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1 'Tyson Kriner
2 'RCET0265
3 'asg4-1
4 'MathContestForm
5 'https://github.com/krintyso/TK-VS-F19
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9 Option Explicit On
10 Option Strict On
11
12
13 Public Class MathContest
14
15     Private totalRight As Integer
16     Private totalWrong As Integer
17
18     Public Sub MathContest_Load(sender As Object, e As EventArgs) Handles MyBase.Load
19         Refreshvalues() 'When the form loads, 1st and 2nd numbers are refreshed
20     End Sub
21
22     Sub Refreshvalues()
23         Dim rn1 As New Random
24         Dim firstNum As Integer
25         Dim secondNum As Single
26
27         firstNum = (rn1.Next(1, 10)) 'generates a random number for the 1st
28         secondNum = Int((10 * Rnd() + 1)) 'generates a different random number
29
30
31         firstNumertextbox.Text = firstNum.ToString 'Converts the firstNum
32         secondNumertextbox.Text = secondNum.ToString 'Converts the secondNum
33
34
35     End Sub
36
37
38     Private Sub Message(Correctanswer As Decimal)
39         If Decimal.Parse(StudentAnswerTextbox.Text) <> Correctanswer Then 'If
40             the student answer doesn't match the correct answer, then the
41             "incorrect answer" message box is displayed and the total wrong
42             variable is incremented
43             MessageBox.Show("Incorrect Answer, the correct answer is " &
44                 Correctanswer, "oopsies", MessageBoxButtons.OK)
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41         totalWrong += 1
42     ElseIf Decimal.Parse(StudentAnswerTextbox.Text) = Correctanswer Then
43         'If the student answer does match the correct answer, then the
44         "correct answer" message box is displayed and the total right
45         variable is incremented
46         MessageBox.Show("Congrats! Correct answer!", "Nice Job",
47             MessageBoxButtons.OK)
48         totalRight += 1
49     End If
50 End Sub
51
52 Private Sub SubmitButton_Click(sender As Object, e As EventArgs) Handles
53     SubmitButton.Click
54     Dim correctanswer As Decimal
55     Dim firstNumber As Decimal
56     Dim secondNumber As Decimal
57     Dim StudentInfoError As Boolean
58
59     If NameTextbox.Text = "" Then 'If the name text box is empty than the
60     "invalid name" message box is displayed
61     MessageBox.Show("Please enter student's name", "Invalid Name",
62         MessageBoxButtons.OK)
63     NameTextbox.Select()
64     StudentInfoError = True
65     ElseIf Integer.Parse(GradeMaskTextbox.Text) < 1 Or 'If the grade masked
66     text box is greater than 4 or less than 1, then the "Invalid Grade"
67     message box is shown
68     Integer.Parse(GradeMaskTextbox.Text) > 4 Or
69     GradeMaskTextbox.Text = "" Then
70     MessageBox.Show("Grade can only be 1-4", "Invalid Grade",
71         MessageBoxButtons.OK)
72     StudentInfoError = True
73     ElseIf Integer.Parse(AgeMaskTextbox.Text) < 4 Or 'If the age masked
74     text box is greater than 11 or less than 4, then the "Invalid Age"
75     message box is shown
76     Integer.Parse(AgeMaskTextbox.Text) > 11 Or
77     AgeMaskTextbox.Text = "" Then
78     MessageBox.Show("Age can only be 4-11", "Invalid Age",
79         MessageBoxButtons.OK)
80     StudentInfoError = True
81     End If
82
83     Select Case StudentInfoError
84     Case True 'If the Student info error is true then no action is
85     taken
86
87     Case False 'If the student info error is false, then the answer is
88     produced based on which radio button is checked
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75         Try
76             If AddRadioButton.Checked Then
77                 firstNumber = Decimal.Parse(firstNumbertextbox.Text)
78                 secondNumber = Decimal.Parse(secondNumbertextbox.Text)
79                 correctanswer = firstNumber + secondNumber
80             ElseIf SubRadioButton.Checked Then
81                 firstNumber = Decimal.Parse(firstNumbertextbox.Text)
82                 secondNumber = Decimal.Parse(secondNumbertextbox.Text)
83                 correctanswer = firstNumber - secondNumber
84             ElseIf MultiplyRadioButton.Checked Then
85                 firstNumber = Decimal.Parse(firstNumbertextbox.Text)
86                 secondNumber = Decimal.Parse(secondNumbertextbox.Text)
87                 correctanswer = firstNumber * secondNumber
88             ElseIf DivideRadioButton.Checked Then
89                 firstNumber = Decimal.Parse(firstNumbertextbox.Text)
90                 secondNumber = Decimal.Parse(secondNumbertextbox.Text)
91                 correctanswer = firstNumber / secondNumber
92             End If
93         Catch ex As System.Exception
94             MessageBox.Show("Please enter valid number", "Invalid Data", MessageBoxButtons.OK) 'This catches any invalid data being entered
95
96         End Try
97         Message(correctanswer)
98
99     End Select
100
101
102
103 End Sub
104
105 Private Sub RefreshButton_Click(sender As Object, e As EventArgs) Handles RefreshButton.Click 'When the refresh button is pressed, the values are refreshed
106     Refreshvalues()
107 End Sub
108
109 Private Sub ClearButton_Click(sender As Object, e As EventArgs) Handles ClearButton.Click 'When the clear button is pressed then the text boxes are cleared
110     NameTextbox.Text = ""
111     AgeMaskTextbox.Text = ""
112     GradeMaskTextbox.Text = ""
113     StudentAnswerTextbox.Text = ""
114
115 End Sub
116
117 Private Sub ExitButton_Click(sender As Object, e As EventArgs) Handles
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ExitButton.Click 'when the exit button is pressed, then the program is closed
118     Me.Close()
119 End Sub
120
121 Private Sub SummaryButton_Click(sender As Object, e As EventArgs) Handles
    SummaryButton.Click 'when the summary button is pressed, a message box
    shows the total correct and incorrect answers.
122     MessageBox.Show(NameTextbox.Text & " had " & totalRight & " correct " &
123         " and " & totalWrong & " incorrect ")
124
125 End Sub
126
127
128 End Class
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