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By

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CERTIFICATE

This to certify that, **Mr. Agrawal Yash Gopal** appearing **Master in Computer Application (Semester II - CBCS) Application ID: 75706** has satisfactorily completed the prescribed practical of **MCAL24- Advanced Web Technologies Lab** as laid down by the University of Mumbai for the academic year 2023-24

Teacher in charge

Examiners

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Date: -20/06/2024

Place: - Vasai

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Practical 1

Write a program to print Hello World using C# and ASP.NET

```
class HelloWorld
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Hello World Aliens!!!!");
         Console.WriteLine("Press any Key to exit!!");
         Console.ReadKey();
      }
   }
```

Output:

```
Hello World Aliens!!!!
Press any Key to exit!!
```

Practical 2

Write a program to print Factorial using C# and ASP.NET

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
namespace factorial
{
   class Program
   {
      static void Main(string[] args)
      {
         int i, number, fact;
         Console.WriteLine("Enter the Number");
         number = int.Parse(Console.ReadLine());
         fact = number;
         for (i = number - 1; i >= 1; i--)
         {
            fact = fact * i;
         }
         Console.WriteLine("\nFactorial of Given Number is: "+fact);
         Console.ReadLine();
      }
   }
}
```

Output:

```
Enter the Number 5

Factorial of Given Number is: 120
```

Practical 3

File read and write in C#

```
using System;
using System.IO;
namespace FileApplication {
  class Program {
    static void Main(string[] args) {
      string[] names = new string[] {"Hello", "World"};
      using (StreamWriter sw = new StreamWriter("names.txt")) {
        foreach (string s in names) {
          sw.WriteLine(s);
        }
      }
      string line = "";
      using (StreamReader sr = new StreamReader("names.txt")) {
        while ((line = sr.ReadLine()) != null) {
          Console.WriteLine(line);
        }
      }
      Console.ReadKey();
    } }
}
```

OUTPUT:

```
$mono main.exe
Hello
World
```

Practical 4

Classes and inheritance in C#

```
using System;
using System.Text;

namespace ContainmentInheritance
{
   class Room
   {
      public int length;
      public  int  width;
      public int height;

      public Room(int l, int w, int h)
      {
         length  = l;
         width = w;
         height = h;
      }
   }

   class Home
   {
      int numberOfRooms;
      int plotSize;
      string locality;
      string name;

      // create an object of class Room inside class Home
      Room studyRoom = new Room(10, 12, 12);

      public Home()
      {
         numberOfRooms = 1;
         plotSize = 1000;
         locality = "Versova";
         name = "study room";
      }

      public void Display()
      {
         Console.WriteLine("MyHome has {0} rooms", numberOfRooms);
         Console.WriteLine("Plot size is {0}", plotSize);
         Console.WriteLine("Locality is {0}", locality);

         int area = studyRoom.length*studyRoom.width;
         Console.WriteLine("Area of the {0} room is {1}", name, area);
```

```
    }
  }

  class Program
  {
    static void Main(string[] args)
    {
      Home myhome = new Home();
      myhome.Display();

      Console.ReadLine();
    }
  }
}
```

Output:

```
MyHome has 1 rooms
Plot size is 1000
Locality is Versova
Area of the study room room is 120
```

Practical 5

Reading xml in C#

Products.xml

```
<?xml version="1.0" encoding="utf-8"?>
<Product ID="001" Name="Soap">
<Price>10.00</Price>
<OtherDetails>
<BrandName>X Soap</BrandName>
<Manufacturer>X Company</Manufacturer>
</OtherDetails>
</Product>
```

```
using System;
using System.Xml;
public class Program
{
public static void Main()
{
XmlReader reader = XmlReader.Create("Products.xml");

while (reader.Read())
{
if (reader.NodeType == XmlNodeType.Element
&& reader.Name == "Product")
{
Console.WriteLine("ID = " + reader.GetAttribute(0));
Console.WriteLine("Name = " + reader.GetAttribute(1));

while (reader.NodeType != XmlNodeType.EndElement)
{
reader.Read();
if (reader.Name == "Price")
{
while (reader.NodeType != XmlNodeType.EndElement)
{
reader.Read();
if (reader.NodeType == XmlNodeType.Text)
{
Console.WriteLine("Price = {0:C}", Double.Parse(reader.Value));
}
}
```

