL
Click
Search
ENG
US
06:07
21-09-2024

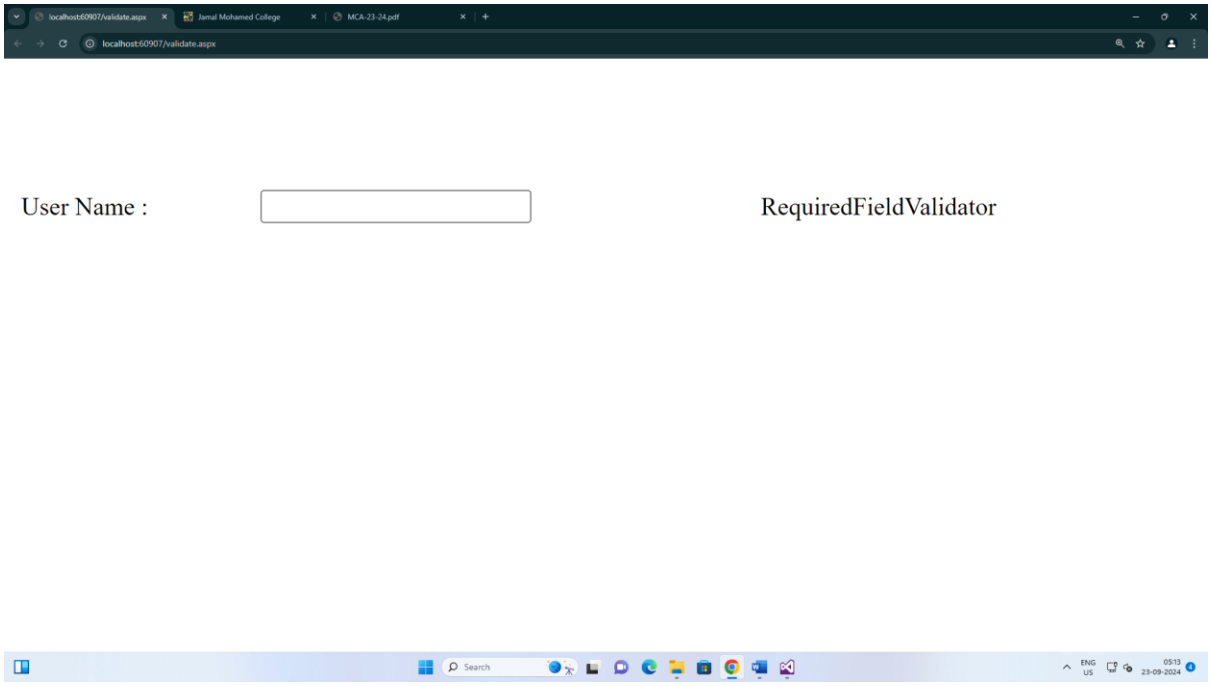
8. a) Write a program to get a user input such as the boiling point of water and test it to the appropriate value using CompareValidator.

OUTPUT:

Boilong point of Water 99 CompareValidator

8. b) Write a program that uses a textbox for a user input name and validate it for RequiredField Validation.

OUTPUT:

