```vb
1  'Ben Wallace
2  'RCET0265
3  'Spring 2020
4  'Car Rental Program
5
6  Option Explicit On
7  Option Strict On
8  Option Compare Binary
9  Public Class RentalForm
10     Dim numCustomers As Integer
11     Dim totalMiles As Decimal
12     Dim totalCharges As Decimal
13
14     Private Sub RentalForm_Load(sender As Object, e As EventArgs) Handles Me.Load
15         SummaryButton.Enabled = False
16     End Sub
17
18     Private Sub CalculateButton_Click(sender As Object, e As EventArgs) Handles  ⏎
         CalculateButton.Click
19         Dim dataValidated As Boolean = False
20         Dim userMessage As String = ""
21         Dim beginOdo As Decimal
22         Dim endOdo As Decimal
23         Dim daysNum As Integer
24         Dim begOdoGood As Boolean = False
25         Dim endOdoGood As Boolean = False
26         Dim daysNumGood As Boolean = False
27         'validate data first:
28         'text: no field blank
29         'odomoter readings: beginning must be less than end. both valid integers
30         'number of days between 0 and 45
31
32         'check for blanks
33         If NameTextBox.Text = "" Then
34             userMessage = "Please enter a name." & vbNewLine
35         End If
36         If AddressTextBox.Text = "" Then
37             userMessage &= "Please enter the address." & vbNewLine
38         End If
39         If CityTextBox.Text = "" Then
40             userMessage &= "Please enter the city." & vbNewLine
41         End If
42         If StateTextBox.Text = "" Then
43             userMessage &= "Please enter the state." & vbNewLine
44         End If
45         If ZipCodeTextBox.Text = "" Then
46             userMessage &= "Please enter the zip code." & vbNewLine
47         End If
48         If BeginOdometerTextBox.Text = "" Then
49             userMessage &= "Please enter the beginning odometer reading." &  ⏎
                 vbNewLine
50         End If
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51          If EndOdometerTextBox.Text = "" Then
52              userMessage &= "Please enter the end odometer reading." & vbNewLine
53          End If
54          If DaysTextBox.Text = "" Then
55              userMessage &= "Please enter the number of days." & vbNewLine
56          End If
57
58          'if any of the last 3 are not blank, check to see if they are valid
              integers
59          If BeginOdometerTextBox.Text <> "" Or EndOdometerTextBox.Text <> "" Or
60              DaysTextBox.Text <> "" Then
61              Try
62                  beginOdo = CDec(BeginOdometerTextBox.Text)
63                  begOdoGood = True
64                  'this line means the odometer input successfully converted to dec
65              Catch ex As Exception
66                  'did not convert to dec
67                  userMessage &= "Please enter a valid beginning odometer reading"
                      & vbNewLine
68              End Try
69              Try
70                  endOdo = CDec(EndOdometerTextBox.Text)
71                  endOdoGood = True
72              Catch ex As Exception
73                  userMessage &= "Please enter a valid ending odometer reading" &
                      vbNewLine
74              End Try
75              If begOdoGood = True And endOdoGood = True Then
76                  'as long as both values converted to dec, compare them
77                  If beginOdo < endOdo Then
78                      'do nothing. Beg is less than end
79                  Else
80                      userMessage &= "The ending odometer reading must be greater
                          than the
81                      starting odometer reading. Please fix this to continue." &
                          vbNewLine _
82                      & vbNewLine
83                  End If
84              End If
85              Try
86                  daysNum = CInt(DaysTextBox.Text)
87                  If daysNum > 0 And daysNum <= 45 Then
88                      'days is ok
89                      daysNumGood = True
90                  Else
91                      'if this line is entered, days input is a number but not in
                          range
92                      userMessage &= "The number of days must be between 0 and 45."
                          & vbNewLine
93                  End If
94              Catch ex As Exception
95                  userMessage &= "Please enter a valid number for the amount of
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                            days." _
 96                             & vbNewLine
 97                  End Try
 98              End If
 99
100          If userMessage <> "" Then
101              MsgBox(userMessage)
102              'following 3 ifs clears bad data
103              If begOdoGood = False Then
104                  BeginOdometerTextBox.Text = ""
105              End If
106              If endOdoGood = False Then
107                  EndOdometerTextBox.Text = ""
108              End If
109              If daysNumGood = False Then
110                  DaysTextBox.Text = ""
111              End If
112
113              'Following ifs determines which bad data to select (last instance is ⮒
                   selected)
114              'if statements for each text box, from name to days.
115              'If bad, Then NameTextBox.Select()
116              If daysNumGood = False Then
117                      DaysTextBox.Select()
118                  End If
119                  If endOdoGood = False Then
120                      'endOdoGood corresponds to validation of end odo text
121                      EndOdometerTextBox.Select()
122                  End If
123                  If begOdoGood = False Then
124                      'begOdoGood corresponds to validation of begin odo text
125                      BeginOdometerTextBox.Select()
126                  End If
127                  If ZipCodeTextBox.Text = "" Then
128                      ZipCodeTextBox.Select()
129                  End If
130                  If StateTextBox.Text = "" Then
131                      StateTextBox.Select()
132                  End If
133                  If CityTextBox.Text = "" Then
134                      CityTextBox.Select()
135                  End If
136                  If AddressTextBox.Text = "" Then
137                      AddressTextBox.Select()
138                  End If
139                  If NameTextBox.Text = "" Then
140                      NameTextBox.Select()
141                  End If
142              Else
143                  'no error message, validation is confirmed
144                  dataValidated = True
145          End If
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146
147            If dataValidated = True Then
148                'validation checks out. do math here
149                Dim milesDriven As Decimal = 0
150                Dim dayCharge As Integer = 0
151                Dim mileCharge As Decimal = 0
152                Dim totalOwed As Decimal = 0
153
154                If MilesradioButton.Checked = True Then
155                    milesDriven = endOdo - beginOdo
156                Else
157                    'if miles is not checked, km is checked. convert to miles.
158                    milesDriven = (endOdo - beginOdo) * 0.62D
159                End If
160                DistanceDriven.Text = Math.Round(milesDriven, 2).ToString("N")
161
162                'daily charge =  days * $15
163                dayCharge = daysNum * 15
164                DayChargeDisplay.Text = dayCharge.ToString("C")
165
166                'mileage charge:
167                '      first 200 miles free
168                '      miles 201 to 500: .12 cents per mile
169                '      miles 501 and up: .10 cents per mile
170                'do calcs in miles.
171                '    if in km, convert to miles: 1 km = .62 mile
172                '    convert to mile for calcs and output display, dont change input
173                Const RATE_REGULAR = 0.12D
174                Const RATE_LOW = 0.1D
175                Const RATE_FREE = 0D
176
177                'use select to calculate the mileage charge depending on the number
                     of miles
178                Select Case milesDriven
179                    Case <= 200
180                        mileCharge = milesDriven * RATE_FREE
181                    Case > 500
182                        mileCharge = 300 * RATE_REGULAR
183                        mileCharge += (milesDriven - 500) * RATE_LOW
184                    Case Else
185                        mileCharge = (milesDriven - 200) * RATE_REGULAR
186                End Select
187                MileageChargeDisplay.Text = mileCharge.ToString("c")
188
189                Const AAARATE = 0.05D
190                Const SENIORRATE = 0.03D
191                Dim totalDiscount As Decimal = 0
192
193                Dim subTotal As Decimal
194                subTotal = mileCharge + dayCharge
195
196                'discounts:
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197                '      AAA: 5%
198                '      SC: 3% (can get both)
199              If AAAcheckbox.Checked = True Then
200                  totalDiscount += subTotal * AAARATE
201              End If
202              If Seniorcheckbox.Checked = True Then
203                  totalDiscount += subTotal * SENIORRATE
204              End If
205              DiscountDisplay.Text = totalDiscount.ToString("c")
206
207              totalOwed = mileCharge + dayCharge - totalDiscount
208              TotalChargeDisplay.Text = totalOwed.ToString("c")
209
210              'Add to the number of customers, and total charges and miles
211              numCustomers += 1
212              totalMiles += milesDriven
213              totalCharges += totalOwed
214              SummaryButton.Enabled = True
215              ClearData()
216          End If
217
218      End Sub
219
220      Private Sub ClearButton_Click(sender As Object, e As EventArgs) Handles     ⊋
            ClearButton.Click
221          ClearData()
222          'clear all output boxes
223          DistanceDriven.Text = ""
224          MileageChargeDisplay.Text = ""
225          DayChargeDisplay.Text = ""
226          DiscountDisplay.Text = ""
227          TotalChargeDisplay.Text = ""
228      End Sub
229
230      Private Sub SummaryButton_Click(sender As Object, e As EventArgs) Handles    ⊋
            SummaryButton.Click
231          'show summary
232
233          ' "Detailed Summary"
234          ' Total Customers:      4
235          ' Total Miles Driven: 1,430.00 mi
236          ' Total Charges:      $1,903.14
237          Dim totalSummary As String = ""
238          totalSummary = "Total Customers:        " & numCustomers.ToString &    ⊋
                vbNewLine
239          totalSummary &= "Total Miles Driven:    " & totalMiles.ToString("n") & "  ⊋
                mi" & vbNewLine
240          totalSummary &= "Total charges:          " & totalCharges.ToString("c")  ⊋
                & vbNewLine
241          MessageBox.Show(totalSummary, "Detailed Summary")
242          ClearData()
243          'clear all output boxes
```

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244            DistanceDriven.Text = ""
245            MileageChargeDisplay.Text = ""
246            DayChargeDisplay.Text = ""
247            DiscountDisplay.Text = ""
248            TotalChargeDisplay.Text = ""
249        End Sub
250
251        Private Sub ExitButton_Click(sender As Object, e As EventArgs) Handles        ⮧
             ExitButton.Click
252
253            Dim result As DialogResult
254            result = MessageBox.Show("Are you sure you want to exit?",
255             "Exit confirmation", MessageBoxButtons.YesNo, MessageBoxIcon.Warning,
256             MessageBoxDefaultButton.Button2)
257            If result = vbYes Then
258                Me.Close()
259            End If
260
261            'other way of doing it is this:
262            'dim result as msgboxstyle
263            'result = CType(MsgBox("Are you sure you want to exit? All information   ⮧
                 will be _
264            'lost!!!", vbYesNo), MsgBoxStyle)
265        End Sub
266
267        Sub ClearData()
268            'do not clear summary
269
270            'Clear User input
271            NameTextBox.Text = ""
272            AddressTextBox.Text = ""
273            CityTextBox.Text = ""
274            StateTextBox.Text = ""
275            ZipCodeTextBox.Text = ""
276            BeginOdometerTextBox.Text = ""
277            EndOdometerTextBox.Text = ""
278            DaysTextBox.Text = ""
279            'select miles radio button
280            MilesradioButton.Select()
281            'uncheck discount boxes
282            AAAcheckbox.Checked = False
283            Seniorcheckbox.Checked = False
284
285        End Sub
286
287  End Class
```