```
reader.Read();

} //end if

if (reader.Name == "OtherDetails")
{
while (reader.NodeType != XmlNodeType.EndElement)
{
reader.Read();
if (reader.Name == "BrandName")
{
while (reader.NodeType != XmlNodeType.EndElement)
{
reader.Read();
if (reader.NodeType == XmlNodeType.Text)
{
Console.WriteLine("Brand Name = " + reader.Value);
}
}
reader.Read();
} //end if

if (reader.Name == "Manufacturer")
{
while (reader.NodeType != XmlNodeType.EndElement)
{
reader.Read();
if (reader.NodeType == XmlNodeType.Text)
{
Console.WriteLine("Manufacturer = " + reader.Value);
}
}

} //end if
}
} //end if
} //end while
} //end if

} //end while
}}
```

Output:

```
ID = 001
Name = Soap
Price = $10.00
Brand Name = X Soap
Manufacturer = X Company
```

Practical 6

C# Program for Arraylist.

```
using System;
using System.Collections;
using System.Text;
class arraylistdemo1
   {
      public static void Main()
      {
         int i;
         ArrayList n = new ArrayList();
         n.Add("Madras");
         n.Add("Calcutta");
         n.Add("Amritsar");
         n.Add("Delhi");
         n.Add("Mumbai");
         Console.WriteLine("Capacity " + n.Capacity);
         Console.WriteLine("Count " + n.Count);
         n.Sort();
         for (i = 0; i < n.Count; i++)
         {
            Console.Write("  " + n[i]);
         }
         Console.WriteLine();
         n.RemoveAt(4);
         n.Insert(2, "Goa");
         for (i = 0; i < n.Count; i++)
         { Console.Write("  " + n[i]);  }
         Console.Read();
```

```
    } }
```

Output:

```
$mono main.exe
Capacity 8
Count 5
  Amritsar  Calcutta  Delhi  Madras  Mumbai
   Amritsar   Calcutta   Goa   Delhi   Madras
```

Practical 7

books.xmlXpath and Xquery

```
<?xml version="1.0" encoding="UTF-8"?>
<bookstore>
<book category="cooking">
  <title lang="en">Everyday Italian</title>
  <author>Giada De Laurentiis</author>
  <year>2005</year>
  <price>30.00</price>
</book>
<book category="children">
  <title lang="en">Harry Potter</title>
  <author>J K. Rowling</author>
  <year>2005</year>
  <price>29.99</price>
</book>
<book category="web">
  <title lang="en">XQuery Kick Start</title>
  <author>James McGovern</author>
  <author>Per Bothner</author>
  <author>Kurt Cagle</author>
  <author>James Linn</author>
  <author>Vaidyanathan Nagarajan</author>
  <year>2003</year>
  <price>49.99</price>
</book>
<book category="web">
  <title lang="en">Learning XML</title>
  <author>Erik T. Ray</author>
  <year>2003</year>
  <price>39.95</price>
</book>
</bookstore>
```

books.xqy

```
for $x in doc("books.xml")/books/book
where $x/price>30
return $x/title
```

Output:

<title lang="en">XQuery Kick Start</title>

<title lang="en">Learning XML</tit

Practical 8

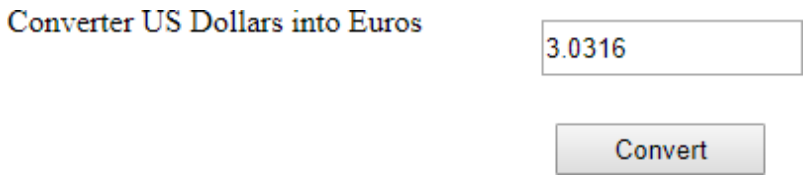
Program to convert dollars to euro using ASP.NET.

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

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

   protected void Button1_Click(object sender, EventArgs e)
   {
      string s = TextBox1.Text;
      Double usamt = Int32.Parse(s);
      Double eroamt;
      eroamt = usamt * 0.7579;
      TextBox1.Text = Convert.ToString(eroamt);
}

   protected void TextBox1_TextChanged(object sender, EventArgs e)
   {}
</script>
<html xmlns="http://www.w3.org/1999/xhtml" >
<head id="Head1" runat="server">
   <title>Untitled Page</title>
   <style type="text/css">
      .style1
      {
         height: 154px;
      }
      .style2
      {
         width: 128px;
         height: 22px;
         position: absolute;
         left: 278px;
         top: 186px;
      }
      .style3
      {
         width: 106px;
         height: 26px;
         position: absolute;
         top: 238px;
         left: 285px;
      }
   </style>
```

```
</head>
<body>
   <form id="form1" runat="server">
   <div class="style1">
   </div>
   <p>
      C<span lang="en-us">onverter US Dollars into Euros</span></p>
   <asp:TextBox ID="TextBox1" runat="server" CssClass="style2"
      ontextchanged="TextBox1_TextChanged"></asp:TextBox>
   <p>
      <asp:Button ID="Button1" runat="server" CssClass="style3"
         onclick="Button1_Click" Text="Convert" />
   </p>
   <p>
       </p>
   </form>
</body>
</html>
```