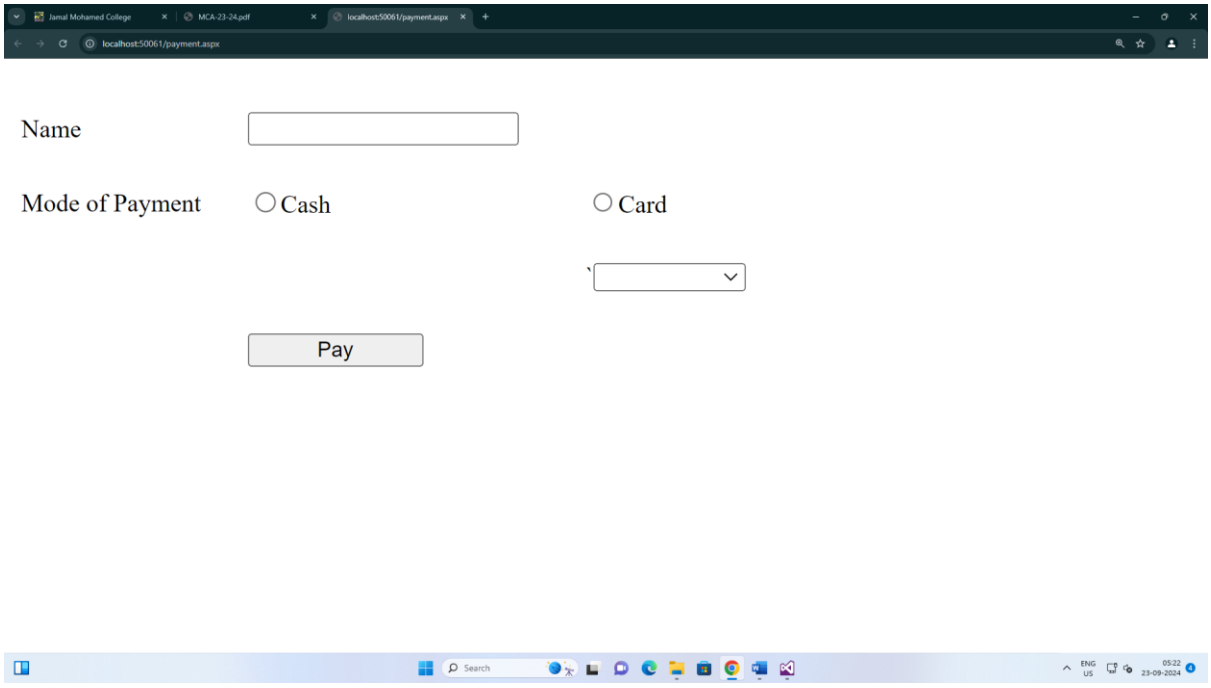


9. Write a program that gets user input such as the user name, mode of payment, appropriate credit card. After the user enters the appropriate values the Validation button validates the values entered.

PROGRAM:

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

public partial class payment : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        if(RadioButton1.Checked)
        {
            RadioButton2.Visible = false;
            DropDownList1.Visible = false;
            RequiredFieldValidator1.Enabled = false;
        }
        else if(RadioButton2.Checked)
        {
            RadioButton1.Visible = false;
        }
    }

    protected void Button1_Click(object sender, EventArgs e)
