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```
00001
        Public Class frmAdmin
00002
00003
              Private Sub btnBack Click(sender As System.Object, e As System.EventArgs)
              Handles btnBack.Click
00004
                  'opens form start and close the admin form
00005
                  frmStart.Show()
00006
                  Me.Close()
             End Sub
00007
00008
00009
             Private Sub btnDay_Click(ByVal sender As System.Object, ByVal e As System.
              EventArgs) Handles btnDay.Click
00010
                  'opnes frm daysettings
                  frmDaySettings.Show()
00011
00012
             End Sub
00013
00014
             Private Sub btnImport Click(sender As System.Object, e As System.EventArgs)
              Handles btnImport.Click
00015
                  'tries to inport staff. if it failes then due to safeguards in Importstaff()
                   it must be that there is an error
00016
                  'with the csv so it reports that and quits the subroutine
00017
00018
                       Call ImportStaff()
00019
                  Catch
00020
                      MsgBox("system cannot find staff.csv" , , "Error" )
00021
00022
                  End Try
00023
                  'if there was no problems with the staff csv but there were isues with the
                   data then an error message will have been sent
                  'and the varialbe stopimport will be set to true meaning that the subroutine
00024
                   should stop.
00025
                  If stopimport = True Then
00026
                       stopimport = False
00027
                      Exit Sub
00028
                  End If
00029
                  'tries to inport students. if it failes then due to safeguards in
                   Importstudents() it must be that there is an error
00030
                  'with the csv so it reports that and quits the subroutine
00031
                  Try
00032
                      Call ImportStudents()
00033
                  Catch
00034
                      MsgBox("system cannot find student.csv" , , "Error" )
00035
                      Exit Sub
00036
                  End Try
00037
                  'if there was no problems with the student csv but there were isues with the
                   data then an error message will have been sent
00038
                  'and the varialbe stopimport will be set to true meaning that the subroutine
                   should stop.
00039
                  If stopimport = True Then
00040
                       stopimport = False
00041
                      Exit Sub
00042
                  End If
00043
                  'tries to inport student lesson information. if it failes then due to
                   safeguards in ImportLessonsStudent() it must be that there is an error
00044
                  'with the csv so it reports that and quits the subroutine
00045
00046
                      Call importLessonsStudent()
00047
                       MsgBox("system cannot find studentclasses.csv" , , "Error" )
00048
00049
                       Exit Sub
00050
                  End Try
00051
                  'if there was no problems with the studentclass csv but there were isues
```

```
with the data then an error message will have been sent
00052
                  'and the varialbe stopimport will be set to true meaning that the subroutine
                   should stop.
00053
                  If stopimport = True Then
00054
                       stopimport = False
00055
                      Exit Sub
00056
                  End If
00057
                  'tries to inport staff lesson information. if it failes then due to
                   safeguards in ImportLessonStaff() it must be that there is an error
00058
                  'with the csv so it reports that and quits the subroutine
00059
00060
                       Call importLessonStaff()
00061
                  Catch
00062
                      MsgBox("system cannot find classslots.csv" , , "Error" )
00063
                      Exit Sub
00064
                  End Trv
00065
                  'if there was no problems with the classslots csv but there were isues with
                   the data then an error message will have been sent
00066
                  'and the varialbe stopimport will be set to true meaning that the subroutine
                   should stop.
00067
                  If stopimport = True Then
00068
                      stopimport = False
00069
                      Exit Sub
00070
                  End If
             End Sub
00071
00072
00073
              Private Sub btnResent Click(sender As System.Object, e As System.EventArgs)
              Handles btnResent.Click
00074
                  ' for each dat file it goes through and writes over every record wiht empty
                   space
00075
00076
                  'overwrites staff.dat
00077
                  For counter As Integer = 1 To Nstaff
00078
                      Staff = Nothing
00079
                      PutStaff(Staff, counter)
00080
                  Next
00081
00082
                  'overwrites staffav.dat
00083
                  For counter As Integer = 1 To NStaffAv
00084
                       StaffAv = Nothing
00085
                      PutStaffAv(StaffAv, counter)
00086
                  Next.
00087
00088
                  'overwrites student.dat
00089
                  For counter As Integer = 1 To Nstudents
00090
                       student = Nothing
00091
                       PutStudent(student, counter)
00092
                  Next.
00093
00094
                  'overwrites studentav.dat
00095
                  For counter As Integer = 1 To NStudAv
00096
                      StudAv = Nothing
00097
                       PutStudAv(StudAv, counter)
00098
                  Next
00099
00100
                  'overwrites day.dat
00101
                  For counter As Integer = 1 To NDay
00102
                      Day = Nothing
00103
                       Putday (Day, counter)
00104
                  Next.
```

00105

```
00106
                  'overwrites lesson.dat
00107
                  For counter As Integer = 1 To Nlesson
00108
                     Lesson = Nothing
00109
                      Putlesson(Lesson, counter)
00110
00111
00112
                  'overwrites appointment.dat
00113
                  For counter As Integer = 1 To NAppointment
00114
                     Appointment = Nothing
00115
                     Putappointment (Appointment, counter)
00116
                  Next
00117
             End Sub
00118
00119
             Private Sub btnalgorithm Click(ByVal sender As System.Object, ByVal e As System.
             EventArgs) Handles btnalgorithm.Click
00120
                 'calls the sorting algoritthm which is stored in mod1
00121
                 Call TheSortingAlogorithm()
00122
00123
        End Class
```