OUTPUT:

After clicking Convert button

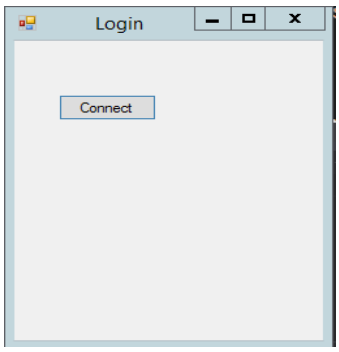


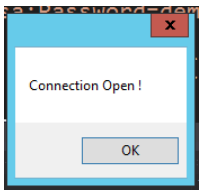
Practical 9

ASP.NET database access

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Data.SqlClient;
using  System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace DemoApplication1
{
 public partial class Form1 : Form
 {
  public Form1()  {
   InitializeComponent();
  }
  private void button1_Click(object sender, EventArgs e) {
   string connetionString;
   SqlConnection cnn;
   connetionString = @"Data Source=WIN-50GP30FGO75;Initial Catalog=Demodb;User
ID=sa;Password=demol23";
   cnn = new SqlConnection(connetionString);
   cnn.Open();
   MessageBox.Show("Connection Open !");
   cnn.Close();
  } } }
```

Output:





Practical 10

Servlet

```
// Import required java libraries
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

// Extend HttpServlet class
public class HelloWorld extends HttpServlet {

  private String message;

  public void init() throws ServletException {
    // Do required initialization
    message = "Hello World";
  }

  public void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {

    // Set response content type
    response.setContentType("text/html");

    // Actual logic goes here.
    PrintWriter out = response.getWriter();
    out.println("<h1>" + message + "</h1>");
  }

  public void destroy() {
    // do nothing.
  }
}
```

Output:

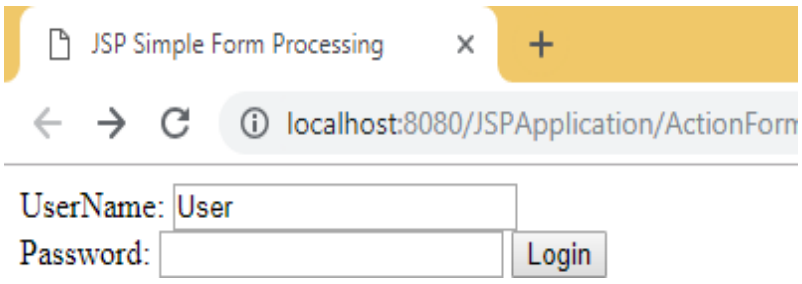
Practical 11

JSP Form Example.

ActoinForm.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1" pageEncoding="ISO-8859-
1"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
      <title>JSP Simple Form Processing</title>
   </head>
   <body>
      <form action="ActionFormProcess.jsp" method="POST">
         UserName: <input type="text" name="username">
         <br />
         Password: <input type="password" name="password" />
         <input type="submit" value="Submit" />
      </form>
   </body>
</html>
```

Output:



ActionFormProcess.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
      <title>Insert title here</title>
   </head>
   <body>
      <h1>Form Processing</h1>
      <p><b>Welcome User:</b>
         <%= request.getParameter("username")%>
      </p>
   </body>
</html>
```

Output: