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1 'Jemika Smith
2 'RCET0265
3 'Spring2020
4 'Math Contest
5 'https://github.com/smitjemi/JKS-VS-S20
6 Public Class MathContestForm
7     Dim userMessage As String
8     Dim randomNumber As Integer
9     Dim studentAnswer As Integer
10    Dim correctAnswer As Integer
11    Dim firstNumber As Integer
12    Dim secondNumber As Integer
13    Dim numbersCorrect As Integer
14    Dim numberOfProblems As Integer
15    Dim ageNumber As Integer
16    Dim gradeNumber As Integer
17    Dim gradeValidated As Boolean = False
18    Private Sub StudentInfoGroupBox_Validate(sender As Object, e As EventArgs) Handles StudentInfoGroupBox.Validated, GradeTextBox.TextChanged, AgeTextBox.Validated
19        'Checks to see if student information is correct/eligible.
20        Try
21            ageNumber = CInt(AgeTextBox.Text)
22            If ageNumber < 7 Or ageNumber > 11 Then
23                MsgBox("Student is not eligible to compete.")
24            End If
25        Catch ex As Exception
26            MsgBox("Please enter a valid age.")
27            AgeTextBox.Text = ""
28        End Try
29        If GradeTextBox.Text <> "" Then
30            Try
31                gradeNumber = CInt(GradeTextBox.Text)
32                If gradeNumber < 1 Or gradeNumber > 4 Then
33                    MsgBox("Student is not eligible to compete.")
34                Else
35                    gradeValidated = True
36                End If
37            Catch ex As Exception
38                MsgBox("Please enter a valid grade.")
39                GradeTextBox.Text = ""
40            End Try
41        End If
42    End Sub
43    Private Sub MathContestForm_Load(sender As Object, e As EventArgs) Handles Me.Load
44        'Random Number Generator
45        randomNumber = CInt(Int((20 * Rnd()) + 0))
46        firstNumberTextBox.Text = Str(Int((20 * Rnd()) + 0))
47        secondNumberTextBox.Text = Str(Int((20 * Rnd()) + 0))
48        firstNumberTextBox.Enabled = False
49        secondNumberTextBox.Enabled = False
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50     SummaryButton.Enabled = False
51     AddRadioButton.Checked = True
52 End Sub
53 Private Sub SubmitButton_Click(sender As Object, e As EventArgs) Handles SubmitButton.Click
54     'This sub is validating the math answers.
55     'This sub is also calculating correct answers.
56     'This sub is saving and resetting for next set of questions.
57     If gradeValidated = True Then
58         firstNumber = CInt(firstNumberTextBox.Text)
59         secondNumber = CInt(secondNumberTextBox.Text)
60         studentAnswer = studentAnswerTextBox.Text
61         If AddRadioButton.Checked = True Then
62             correctAnswer = firstNumber + secondNumber
63         ElseIf SubtractRadioButton.Checked = True Then
64             correctAnswer = firstNumber - secondNumber
65         ElseIf DivideRadioButton.Checked = True Then
66             correctAnswer = firstNumber / secondNumber
67         ElseIf MultiplyRadioButton.Checked = True Then
68             correctAnswer = firstNumber * secondNumber
69         End If
70         If studentAnswer = correctAnswer Then
71             userMessage = "Good job, that is correct!"
72             numbersCorrect += 1
73         End If
74         If studentAnswer <> correctAnswer Then
75             userMessage = "Sorry, that is not correct. The correct answer was " & correctAnswer & ".""
76         End If
77         MsgBox(userMessage)
78         SummaryButton.Enabled = True
79         numberOfProblems += 1
80         randomNumber = CInt(Int((20 * Rnd()) + 0))
81         firstNumberTextBox.Text = Str(Int((20 * Rnd()) + 0))
82         secondNumberTextBox.Text = Str(Int((20 * Rnd()) + 0))
83         studentAnswerTextBox.Text = ""
84     Else
85         MsgBox("Please enter a grade or correct grade.")
86     End If
87 End Sub
88 Private Sub SummaryButton_Click(sender As Object, e As EventArgs) Handles SummaryButton.Click
89     'Displays summary
90     MsgBox("You got " & numbersCorrect & " answers correct out of " & numberOfProblems & " problems.")
91 End Sub
92 Private Sub ClearButton_Click(sender As Object, e As EventArgs) Handles ClearButton.Click
93     'Dim ResetAllControls
94     NameTextBox.Text = ""
95     GradeTextBox.Text = ""
96     AgeTextBox.Text = ""
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97         studentAnswerTextBox.Text = ""
98         AddRadioButton.Enabled = True
99         numbersCorrect = 0
100        numberOfProblems = 0
101    End Sub
102    Private Sub ExitButton_Click(sender As Object, e As EventArgs) Handles  ExitButton.Click
103        'Ends Program
104        Me.Close()
105    End Sub
106
107
108 End Class
109
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