

Internet Application Development

Lab No 5(B):

Rao Abdul Saboor

Demonstration of HTML Server Control

Modify code developed in TASK 1 to identify regions on the following circle: **[Hint:]** Use Screen coordinates, Cartesian coordinates and Polar coordinates

- **Default.aspx**

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Default.aspx.vb"
Inherits="_Default" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" >
<head>
  <title>ImageButton Sample</title>

</head>

<body>
  <form id="form1" runat="server">

    <h3>ImageButton Sample</h3>

    Click anywhere on the image.<br /><br />

    <asp:ImageButton id="imagebutton1" runat="server"
      AlternateText="ImageButton 1"
      ImageAlign="Middle"
      ImageUrl="https://i.ibb.co/Wx6vWMS/circle.png"
      OnClick="ImageButton_Click"/>

    <br /><br />
```

```
<asp:Label id="Label1" runat="server"/>

</form>
</body>
</html>
```

- **Default.aspx.vb**

Imports System.Web.UI

Partial Class _Default
Inherits Page

```
Public Sub ImageButton_Click(ByVal sender As Object, ByVal e As ImageClickEventArgs)
    ' Get the center coordinates of the circle
    Dim x_center As Integer = 100
    Dim y_center As Integer = 100

    ' Get the radius of the circle
    Dim radius As Integer = 100

    ' Calculate the Cartesian coordinates of the click
    Dim x_click As Integer = e.X
    Dim y_click As Integer = e.Y

    ' Convert screen coordinates to Cartesian coordinates
    Dim x_cartesian As Integer = x_click - x_center
    Dim y_cartesian As Integer = y_center - y_click

    ' Convert Cartesian coordinates to polar coordinates
    Dim r As Double = Math.Sqrt(x_cartesian * x_cartesian + y_cartesian * y_cartesian)
    Dim theta As Double = Math.Atan2(y_cartesian, x_cartesian)

    ' Calculate the angle in degrees
    Dim angle_deg As Double = theta * (180 / Math.PI)

    ' Check if the click falls inside the circle
    If r <= radius Then
        ' Determine the quadrant based on the angle
        Dim quadrant As String = ""
        If angle_deg >= 0 AndAlso angle_deg < 90 Then
```

```
        quadrant = "Blue"
    ElseIf angle_deg >= 90 AndAlso angle_deg < 180 Then
        quadrant = "Red"
    ElseIf angle_deg >= -180 AndAlso angle_deg < -90 Then
        quadrant = "Green"
    ElseIf angle_deg >= -90 AndAlso angle_deg < 0 Then
        quadrant = "Yellow"
    End If

    ' Display the result
    Label1.Text = "You clicked in the " & quadrant & " area of the circle."
End If
End Sub
```

```
Protected Sub Page_PreRender(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Init
    Text1.Value &= "<br>Page Init"
    If Me.IsPostBack = False Then
        Text1.Value = "It is confirmed that page initialization has occurred during FIRST
REQUEST"
    Else
        Text1.Value = "It is confirmed that page initialization has occurred during POSTBACK"
    End If

End Sub

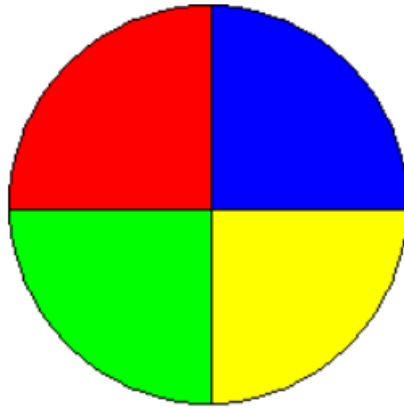
End Class
```

- **Output**



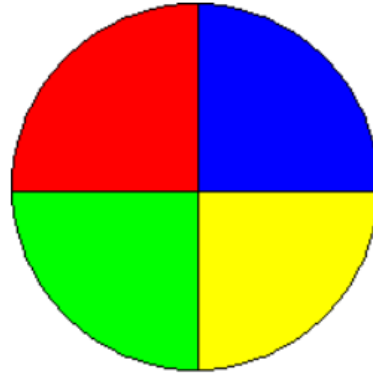
ImageButton Sample

Click anywhere on the image.



ImageButton Sample

Click anywhere on the image.



You clicked in the Blue area of the circle.