    {
        string textBoxValue = TextBox1.Text;
        string encodedValue =
HttpUtility.JavaScriptStringEncode(textBoxValue);
        string script = "<script>" +
                        "alert('Redirect to Payment Page! Name:" +
encodedValue + "');" +
                        "</script>";
        Response.Write(script);
        TextBox1.Text = " ";
        RadioButton1.Checked = false;
        RadioButton2.Checked = false;
    }
}
```

OUTPUT:

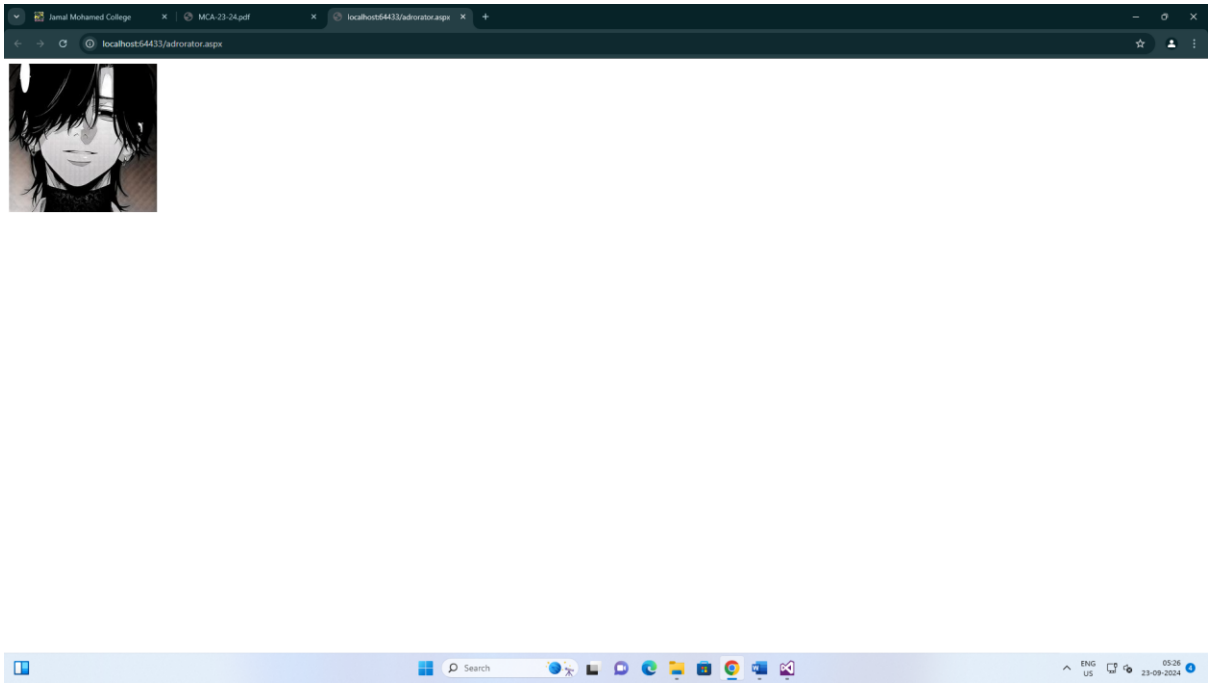

Jamal Mohamed College
MCA-23-24.pdf
localhost:50061/payment.aspx
localhost:50061/payment.aspx
Name
Mode of Payment
Cash
Card
Pay
Search
ENG
US
05:22
23-09-2024

10. Write a program using AdRotator Control.

PROGRAM:

```
<?xml version="1.0" encoding="utf-8" ?>
<Advertisements>>
<Ad>
<ImageUrl>~/Aizen.jpg</ImageUrl>
  <AlternateText>jgfihfrh</AlternateText>
  <Impersions>40</Impersions>
</Ad>
<Ad>
<ImageUrl>~/gojo.jpg</ImageUrl>
  <AlternateText>ihjFShjf</AlternateText>
  <Impersions>40</Impersions>
</Ad>
<Ad>
<ImageUrl>~/hero.jpg</ImageUrl>
  <AlternateText>kjbgfjf</AlternateText>
  <Impersions>40</Impersions>
</Ad>
<Ad>
<ImageUrl>~/sword.jpg</ImageUrl>
  <AlternateText>kjfbj</AlternateText>
  <Impersions>40</Impersions>
</Ad>
</Advertisements>
```

OUTPUT:

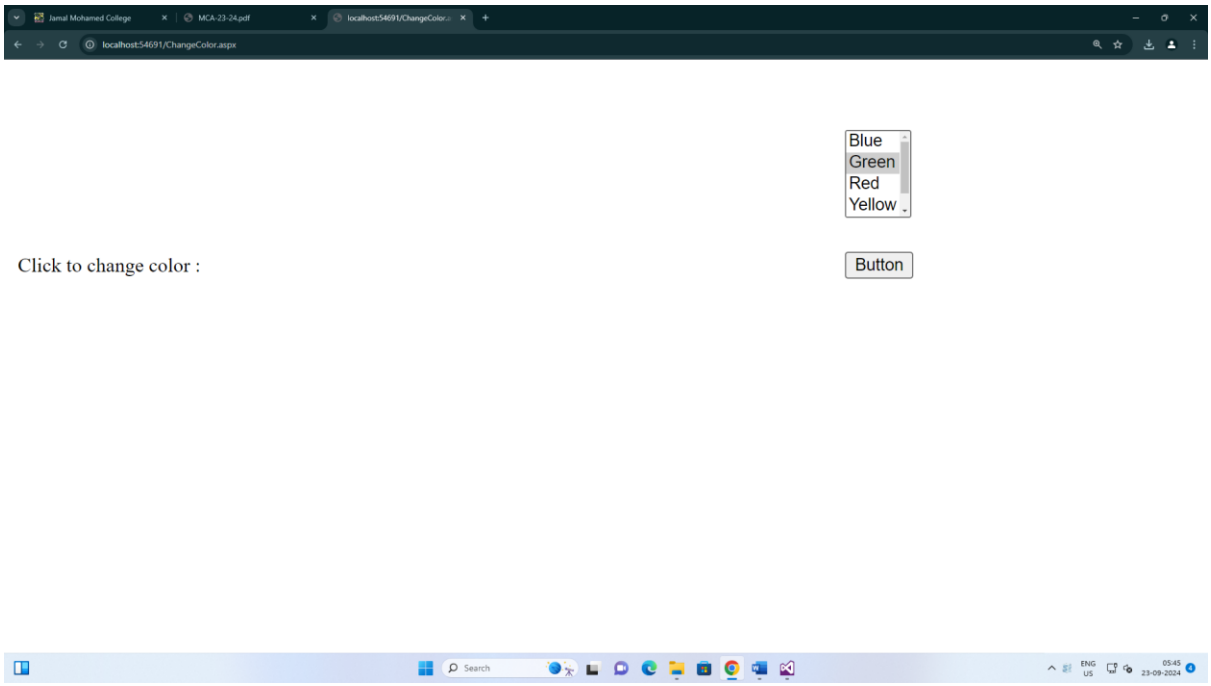

Jamal Mohamed College
MCA-23-24.pdf
localhost64433/adrorator.aspx
localhost:64433/adrorator.aspx
Search
ENG
US
05:26
23-09-2024

11. a) Create a user control that contains a list of colors. Add a button to the Web Form which when clicked changes the color of the Form to the color selected from the list.

PROGRAM:

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

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

    }

    protected void Button1_Click(object sender, EventArgs e)
    {
        Response.Write("<body bgcolor=\"" +
ListBox1.SelectedItem.Text + "\">");
    }
}
```

OUTPUT:

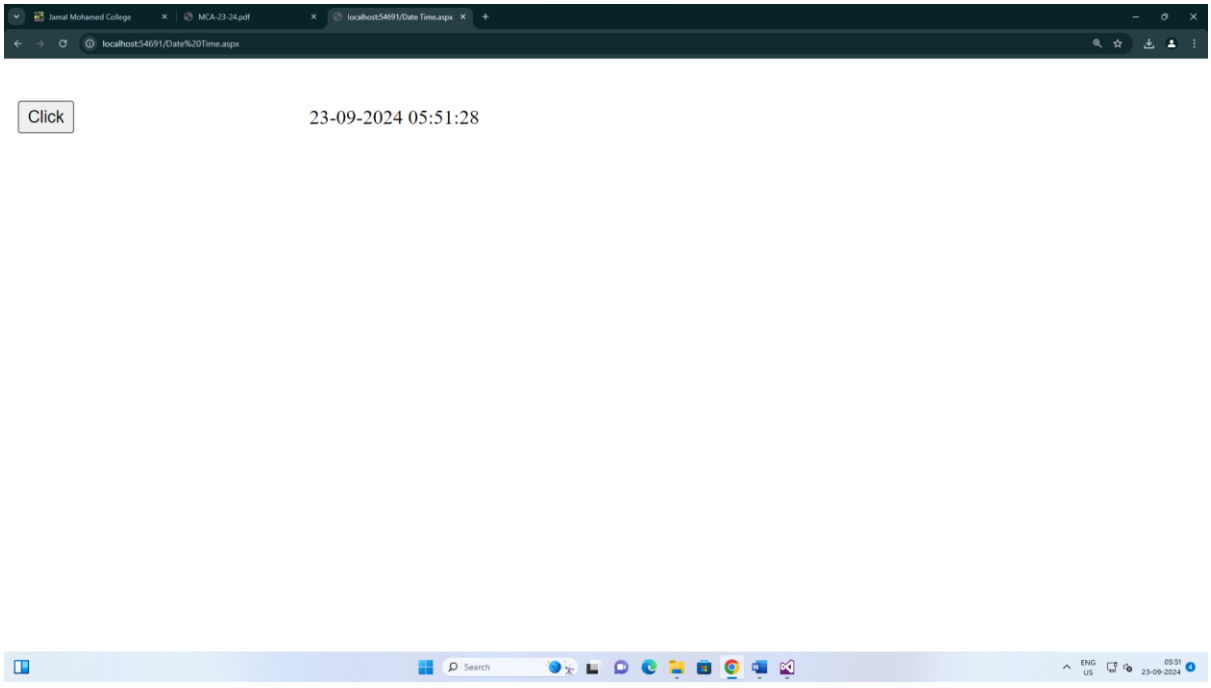


11 b) Create a user control that displays the current date and time. Include it in a Web Form and refresh it each time a button is clicked.

PROGRAM:

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

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

    }

    protected void Button1_Click(object sender, EventArgs e)
    {
        Label1.Text = DateTime.Now.ToString();
    }
}
```

OUTPUT:



12. Develop a project to update and delete few records using Disconnected Access

PROGRAM:

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


public partial class _Default : System.Web.UI.Page
{


    private string connectionString =
@"Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\Users\student\Documents\StudentData.mdb";


    protected void Page_Load(object sender, EventArgs e)
    {


    }


    protected void Button1_Click(object sender, EventArgs e)
    {
        using (OleDbConnection con = new
OleDbConnection(connectionString))
        {
            string query = "INSERT INTO mca (regno, name, dept,
college, mobile, address) VALUES (?, ?, ?, ?, ?, ?)";
```

