```vb
1  'Nathan Comstock
2  'RCET0265
3  'Spring 2020
4  'MathContest
5  'https://github.com/comsnath/NC-VS-S20
6
7
8  Public Class MathContestForm
9      Private Sub MathContestForm_Load(sender As Object, e As EventArgs) Handles  ⮡
          Me.Load
10         'On Load Disable Summary
11
12         SummaryButton.Enabled = False
13         SubmitButton.Enabled = True
14         FirstNumberTextBox.Enabled = True
15         SecondNumberTextBox.Enabled = True
16         AddRadioButton.Checked = True
17     End Sub
18
19
20     Private Sub ExitButton_Click(sender As Object, e As EventArgs) Handles      ⮡
         ExitButton.Click
21         Close()
22     End Sub
23
24
25     Private Sub AgeTextBox_TextChanged(sender As Object, e As EventArgs) Handles ⮡
         AgeTextBox.TextChanged
26         'Validate for Number
27         Dim age As String
28
29         If AgeTextBox.Text <> "" Then
30             Try
31                 age = CInt(AgeTextBox.Text)
32             Catch ex As Exception
33                 MessageBox.Show("Alert. Please enter a valid age.")
34                 AgeTextBox.Text = ""
35             End Try
36         End If
37     End Sub
38
39     Private Sub GradeTextBox_TextChanged(sender As Object, e As EventArgs)       ⮡
         Handles GradeTextBox.TextChanged
40         'Validate for Number
41         Dim grade As String
42
43         If GradeTextBox.Text <> "" Then
44             Try
45                 grade = CInt(GradeTextBox.Text)
46             Catch ex As Exception
47                 MessageBox.Show("Alert. Please enter a valid grade.")
48                 GradeTextBox.Text = ""
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49                    End Try
50                End If
51          End Sub
52
53          Private Sub FirstNumberTextBox_TextChanged(sender As Object, e As EventArgs) ⮐
                Handles FirstNumberTextBox.TextChanged
54              'Validate for Number
55              Dim firstNum As String
56
57              If FirstNumberTextBox.Text <> "" Then
58                  Try
59                      firstNum = CInt(FirstNumberTextBox.Text)
60                  Catch ex As Exception
61                      MessageBox.Show("Alert. Please enter a valid number.")
62                      FirstNumberTextBox.Text = ""
63                  End Try
64              End If
65          End Sub
66
67          Private Sub SecondNumberTextBox_TextChanged(sender As Object, e As EventArgs) ⮐
                Handles SecondNumberTextBox.TextChanged
68              'Validate for Number
69              Dim secondNum As String
70
71              If SecondNumberTextBox.Text <> "" Then
72                  Try
73                      secondNum = CInt(SecondNumberTextBox.Text)
74                  Catch ex As Exception
75                      MessageBox.Show("Alert. Please enter a valid number.")
76                      SecondNumberTextBox.Text = ""
77                  End Try
78              End If
79          End Sub
80
81          Private Sub SubmitButton_Click(sender As Object, e As EventArgs) Handles      ⮐
              SubmitButton.Click
82              'Create Variables for Vaildation Check
83              Dim validateMessage As String
84              Dim overrideMessage As String
85
86
87              'Check for Validation Issues
88              If NameTextBox.Text = "" Then
89                  validateMessage &= "Please enter a valid name." & vbNewLine
90                  NameTextBox.Select()
91              End If
92
93              If AgeTextBox.Text = "" Then
94                  validateMessage &= "Please enter a valid age." & vbNewLine
95                  AgeTextBox.Select()
96              ElseIf AgeTextBox.Text <> "" Then
97                  Dim age As String
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 98                 age = CInt(AgeTextBox.Text)
 99                 If age < 7 Then
100                     overrideMessage &= "This student is too young to partipate." &    ⮳
                          vbNewLine
101                 ElseIf age > 11 Then
102                     overrideMessage &= "This student is too old to partipate." &     ⮳
                          vbNewLine
103                 End If
104             End If
105
106             If GradeTextBox.Text = "" Then
107                 validateMessage &= "Please enter a valid grade." & vbNewLine
108                 GradeTextBox.Select()
109             ElseIf GradeTextBox.Text <> "" Then
110                 Dim grade As String
111                 grade = CInt(GradeTextBox.Text)
112                 If grade < 1 Then
113                     overrideMessage &= "This student's grade is too low to          ⮳
                          participate." & vbNewLine
114                 ElseIf grade > 4 Then
115                     overrideMessage &= "This student's grade is too high to          ⮳
                          participate." & vbNewLine
116                 End If
117             End If
118
119             If FirstNumberTextBox.Text = "" Then
120                 validateMessage &= "Please enter a valid first number." & vbNewLine
121                 FirstNumberTextBox.Select()
122             End If
123
124             If SecondNumberTextBox.Text = "" Then
125                 validateMessage &= "Please enter a valid first number." & vbNewLine
126                 SecondNumberTextBox.Select()
127             End If
128
129             If overrideMessage <> "" Then
130                 MessageBox.Show(overrideMessage)
131             ElseIf validateMessage <> "" Then
132                 Dim validateTemp As String
133                 validateTemp = validateMessage
134                 validateMessage = "Please address the following errors:" & vbNewLine
135                 validateMessage &= validateTemp
136                 MessageBox.Show(validateMessage)
137             ElseIf validateMessage = "" Then
138                 SummaryButton.Enabled = True
139                 SubmitButton.Enabled = False
140                 FirstNumberTextBox.Enabled = False
141                 SecondNumberTextBox.Enabled = False
142                 NameTextBox.Enabled = False
143                 AgeTextBox.Enabled = False
144                 GradeTextBox.Enabled = False
145                 ProblemTypeGroupBox.Enabled = False
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146                CheckButton.Enabled = True
147            End If
148
149        End Sub
150
151
152        Private Sub ClearButton_Click(sender As Object, e As EventArgs) Handles    ⮡
              ClearButton.Click
153            SummaryButton.Enabled = False
154            SubmitButton.Enabled = True
155            FirstNumberTextBox.Enabled = True
156            SecondNumberTextBox.Enabled = True
157            NameTextBox.Enabled = True
158            AgeTextBox.Enabled = True
159            GradeTextBox.Enabled = True
160            ProblemTypeGroupBox.Enabled = True
161            CheckButton.Enabled = False
162
163            NameTextBox.Text = ""
164            AgeTextBox.Text = ""
165            GradeTextBox.Text = ""
166            FirstNumberTextBox.Text = ""
167            SecondNumberTextBox.Text = ""
168        End Sub
169
170        Private Sub CheckButton_Click(sender As Object, e As EventArgs) Handles    ⮡
              CheckButton.Click
171            Dim numOne As Integer
172            Dim numTwo As Integer
173            Dim addResult As String
174            Dim subtractResult As String
175            Dim multiplyResult As String
176            Dim divideResult As String
177            Dim submittedResult As String
178
179
180            Try
181                submittedResult = CInt(StudentAnswerTextBox.Text)
182            Catch ex As Exception
183                MessageBox.Show("Please enter a valid answer.")
184                StudentAnswerTextBox.Text = ""
185            End Try
186
187
188            Try
189                numOne = CInt(FirstNumberTextBox.Text)
190                numTwo = CInt(SecondNumberTextBox.Text)
191            Catch ex As Exception
192                MessageBox.Show("Something went wrong. Please Try Again")
193                FirstNumberTextBox.Text = ""
194                SecondNumberTextBox.Text = ""
195            End Try
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196
197            If AddRadioButton.Checked = True Then
198                addResult = numOne + numTwo
199                If addResult = submittedResult Then
200                    MessageBox.Show("Congragulations! You are correct!")
201                ElseIf addResult <> submittedResult Then
202                    MessageBox.Show("Oops! That's not quite right. The answer is: " & ⮐
                         addResult)
203                End If
204
205            End If
206
207            If SubtractRadioButton.Checked = True Then
208                subtractResult = numOne - numTwo
209                If subtractResult = submittedResult Then
210                    MessageBox.Show("Congragulations! You are correct!")
211                ElseIf subtractResult <> submittedResult Then
212                    MessageBox.Show("Oops! That's not quite right. The answer is: " & ⮐
                         subtractResult)
213                End If
214
215            End If
216
217            If MultiplyRadioButton.Checked = True Then
218                multiplyResult = numOne * numTwo
219                If multiplyResult = submittedResult Then
220                    MessageBox.Show("Congragulations! You are correct!")
221                ElseIf multiplyResult <> submittedResult Then
222                    MessageBox.Show("Oops! That's not quite right. The answer is: " & ⮐
                         multiplyResult)
223                End If
224
225            End If
226
227            If DivideRadioButton.Checked = True Then
228                divideResult = numOne / numTwo
229                If divideResult = submittedResult Then
230                    MessageBox.Show("Congragulations! You are correct!")
231                ElseIf divideResult <> submittedResult Then
232                    MessageBox.Show("Oops! That's not quite right. The answer is: " & ⮐
                         divideResult)
233                End If
234
235            End If
236        End Sub
237    End Class
238
```