Internet Application Development Lab-05

Submitted to
Dr Haneef Durad
DCIS, PIEAS

Submitted By
Muhammad Aly Yousaf

Date of Submission
13th March, 2024

Department of Computer & Information Sciences, PIEAS, Islamabad, Pakistan

Part A)
Using Html server controls develop a web form that displays a rectangle {refer to book page 148}.
Write appropriate event handler code that detects the location at which the user has clicked.

Default.aspx

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Default3.aspx.vb"
Inherits="Default3" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Input image</title>
    <style>
        #ImgButton{
            width: 200px;
            height: 200px;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <input type="image" ID="ImgButton" runat="server" src="pexels-eberhard-
grossgasteiger-443446.JPG" />
        </div>
    <asp:Label ID="Result" runat="server" Text=""></asp:Label>
    </form>
</body>
        </html>
```

Default.aspx.vb

```
Partial Class Default3
    Inherits System.Web.UI.Page
    Protected Sub ImgButton_ServerClick(ByVal sender As Object, ByVal e As
ImageClickEventArgs) Handles ImgButton.ServerClick

        Result.Text = "You clicked at (" & e.X.ToString() &
        ", " & e.Y.ToString() & "). "
        If e.Y < 100 And e.Y > 20 And e.X > 20 And e.X < 275 Then
            Result.Text &= "You clicked on the button surface."
        Else
            Result.Text &= "You clicked the button border."
        End If

    End Sub
End Class
```

Part B)
Modify code developed in Part (A) to identify regions on the following circle:
[Hint:] Use Screen coordinates, Cartesian coordinates and Polar coordinates

Default1.aspx

```vb
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Default4.aspx.vb"
Inherits="Default4" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Input image</title>
    <style>
        #ImgButton{
            width: 200px;
            height: 200px;
            border-radius: 50%;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <input type="image" ID="ImgButton" runat="server" src="image.JPG" />
        </div>
    <asp:Label ID="Result" runat="server" Text=""></asp:Label>
    </form>
</body>
</html>
```

Default1.aspx.vb

```vb
Partial Class Default4
    Inherits System.Web.UI.Page
    Protected Sub ImgButton_ServerClick(ByVal sender As Object, ByVal e As
ImageClickEventArgs) Handles ImgButton.ServerClick

        Dim x As Integer = Request.Form("ImgButton.x")
        Dim y As Integer = Request.Form("ImgButton.y")

        ' Calculate distance from the center of the circle
        Dim centerX As Integer = 100 ' x-coordinate of the center
        Dim centerY As Integer = 100 ' y-coordinate of the center
        Dim distance As Double = Math.Sqrt((x - centerX) ^ 2 + (y - centerY) ^ 2)

        ' Calculate angle in degrees
        Dim angle As Double = Math.Atan2(y - centerY, x - centerX) * (180 / Math.PI)
        If angle < 0 Then
            angle += 360 ' Ensure positive angle
        End If

        ' Determine the region based on distance and angle
        Dim region As String = ""
        If distance <= 100 AndAlso angle >= 180 AndAlso angle < 270 Then
            region = "Red"
        ElseIf distance <= 100 AndAlso angle >= 270 AndAlso angle < 360 Then
            region = "Yellow"
        ElseIf distance <= 100 AndAlso angle >= 90 AndAlso angle < 180 Then
            region = "Blue"
        Else
            region = "Green"
```

```vbnet
        End If

        ' Display the output
        Result.Text = "Clicked at (" & x & ", " & y & ") in " & region & " region." & angle



    End Sub
End Class
```