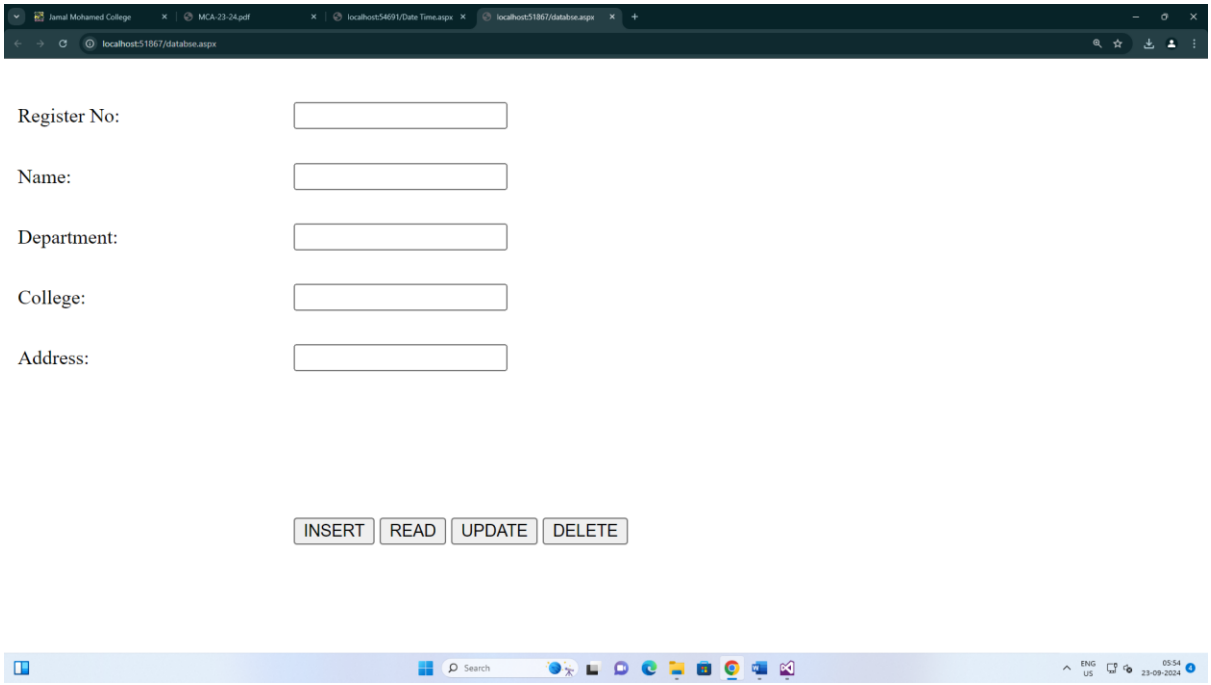
```
            using (OleDbCommand cmd = new OleDbCommand(query, con))
            {
                cmd.Parameters.AddWithValue("?", TextBox1.Text);
                cmd.Parameters.AddWithValue("?", TextBox2.Text);
                cmd.Parameters.AddWithValue("?", TextBox3.Text);
                cmd.Parameters.AddWithValue("?", TextBox4.Text);
                cmd.Parameters.AddWithValue("?", TextBox5.Text);
                cmd.Parameters.AddWithValue("?", TextBox6.Text);

                con.Open();
                cmd.ExecuteNonQuery();
                con.Close();
            }
        }
        ClearFields();
        Response.Write("Record Inserted!");
    }

    protected void Button2_Click(object sender, EventArgs e)
    {
        DataSet dataSet = new DataSet();

        using (OleDbConnection con = new
OleDbConnection(connectionString))
        {
            string query = "SELECT * FROM mca WHERE regno = ?";
            using (OleDbDataAdapter adapter = new
OleDbDataAdapter(query, con))
            {
                adapter.SelectCommand.Parameters.AddWithValue("?",
TextBox1.Text);
```

```
                adapter.Fill(dataSet, "mca");
            }
        }

        if (dataSet.Tables["mca"].Rows.Count > 0)
        {
            DataRow row = dataSet.Tables["mca"].Rows[0];
            TextBox2.Text = row["name"].ToString();
            TextBox3.Text = row["dept"].ToString();
            TextBox4.Text = row["college"].ToString();
            TextBox5.Text = row["mobile"].ToString();
            TextBox6.Text = row["address"].ToString();
        }
        else
        {
            ClearFields();
            Response.Write("No record found.");
        }
    }

    protected void Button3_Click(object sender, EventArgs e)
    {
        using (OleDbConnection con = new
OleDbConnection(connectionString))
        {
            // SQL query to update the record
            string query = "UPDATE mca SET name = ?, dept = ?,
college = ?, mobile = ?, address = ? WHERE regno = ?";

            using (OleDbCommand cmd = new OleDbCommand(query, con))
            {
```

```
                cmd.Parameters.AddWithValue("?", TextBox2.Text); //
name
                cmd.Parameters.AddWithValue("?", TextBox3.Text); //
dept
                cmd.Parameters.AddWithValue("?", TextBox4.Text); //
college
                cmd.Parameters.AddWithValue("?", TextBox5.Text); //
mobile
                cmd.Parameters.AddWithValue("?", TextBox6.Text); //
address
                cmd.Parameters.AddWithValue("?", TextBox1.Text); //
regno (WHERE condition)

                con.Open();

                cmd.ExecuteNonQuery();

                con.Close();
            }
        }
        ClearFields();
        Response.Write("Record Updated!.");
    }

    protected void Button4_Click(object sender, EventArgs e)
    {
        using (OleDbConnection con = new
OleDbConnection(connectionString))
        {
            string query = "DELETE FROM mca WHERE regno = ?";
            using (OleDbCommand cmd = new OleDbCommand(query, con))
```

```
            {
                cmd.Parameters.AddWithValue("?", TextBox1.Text);

                con.Open();
                cmd.ExecuteNonQuery();
                con.Close();
            }
        }

        ClearFields();
        Response.Write("Record Deleted!");
    }

    // Helper method to clear form fields after operations
    private void ClearFields()
    {
        TextBox1.Text = "";
        TextBox2.Text = "";
        TextBox3.Text = "";
        TextBox4.Text = "";
        TextBox5.Text = "";
        TextBox6.Text = "";
    }
}
```

OUTPUT:


Jamal Mohamed College
MCA-23-24.pdf
localhost:54691/Date Time.aspx
localhost:51867/databse.aspx
localhost:51867/databse.aspx
Register No:
Name:
Department:
College:
Address:
INSERT
READ
UPDATE
DELETE
Search
ENG
US
05:54
23-09-2024