```
00001
        Public Class frmAvailability
00002
00003
00004
00005
             Private Sub frmAvailability_Load(ByVal sender As System.Object, ByVal e As
              System. EventArgs) Handles MyBase. Load
00006
                  'hides the start form
00007
                  frmStart.Hide()
00008
                  'checks weather the user is a student and files in the name correctly
00009
                  If usertype = 1 Then
00010
                      lblname.Text = "welcome" + student.Forename.Trim + " " + student.
                       Surname.Trim
00011
                  ElseIf usertype = 2 Then
00012
                      lblname.Text = "welcome" + Staff.Forename.Trim + " " + Staff.Surname.
                       Trim
00013
                  End If
00014
                  'populates the checked list box containing appointment blocks
00015
                  If Appointmentlength = 5 Then
00016
00017
                       'appointmetn length is 5 minuets
00018
                      For counter As Integer = 1 To NDay
00019
                           'start and finish times for each day are retrived
00020
                           Day = GetDay(counter)
00021
                           For counter2 As Integer = 0 To (Day.finish - Day.Start) \ 6 - 2
00022
                                'for each appintment an item is added contianing the
                                appointment number changed into a 24 hour time
                               chklstavailability.Items.Add("Day " + counter.ToString + " " +
00023
                                militarytime(Day.Start + (counter2 * 6)) + " to " +
                                militarytime(Day.Start + 12 + (counter2 * 6)))
00024
                           Next.
00025
                      Next
00026
                  Else
00027
                       'appointment lent is 10 minuetes
00028
                      For counter As Integer = 1 To NDay
00029
                           'start and finish times for each day are retrived
00030
                           Day = GetDay(counter)
00031
                           For counter2 As Integer = 0 To (Day.finish - Day.Start) \ 6 - 4
00032
                                'for each appintment an item is added contianinng the
                                appointment number changed into a 24 hour time
00033
                               chklstavailability.Items.Add("Day" + counter.ToString + " " +
                                militarytime(Day.Start + (counter2 * 6)) + " to " +
                                militarytime(Day.Start + 18 + (counter2 * 6)))
00034
                           Next
00035
                      Next.
00036
                  End If
00037
             End Sub
00038
00039
             Private Sub chklst ItemCheck(ByVal sender As Object, ByVal e As System.Windows.
              Forms.ItemCheckEventArgs) Handles chklstavailability.ItemCheck
00040
                  'handles the chanaging of availablitity for a blcok
                  Dim parts() As String = Split(chklstavailability.SelectedItem, " " )
00041
00042
                  'checks if the availability is turned on or off
00043
                  If chklstavailability.GetItemChecked(chklstavailability.SelectedIndex) =
                   False Then
00044
                      'availability turned on
00045
                      If usertype = 1 Then
00046
                           'student
00047
                           If Appointmentlength = 5 Then
00048
                                'appointment length 5
00049
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                parts(2)) \ 100) * 100)) / 5) To ((parts(2) \ 100) + (((parts(2
```

```
)) - (((parts(2)) \setminus 100) * 100)) / 5) + 5)
00050
                                     'finds relevant stud av records that are in the first half
                                     hour of the block
00051
                                     For counter1 As Integer = 1 To NStudAv
00052
                                         GetStudAV(counter1)
00053
                                         If StudAv.StudNo = student.StudNo And StudAv.Appointment 7
                                          = counter And StudAv.DayNO = parts(1) Then
00054
                                              Exit For
00055
                                         End If
00056
                                    Next.
00057
                                     'sets them to available and addes 1 to their block number
00058
                                     StudAv.available = True
00059
                                     StudAv.Block += 1
00060
                                     PutStudAv(StudAv, StudAv.studAVNO)
00061
                                Next
00062
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(3)) \ 100) * 100)) / 5) + 11)
00063
                                     'finds relevant stud av records that are in the second half
                                     hour of the block
00064
                                     For counter1 As Integer = 1 To NStudAv
00065
                                         GetStudAV(counter1)
00066
                                         If StudAv.StudNo = student.StudNO And StudAv.Appointment 7
                                          = counter And StudAv.DayNO = parts(1) Then
00067
                                              Exit For
00068
                                         End If
00069
                                     Next
00070
                                     'sets them to available and addes 2 to their block number
00071
                                     StudAv.available = True
00072
                                     StudAv.Block += 2
00073
                                     PutStudAv (StudAv, StudAv.studAVNO)
00074
                                Next.
00075
                           Else
00076
                                'appointment length 10
00077
00078
                                For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) To ((parts(2) \ 100) + (((parts(2
                                 )) - (((parts(2)) \ 100) * 100)) / 5) + 4) Step 2
00079
                                     'finds relevant stud av records that are in the first third
                                     of the block
00080
                                     For counter1 As Integer = 1 To NStudAv
00081
                                         GetStudAV(counter1)
00082
                                         If StudAv.StudNo = student.StudNO And StudAv.Appointment
                                          = counter And StudAv.DayNO = parts(1) Then
00083
                                             Exit For
00084
                                         End If
00085
                                     Next
00086
                                     'sets them to available and addes 1 to their block number
00087
                                     StudAv.available = True
00088
                                     StudAv.Block += 1
00089
                                    PutStudAv(StudAv, StudAv.studAVNO)
00090
00091
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 10) Step 2
00092
                                     'finds relevant stud av records that are in the second third
                                     of the block
00093
                                     For counter1 As Integer = 1 To NStudAv
00094
                                         GetStudAV(counter1)
00095
                                         If StudAv.StudNo = student.StudNO And StudAv.Appointment 7
                                          = counter And StudAv.DayNO = parts(1) Then
```

```
00096
                                            Exit For
00097
                                        End If
00098
                                    Next.
00099
                                    'sets them to available and addes 2 to their block number
00100
                                    StudAv.available = True
00101
                                    StudAv.Block += 2
00102
                                    PutStudAv (StudAv, StudAv.studAVNO)
                               Next
00103
00104
                               For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                parts(2)) \ 100) * 100)) / 5) + 12 To ((parts(2) \ 100) + (((
                                parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 16) Step 2
00105
                                    'finds relevant stud av records that are in the last third
                                    of the block
00106
                                    For counter1 As Integer = 1 To NStudAv
00107
                                        GetStudAV(counter1)
00108
                                        If StudAv.StudNo = student.StudNO And StudAv.Appointment P
                                         = counter And StudAv.DayNO = parts(1) Then
00109
                                            Exit For
00110
                                        End If
00111
00112
                                    'sets them to available and addes 4 to their block number
00113
                                   StudAv.available = True
00114
                                    StudAv.Block += 4
00115
                                   PutStudAv(StudAv, StudAv.studAVNO)
00116
                               Next.
00117
                          End If
00118
                      Else
00119
                           'staff
00120
                           'appointment length 5
00121
                           If Appointmentlength = 5 Then
                               For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((
00122
                                )) - (((parts(2)) \ 100) * 100)) / 5) + 5)
00123
                                    'finds relevant stud av records that are in the first half
                                    hour of the block
00124
                                    For counter1 As Integer = 1 To NStaffAv
00125
                                        GetStaffAV(counter1)
00126
                                        If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                         Appointment = counter And StaffAv.DayNO = parts(1) Then
00127
                                            Exit For
00128
                                        End If
00129
                                   Next.
00130
                                    'sets them to available and addes 1 to their block number
00131
                                    StaffAv.Available = True
00132
                                    StaffAv.Block += 1
00133
                                    PutStaffAv(StaffAv, StaffAv.staffAVNO)
00134
                               Next
00135
                               For counter As Integer = ((parts(2) \setminus 100) + (((parts(2)) - (((
                                parts(2)) \ 100) * 100)) / 5) + 6) To (((parts(2) \ 100) + (((
                                parts(2)) - (((parts(3)) \ 100) * 100)) / 5) + 11))
00136
                                    'finds relevant stud av records that are in the second half
                                    hour of the block
00137
                                    For counter1 As Integer = 1 To NStaffAv
00138
                                        GetStaffAV(counter1)
                                        If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
00139
                                         Appointment = counter And StaffAv.DayNO = parts(1) Then
00140
                                            Exit For
00141
                                        End If
00142
                                    Next.
00143
                                    'sets them to available and addes 2 to their block number
00144
                                    StaffAv.Available = True
```

```
00145
                                     StaffAv.Block += 2
00146
                                     PutStaffAv(StaffAv, StaffAv.staffAVNO)
00147
                                Next.
00148
                           Else
00149
                                'appointment length 10
00150
00151
                                For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) To ((parts(2) \ 100) + (((parts(2
                                 )) - (((parts(2)) \ 100) * 100)) / 5) + 4) Step 2
                                     'finds relevant stud av records that are in the first half
00152
                                     hour of the block
00153
                                     For counter1 As Integer = 1 To NStaffAv
00154
                                         GetStaffAV(counter1)
00155
                                         If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                          Appointment = counter And StaffAv.DayNO = parts(1) Then
00156
00157
                                         End If
00158
                                     Next
00159
                                     'sets them to available and addes 1 to their block number
00160
                                     StaffAv.Available = True
00161
                                     StaffAv.Block += 1
00162
                                     PutStaffAv(StaffAv, StaffAv.staffAVNO)
00163
                                Next
00164
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 10) Step 2
00165
                                     'finds relevant stud av records that are in the second half
                                     hour of the block
00166
                                     For counter1 As Integer = 1 To NStaffAv
00167
                                         GetStaffAV(counter1)
00168
                                         If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                          Appointment = counter And StaffAv.DayNO = parts(1) Then
00169
                                              Exit For
00170
                                         End If
00171
00172
                                     'sets them to available and addes 2 to their block number
00173
                                     StaffAv.Available = True
00174
                                     StaffAv.Block += 2
                                     PutStaffAv(StaffAv, StaffAv.staffAVNO)
00175
00176
                                Next.
00177
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 12 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 16) Step 2
                                     'finds relevant stud av records that are in the third half
00178
                                     hour of the block
00179
                                     For counter1 As Integer = 1 To NStaffAv
00180
                                         GetStaffAV(counter1)
00181
                                         If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                          Appointment = counter And StaffAv.DayNO = parts(1) Then
00182
                                              Exit For
00183
                                         End If
00184
00185
                                     'sets them to available and addes 4 to their block number
00186
                                     StaffAv. Available = True
00187
                                     StaffAv.Block += 4
00188
                                     PutStaffAv(StaffAv, StaffAv.staffAVNO)
00189
00190
                           End If
00191
                       End If
00192
                  Else
00193
                       'box is unchecked
```

```
00194
                      If usertype = 1 Then
00195
                          'student
00196
                          If Appointmentlength = 5 Then
00197
                               'appointment lenght 5
00198
                               For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                )) - (((parts(2)) \ 100) * 100)) / 5) + 5)
00199
                                   'finds relevant stud av records that are in the first half
                                    hour of the block
                                   For counter1 As Integer = 1 To NStudAv
00200
00201
                                        GetStudAV(counter1)
00202
                                        If StudAv.StudNo = student.StudNO And StudAv.Appointment P
                                         = counter And StudAv.DayNO = parts(1) Then
00203
                                            Exit For
00204
                                        End If
00205
                                   Next
00206
                                    'sets there availability to false if block number is 0 after F
                                    decreasing it by 1
00207
                                   StudAv.Block -= 1
00208
                                   If StudAv.Block = 0 Then
00209
                                        StudAv.available = False
00210
00211
                                   PutStudAv(StudAv, StudAv.studAVNO)
00212
                               For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((
00213
                                parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                parts(2)) - (((parts(3)) \ 100) * 100)) / 5) + 11)
00214
                                   'finds relevant stud av records that are in the second half
                                    hour of the block
00215
                                   For counter1 As Integer = 1 To NStudAv
00216
                                       GetStudAV(counter1)
00217
                                        If StudAv.StudNo = student.StudNO And StudAv.Appointment 7
                                         = counter And StudAv.DayNO = parts(1) Then
00218
                                            Exit For
00219
                                        End If
00220
                                   Next.
00221
                                   'sets there availability to false if block number is 0 after 🔻
                                    decreasing it by 2
00222
                                   StudAv.Block -= 2
                                   If StudAv.Block = 0 Then
00223
00224
                                        StudAv.available = False
00225
00226
                                   PutStudAv(StudAv, StudAv.studAVNO)
00227
                              Next
00228
                          Else
00229
                               'appointment length 10
                               For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((
00230
                                parts(2)) \ 100) * 100)) / 5) To ((parts(2) \ 100) + (((parts(2
                                )) - (((parts(2)) \ 100) * 100)) / 5) + 4) Step 2
00231
                                    'finds relevant stud av records that are in the first half
                                    hour of the block
00232
                                   For counter1 As Integer = 1 To NStudAv
00233
                                        GetStudAV(counter1)
00234
                                        If StudAv.StudNo = student.StudNO And StudAv.Appointment 7
                                         = counter And StudAv.DayNO = parts(1) Then
00235
                                            Exit For
00236
                                        End If
00237
                                   Next.
00238
                                   'sets there availability to false if block number is 0 after 7
                                    decreasing it by 1
00239
                                   StudAv.Block -= 1
```

```
00240
                                     If StudAv.Block = 0 Then
00241
                                          StudAv.available = False
00242
                                     End If
00243
                                     PutStudAv (StudAv, StudAv.studAVNO)
00244
00245
                                For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 10) Step 2
00246
                                     'finds relevant stud av records that are in the second half
                                      hour of the block
00247
                                     For counter1 As Integer = 1 To NStudAv
00248
                                          GetStudAV(counter1)
00249
                                          If StudAv.StudNo = student.StudNO And StudAv.Appointment
                                           = counter And StudAv.DayNO = parts(1) Then
00250
                                              Exit For
00251
00252
                                     Next.
00253
                                      'sets there availability to false if block number is 0 after \overline{\ }
                                      decreasing it by 2
00254
                                     StudAv.Block -= 2
00255
                                     If StudAv.Block = 0 Then
00256
                                          StudAv.available = False
00257
                                     End If
00258
                                     PutStudAv(StudAv, StudAv.studAVNO)
00259
                                Next.
                                 For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
00260
                                 parts(2)) \ 100) * 100)) / 5) + 12 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 16) Step 2
00261
                                     'finds relevant stud av records that are in the third half
                                      hour of the block
00262
                                     For counter1 As Integer = 1 To NStudAv
00263
                                          GetStudAV(counter1)
00264
                                          If StudAv.StudNo = student.StudNO And StudAv.Appointment 7
                                           = counter And StudAv.DayNO = parts(1) Then
00265
                                              Exit For
00266
                                          End If
00267
00268
                                     'sets there availability to false if block number is 0 after \overline{\phantom{a}}
                                      decreasing it by 4
00269
                                     StudAv.Block -= 4
00270
                                     If StudAv.Block = 0 Then
00271
                                          StudAv.available = False
00272
                                     End If
00273
                                     PutStudAv(StudAv, StudAv.studAVNO)
00274
                                Next
00275
                            End If
00276
                       Else
00277
                            'staff
00278
                            If Appointmentlength = 5 Then
00279
                                 'appointment length 5
00280
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) To ((parts(2) \ 100) + (((parts(2
                                 )) - (((parts(2)) \setminus 100) * 100)) / 5) + 5)
                                     'finds relevant stud av records that are in the first half
00281
                                      hour of the block
00282
                                     For counter1 As Integer = 1 To Nstaff
00283
                                          GetStaffAV(counter1)
00284
                                          If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                           Appointment = counter And StaffAv.DayNO = parts(1) Then
00285
                                              Exit For
00286
                                          End If
```

```
00287
                                    Next
00288
                                     'sets there availability to false if block number is 0 after \overline{\phantom{a}}
                                     decreasing it by 1
00289
                                    StaffAv.Block -= 1
00290
                                     If StaffAv.Block = 0 Then
00291
                                         StaffAv.Available = False
00292
00293
                                    PutStaffAv (StaffAv, StaffAv.staffAVNO)
00294
00295
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(3)) \ 100) * 100)) / 5) + 11)
00296
                                     'finds relevant stud av records that are in the second half
                                     hour of the block
00297
                                    For counter1 As Integer = 1 To NStaffAv
                                         GetStaffAV(counter1)
00298
00299
                                         If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                          Appointment = counter And StaffAv.DayNO = parts(1) Then
00300
                                             Exit For
00301
                                    Next
00302
00303
                                     'sets there availability to false if block number is 0 after \overline{\phantom{a}}
                                     decreasing it by 2
00304
                                    StaffAv.Block -= 2
00305
                                    If StaffAv.Block = 0 Then
00306
                                         StaffAv.Available = False
00307
00308
                                    PutStaffAv(StaffAv, StaffAv.staffAVNO)
00309
                                Next
00310
                           Else
00311
                                'appointment length 10
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
00312
                                 )) - (((parts(2)) \ 100) * 100)) / 5) + 4) Step 2
00313
                                     'finds relevant stud av records that are in the first half
                                     hour of the block
00314
                                    For counter1 As Integer = 1 To NStaffAv
00315
                                         GetStaffAV(counter1)
                                         If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
00316
                                          Appointment = counter And StaffAv.DayNO = parts(1) Then
00317
                                             Exit For
00318
                                         End If
00319
                                    Next.
00320
                                     'sets there availability to false if block number is 0 after
                                     decreasing it by 1
00321
                                    StaffAv.Block -= 1
00322
                                     If StaffAv.Block = 0 Then
00323
                                         StaffAv.Available = False
00324
00325
                                    PutStaffAv (StaffAv, StaffAv.staffAVNO)
00326
                                Next
00327
                                For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                 parts(2)) \ 100) * 100)) / 5) + 6 To ((parts(2) \ 100) + (((
                                 parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 10) Step 2
00328
                                     'finds relevant stud av records that are in the second half
                                     hour of the block
00329
                                    For counter1 As Integer = 1 To NStaffAv
00330
                                         GetStaffAV(counter1)
00331
                                         If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                          Appointment = counter And StaffAv.DayNO = parts(1) Then
00332
                                             Exit For
```

```
00333
                                          End If
00334
                                     Next
00335
                                      'sets there availability to false if block number is 0 after \overline{\ }
                                      decreasing it by 2
00336
                                     StaffAv.Block -= 2
00337
                                     If StaffAv.Block = 0 Then
00338
                                          StaffAv.Available = False
00339
                                     End If
00340
                                     PutStaffAv(StaffAv, StaffAv.staffAVNO)
00341
                                Next.
00342
                                 For counter As Integer = (parts(2) \setminus 100) + (((parts(2)) - (((
                                  parts(2)) \ 100) * 100)) / 5) + 12 To ((parts(2) \ 100) + (((
                                  parts(2)) - (((parts(2)) \ 100) * 100)) / 5) + 16) Step 2
00343
                                     'finds relevant stud av records that are in the first half
                                      hour of the block
00344
                                     For counter1 As Integer = 1 To NStaffAv
00345
                                          GetStaffAV(counter1)
00346
                                          If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                           Appointment = counter And StaffAv.DayNO = parts(1) Then
00347
                                               Exit For
00348
                                          End If
00349
                                     Next
00350
                                      'sets there availability to false if block number is 0 after \overline{\phantom{a}}
                                      decreasing it by 4
00351
                                     StaffAv.Block -= 4
00352
                                     If StaffAv.Block = 0 Then
00353
                                          StaffAv.Available = False
00354
                                     End If
00355
                                     PutStaffAv(StaffAv, StaffAv.staffAVNO)
00356
                                Next
00357
                            End If
00358
                       End If
00359
                  End If
00360
              End Sub
00361
00362
              Private Sub btnExit Click(ByVal sender As System.Object, ByVal e As System.
               EventArgs) Handles btnExit.Click
00363
                  'closes the availability form and opens the start form
00364
                  frmStart.Show()
00365
                  Me.Close()
00366
              End Sub
00367
        End Class
```

```
00001
        Public Class frmDaySettings
00002
              'used in the time selecting subroutines
00003
              Public change As Boolean = False
00004
              Public change1 As Boolean = False
00005
              Private Sub rad5min CheckedChanged(ByVal sender As System.Object, ByVal e As
               System. EventArgs) Handles rad5min. CheckedChanged
00006
                  'checks if the the 5 min radio button is checked and if it is sets the
                   appointmetn length to 5 mins
00007
                  'otherwise it sets the appointment length to 10 \ensuremath{\mathsf{mins}}
00008
                  If rad5min.Checked = True Then
00009
                       Appointmentlength = 5
00010
                  Else
00011
                       Appointmentlength = 10
00012
00013
00014
                  'clears the secondary comboboxes
00015
                  cmbStart.Items.Clear()
00016
                  cmbEnd.Items.Clear()
00017
                  cmbDay.Items.Clear()
00018
                  'resets the day settings
00019
                  For counter As Integer = 1 To NDay
00020
                       Day.DayNO = counter
00021
                       Day.finish = 288
00022
                       Day.Start = 0
00023
                       Putday (Day, Day. DayNO)
00024
                  Next.
00025
00026
                  'calls the subroutine second half which decided weather to complete the
                   other repacutions of changing the appointment length
00027
                  Call secondhalf()
00028
              End Sub
00029
00030
              Private Sub frmDaySettings Load(ByVal sender As System.Object, ByVal e As System
               .EventArgs) Handles MyBase.Load
00031
                  'populates the dropdown combobox with numbers 1 to 255
                  For counter As Integer = 1 To 255
00032
00033
                       cmbNdays.Items.Add(counter)
00034
                  Next
00035
              End Sub
00036
00037
              Private Sub cmbNdays SelectedIndexChanged(ByVal sender As System.Object, ByVal e
               As System. EventArgs) Handles cmbNdays. SelectedIndexChanged
00038
                  'records the number of dayz
00039
                  NDay = cmbNdays.SelectedItem
00040
00041
                  'clears the secondary comboboxes
00042
                  cmbStart.Items.Clear()
00043
                  cmbEnd.Items.Clear()
00044
                  cmbDay.Items.Clear()
00045
                  'resets the day settings
00046
                  For counter As Integer = 1 To NDay
00047
                       Day.DayNO = counter
00048
                       Dav.finish = 288
00049
                       Day.Start = 0
00050
                       Putday (Day, Day. DayNO)
00051
00052
                  'calls the subroutine second half which decided weather to complete the
                   other repacutions of changing the number of days
00053
                  Call secondhalf()
00054
00055
```

```
00056
             End Sub
00057
00058
              Public Sub secondhalf()
00059
                  'sub to check if the appointment length and day numbers have been chosen. if
                   so it populates the
00060
                  'day.dat file
00061
                  If NDay <> -1 And Appointmentlength <> -1 Then
00062
                       For counter As Integer = 1 To NDay
                           Day.DayNO = counter
00063
00064
                           Day.Start = 0
00065
                           Day.finish = 288
00066
                           Putday(Day, counter)
00067
                       Next.
00068
                  Else
00069
                      Exit Sub
00070
                  End If
00071
00072
                  cmbDay.Visible = True
00073
                  cmbStart.Visible = True
00074
                  cmbEnd. Visible = True
00075
00076
                  'populates the day selector combo box with each of the days
00077
                  cmbDay.Items.Clear()
                  For counter = 1 To NDay
00078
00079
                      cmbDay.Items.Add(counter)
00080
00081
             End Sub
00082
00083
             Private Sub rad10min CheckedChanged(ByVal sender As System.Object, ByVal e As
               System. EventArgs) Handles rad10min. CheckedChanged
00084
                  'records the new value of appintment length and checks if its ready to start
                   hte second half
00085
                  Appointmentlength = 10
00086
00087
                  'clears the secondary comboboxes
00088
                  cmbStart.Items.Clear()
00089
                  cmbEnd.Items.Clear()
00090
                  cmbDay.Items.Clear()
00091
                  'resets the day settings
00092
                  For counter As Integer = 1 To NDay
00093
                       Day.DayNO = counter
                       Day.finish = 288
00094
00095
                       Day.Start = 0
00096
                       Putday (Day, Day. DayNO)
00097
                  Next.
00098
                  'calls the subroutine second half which decided weather to complete the
                   other repacutions of changing the appointment length
00099
                  Call secondhalf()
00100
             End Sub
00101
00102
              Private Sub cmbDay_SelectedIndexChanged(ByVal sender As System.Object, ByVal e
              As System. EventArgs) Handles cmbDay. SelectedIndexChanged
00103
                  'calls the subrootine that will populate cmbstart and cmbend
00104
                  Call populateStartEndDaySettings()
00105
             End Sub
00106
00107
             Private Sub cmbStart_SelectedIndexChanged(ByVal sender As System.Object, ByVal e
               As System. EventArgs) Handles cmbStart. SelectedIndexChanged
00108
                  Dim hours As Integer = (cmbStart.SelectedItem) \ 100
00109
                  Dim minuets As Integer = ((cmbStart.SelectedItem) - (((cmbStart.SelectedItem)))
                   ) \ 100) * 100)) / 5
```

00110

```
00111
                  'eliminates any accidental loops
                  If change = True Then
00112
                       change = False
00113
00114
                       Exit Sub
00115
                  End If
00116
                  'sets the start time for the day selected
00117
                  Day.Start = (hours * 12) + minuets
00118
                  Day.DayNO = cmbDay.SelectedItem
00119
                  Putday(Day, Day.DayNO)
00120
                  'clears the cmbstart andc cmbend
00121
                  cmbEnd.Items.Clear()
00122
                  cmbStart.Items.Clear()
00123
                  'calls the subroutine to populate cmbstart and cmbend
00124
                  Call populateStartEndDaySettings()
00125
                  change = True
00126
                  'selects the start time in cmbstart
00127
                  cmbStart.SelectedIndex = Day.Start / 6
00128
                  change1 = True
00129
                  'selects the end time in cmbend
00130
                  If Appointmentlength = 5 Then
00131
                       cmbEnd.SelectedIndex = (Day.finish - Day.Start) \ 6 - 2
00132
00133
                       cmbEnd.SelectedIndex = (Day.finish - Day.Start) \ 6 - 3
00134
                  End If
00135
             End Sub
00136
00137
             Private Sub btnBack Click(ByVal sender As System.Object, ByVal e As System.
              EventArgs) Handles btnBack.Click
00138
                  'closes the form
00139
                  Me.Close()
             End Sub
00140
00141
00142
             Private Sub cmbEnd SelectedIndexChanged(ByVal sender As System.Object, ByVal e
              As System. EventArgs) Handles cmbEnd. SelectedIndexChanged
                  Dim hours As Integer = (cmbEnd.SelectedItem) \ 100
00143
00144
                  Dim minuets As Integer = ((cmbEnd.SelectedItem) - (((cmbEnd.SelectedItem) \
                   100) * 100)) / 5
00145
                  'eliminates accidental loops
00146
                  If change1 = True Then
00147
                       change1 = False
00148
                       Exit Sub
00149
                  End If
00150
                  'sets the end time for the day selected
00151
                  Day.finish = (hours * 12) + minuets
00152
                  Day.DayNO = cmbDay.SelectedItem
00153
                  Putday (Day, Day. DayNO)
00154
                  'clears cmbend and cmbstart
00155
                  cmbEnd.Items.Clear()
00156
                  cmbStart.Items.Clear()
00157
                  'calls the subroutine to populate cmbstart and cmbend
00158
                  Call populateStartEndDaySettings()
00159
                  change = True
00160
                  'selscts the start time in cmbstart
00161
                  cmbStart.SelectedIndex = Day.Start / 6
00162
                  change1 = True
00163
                  'selects the end time in cmbend
00164
                  If Appointmentlength = 5 Then
00165
                       cmbEnd.SelectedIndex = (Day.finish - Day.Start) \ 6 - 2
00166
                  Else
00167
                       cmbEnd.SelectedIndex = (Day.finish - Day.Start) \setminus 6 - 3
```

00168 End If 00169 End Sub 00170 End Class

```
00001
        Public Class frmStart
00002
00003
              Private Sub frmStart Load(ByVal sender As System.Object, ByVal e As System.
              EventArgs) Handles MyBase.Load
00004
00005
                  'splits up the user data to seperate out the users username
00006
                  Dim parts() As String = Split(My.User.Name, "\" )
00007
                  user = parts(1)
00008
00009
                  'finds the length of each dat file and if they dont exist sets it to -1
00010
00011
                      Nstaff = FileLen("staff.dat" ) / Len(Staff)
00012
                  Catch
00013
                      Nstaff = -1
                  End Try
00014
00015
00016
                      NStaffAv = FileLen("staffav.dat" ) / Len(StaffAv)
00017
                  Catch
00018
                      NStaffAv = -1
00019
                  End Try
00020
00021
                      Nstudents = FileLen("student.dat" ) / Len(student)
00022
00023
                      Nstudents = -1
                  End Try
00024
00025
00026
                      NStudAv = FileLen("studav.dat" ) / Len(StudAv)
00027
00028
                      NStudAv = -1
                  End Try
00029
00030
00031
                      NAppointment = FileLen("appointments.dat" ) / Len(Appointment)
00032
                  Catch
00033
                      NAppointment = -1
00034
                  End Try
00035
                  Try
                      NDay = FileLen("day.dat" ) / Len(Day)
00036
00037
                  Catch
00038
                      NDay = -1
00039
                  End Try
00040
                  Try
00041
                      Nlesson = FileLen("lesson.dat" ) / Len(Lesson)
00042
00043
                      Nlesson = -1
                  End Try
00044
00045
00046
00047
                  'checks if the user is a student or a staff member
00048
00049
                  If Len(user) = 6 Then
00050
                       'user is in the form of a students so the list of students is checked
                       For counter As Integer = 1 To Nstudents
00051
00052
                           student = GetStudent(counter)
00053
                           'checks if the student has been found
00054
                           If user = student.StudID Then
00055
                                'records that the user is a student
00056
                               usertype = 1
00057
                               Exit For
00058
                           End If
00059
                       Next
00060
                  Else
```

```
00061
                       'user is not in the form of a student so the list of staff is checked
00062
                       For counter As Integer = 1 To Nstaff
                           Staff = GetStaff(counter)
00063
                           'checks if the user has been found
00064
00065
                           If user.ToUpper = Staff.staffID.ToUpper Then
00066
                                'records that the user is a member of staff
00067
                                usertype = 2
00068
                                'checks if the user is an admin
00069
                                If Staff.admin = True Then
00070
                                     'makes the admin button visible so that the admin form may
                                     be accessed
00071
                                    btnAvailability.Text = "Your Availability"
00072
                                    btnadmin.Visible = True
00073
                                End If
00074
                               Exit For
00075
                           End If
00076
                      Next
00077
                  End If
00078
                  'checks if the system doesnt have any staff. if so then there arnt any
                   admins and it checks if the user is in the format of a staff member
00079
                  'if so then it sends the user to the admin file to set up the system
00080
00081
                  If FileLen("staff.dat" ) = 0 And IsNumeric(user) = False And Len(user) = 3
00082
                       frmAdmin.Show()
00083
                      Me.Close()
00084
                  End If
00085
00086
                  'if the usesr has been given a usertype of 0 then he is not in the system so
                   access to the other forms is blocked of by making the buttons
00087
                  'invisible and it then sends an error message sayting they arent in the
                   system and advising them to check with an admisistrator if they
                  'feel it is wrong
00088
00089
                  If usertype = 0 Then
00090
                      btnAvailability.Visible = False
00091
                      MsgBox("Your username is not recognised by the system. If this is an
                       error please contact the it technicians." , , "ERROR" )
00092
00093
                  End If
00094
00095
00096
             End Sub
00097
00098
             Private Sub btnAvailability Click(ByVal sender As System.Object, ByVal e As
              System. EventArgs) Handles btnAvailability. Click
00099
                  'though the button should only be vissible if hte user is in the system if
                   first checks if they are tne sends them to the availablility form
00100
                  If usertype = 1 Or usertype = 2 Then
                       frmAvailability.Show()
00101
00102
                  End If
00103
             End Sub
00104
00105
              Private Sub btnExit_Click(sender As System.Object, e As System.EventArgs)
              Handles btnExit.Click
00106
                  'closes the form
00107
                  Me.Close()
00108
             End Sub
00109
00110
              Private Sub btnadmin Click(sender As System.Object, e As System.EventArgs)
              Handles btnadmin.Click
00111
                  'opens up the admin form and closes the start form
```

00112 | frmAdmin.Show()
00113 | Me.Hide()
00114 | End Sub
00115 | End Class

```
00001
        Module mod1
00002
             'structures
00003
00004
              'Student structure
00005
00006
              Public Structure StudRec
00007
                  Public StudNO As Short
00008
                  <VBFixedString(6)> Public StudID As String
00009
                  <VBFixedString(20)> Public Forename As String
00010
                  <VBFixedString(20)> Public Surname As String
00011
                  Public Year As Byte
00012
              End Structure
00013
00014
              'staff structure
00015
00016
              Public Structure StaffRec
00017
                  Public StaffNO As Byte
00018
                  <VBFixedString(3)> Public staffID As String
00019
                  <VBFixedString(20)> Public Forename As String
00020
                  <VBFixedString(20)> Public Surname As String
00021
                  Public admin As Boolean
00022
              End Structure
00023
00024
              'Student availabity structure
00025
00026
              Public Structure StudAvRec
00027
                  public studAVNO as integer
00028
                  Public Appointment As Integer
00029
                  Public StudNo As Short
00030
                  Public DayNO As Byte
00031
                  Public Block As Byte
00032
                  Public available As Boolean
00033
              End Structure
00034
00035
              'staff availability structure
00036
00037
              Public Structure StaffAvRec
00038
                  public staffAVNO as integer
00039
                  Public Appointment As Integer
00040
                  Public StaffNO As Byte
00041
                  Public DayNO As Byte
00042
                  Public Block As Byte
00043
                  Public Available As Boolean
00044
              End Structure
00045
00046
              'day stucture
00047
00048
              Public Structure DayRec
                  Public DayNO As Byte
00049
00050
                  Public Start As Integer
00051
                  Public finish As Integer
00052
              End Structure
00053
00054
              'appointments structure
00055
00056
              Public Structure AppointmentsRec
00057
                  Public studNO As integer
00058
                  Public StaffNO As integer
00059
                  public start as integer
00060
                  public day as integer
00061
                  Public AppointmentNO As Byte
```

```
00062
             End Structure
00063
00064
              'Lesson structure
00065
00066
              Public Structure LessonRec
00067
                  Public LessonNO As Integer
00068
                  Public StudNO As Short
00069
                  Public StaffNO As Short
00070
             End Structure
00071
00072
              'variables
00073
00074
00075
              'general variables
00076
              'contains the users username
00077
             Public user As String
00078
             Public usertype As Byte = 0
00079
             Public stopimport As Boolean = False
00080
              'student variables
00081
00082
00083
             Public student As StudRec = Nothing
00084
             Public Nstudents As Integer = -1
00085
              'staff variables
00086
00087
00088
             Public Staff As StaffRec = Nothing
00089
             Public Nstaff As Integer = -1
00090
00091
             'student availability variables
00092
00093
             Public StudAv As StudAvRec = Nothing
00094
             Public studav2 As StudAvRec = Nothing
00095
             Public NStudAv As Integer = -1
00096
00097
              'staff availablitiy variables
00098
00099
             Public StaffAv As StaffAvRec = Nothing
00100
             Public NStaffAv As Integer = -1
00101
00102
              'Day variables
00103
00104
             Public Appointmentlength As Integer = -1
00105
             Public Day As DayRec = Nothing
00106
             Public NDay As Integer = -1
00107
00108
              'Appointment variables
00109
00110
             Public Appointment As AppointmentsRec = Nothing
             Public NAppointment As Integer = -1
00111
00112
00113
             'Lesson variables
00114
00115
             Public Lesson As LessonRec = Nothing
00116
             Public Nlesson As Integer = -1
00117
00118
              'reading csv files and creating dat files
00119
              'imports the students into thier dat file
00120
00121
              Public Sub ImportStudents()
00122
                  'opnes up file reader and sets it to read students.csv the file in which the
```

student data is stored

```
00123
                  Dim TextFileReader As New Microsoft.VisualBasic.FileIO.TextFieldParser(
                   "students.csv" )
                  TextFileReader.TextFieldType = FileIO.FieldType.Delimited
00124
00125
                  TextFileReader.SetDelimiters(",")
00126
00127
                  Dim CurrentRow As String()
00128
                  Dim OnRec As Integer = 0
00129
                  Dim FileNum As Integer = FreeFile()
00130
                  'opens file
00131
                  FileOpen(FileNum, "Student.dat", OpenMode.Random, OpenAccess.Default,
                   OpenShare.Default, Len(student))
00132
00133
                  While Not TextFileReader.EndOfData
00134
                      Try
00135
                           CurrentRow = TextFileReader.ReadFields()
                           If Not CurrentRow Is Nothing Then
00136
                                OnRec = OnRec + 1
00137
00138
                                'puts data into the studet structure
00139
                                With student
00140
                                    Try
00141
00142
                                         .StudNO = CurrentRow(0)
00143
                                         .StudID = CurrentRow(1)
00144
                                         .Surname = CurrentRow(2)
00145
                                         .Forename = CurrentRow(3)
00146
                                         .Year = CurrentRow(4)
00147
                                    Catch
00148
                                         'this is trigered if there was a problem with inputing
                                          to the student structure
00149
                                         'it stops the importing and telles the suer what has
                                          happened
00150
                                         stopimport = True
00151
                                         MsgBox("error with student.csv" )
00152
                                         Exit Sub
                                    End Try
00153
00154
00155
                                End With
00156
                                'puts data from the student structure into the student dat file
00157
                                FilePut(FileNum, student, OnRec)
00158
                           End If
00159
                      Catch ex As
00160
                               Microsoft.VisualBasic.FileIO.MalformedLineException
00161
                           'if error then error message is sent and try ends
00162
                           MsgBox("Line " & ex.Message & "is not valid and will be skipped." )
00163
                       End Try
00164
                  End While
00165
                  'message box is sent saying that the students are imported and how many
00166
                  Nstudents = OnRec
00167
                  MsgBox(NStudents & " students imported" )
                  'file is closed
00168
00169
                  FileClose(FileNum)
00170
                  TextFileReader.Dispose()
00171
             End Sub
00172
00173
              'imports staff into thier dat file
00174
              Public Sub ImportStaff()
00175
                  'opens microsoft file reader and sets the file to be read as tutor.csv
00176
                  Dim TextFileReader As New Microsoft. VisualBasic. FileIO. TextFieldParser (
                   "tutor.csv" )
00177
                  TextFileReader.TextFieldType = FileIO.FieldType.Delimited
```

```
00178
                  TextFileReader.SetDelimiters("," )
00179
00180
                  Dim CurrentRow As String()
00181
                  Dim OnRec As Integer = 0
00182
                  Dim FileNum As Integer = FreeFile()
00183
00184
                  'opens the file
00185
                  FileOpen (FileNum, "Staff.dat", OpenMode.Random, OpenAccess.Default,
                   OpenShare.Default, Len(Staff))
00186
                  Dim parts() As String
00187
                  While Not TextFileReader.EndOfData
00188
                       Try
00189
                            CurrentRow = TextFileReader.ReadFields()
00190
                            If Not CurrentRow Is Nothing Then
00191
                                OnRec = OnRec + 1
00192
                                'puts data into file structure staff
00193
                                With Staff
                                     Try
00194
00195
                                          .StaffNO = CurrentRow(0)
00196
                                          'forename and surname are saved in the same field on the \overline{\,}^{\bullet}
                                          parent file so need to be broken up
00197
                                         parts = Split(CurrentRow(1), " " )
00198
                                         .Surname = parts(1)
00199
                                         .Forename = parts(0)
00200
                                          .staffID = CurrentRow(2)
00201
                                          If CurrentRow(3) = 0 Then
00202
                                              .admin = False
00203
                                         Else :.admin = True
00204
                                         End If
00205
                                     Catch
00206
                                          'this is trigered if there was a problem with inputing
                                          to the staff structure
                                          'it stops the importing and telles the suer what has
00207
                                          happened
00208
                                          stopimport = True
00209
                                         MsgBox("error with staff.csv" )
00210
                                         Exit Sub
00211
                                     End Trv
00212
00213
                                 'puts data in file structure staff into the staff dat file
00214
                                FilePut (FileNum, Staff, OnRec)
00215
                           End If
00216
                       Catch ex As
00217
                           Microsoft.VisualBasic.FileIO.MalformedLineException
00218
                            'error in text sends error message and ends try
00219
                           MsgBox("Line " & ex.Message & "is not valid and will be skipped." )
00220
                       End Try
00221
                  End While
00222
                  Nstaff = OnRec
00223
                   'sends message box notifying student that staff have been imported and how
                   many have been
00224
                  MsgBox(Nstaff & " Staff imported" )
00225
                  FileClose(FileNum)
00226
                  TextFileReader.Dispose()
00227
              End Sub
00228
00229
              Public Sub importLessonsStudent()
00230
                  'opens microsoft file reader and sets the file to be read as tutor.csv
00231
                  Dim TextFileReader As New Microsoft. VisualBasic. FileIO. TextFieldParser (
                   "studentclass.csv" )
00232
                  TextFileReader.TextFieldType = FileIO.FieldType.Delimited
```

```
00233
                  TextFileReader.SetDelimiters("," )
00234
00235
                  Dim CurrentRow As String()
00236
                  Dim OnRec As Integer = 0
00237
                  Dim FileNum As Integer = FreeFile()
00238
00239
                  'opens the file
00240
                  FileOpen(FileNum, "lesson.dat", OpenMode.Random, OpenAccess.Default,
                   OpenShare.Default, Len(Lesson))
00241
                  While Not TextFileReader.EndOfData
00242
                       Try
00243
                           CurrentRow = TextFileReader.ReadFields()
00244
                           If Not CurrentRow Is Nothing Then
00245
                               OnRec = OnRec + 1
00246
                                'puts data into file structure staff
00247
                                With Lesson
00248
                                    Trv
00249
                                         .LessonNO = OnRec
00250
                                         .StaffNO = CurrentRow(1)
00251
                                         .StudNO = CurrentRow(0)
00252
                                    Catch
00253
                                         'this is trigered if there was a problem with inputing
                                         to the lesson structure
00254
                                         'it stops the importing and telles the suer what has
                                         happened
00255
                                         stopimport = True
00256
                                         MsgBox("error with studentclass.csv" )
00257
                                         Exit Sub
00258
                                    End Try
00259
                                End With
00260
                                'puts data in the lesson file structure into the lesson dat file
00261
                                FilePut(FileNum, Lesson, OnRec)
00262
                           End If
00263
                      Catch ex As
00264
                           Microsoft.VisualBasic.FileIO.MalformedLineException
00265
                           'error in text sends error message and ends try
00266
                           MsgBox("Line " & ex.Message & "is not valid and will be skipped.")
00267
00268
                  End While
00269
                  Nlesson = OnRec
00270
                  'sends message box notifying admin that student part of lessons have been
                   imported and how many have been imported
00271
                  MsgBox("Student half imported" )
00272
                  FileClose(FileNum)
00273
                  TextFileReader.Dispose()
00274
             End Sub
00275
00276
             Public Sub importLessonStaff()
00277
                  'opens microsoft file reader and sets the file to be read as classslots.csv
00278
                  Dim TextFileReader As New Microsoft. VisualBasic.FileIO. TextFieldParser(
                   "classSlots.csv" )
00279
                  TextFileReader.TextFieldType = FileIO.FieldType.Delimited
00280
                  TextFileReader.SetDelimiters("," )
00281
00282
                  Dim lastlesson As Integer = -1
00283
                  Dim currentrow As String() = Nothing
00284
                  Dim onrec As Integer = 0
00285
00286
                  OnRec = 0
00287
00288
                  While Not TextFileReader.EndOfData
```

```
00289
                       Try
00290
                           currentrow = TextFileReader.ReadFields()
00291
                           If (Not currentrow Is Nothing) And (currentrow(0) <> lastlesson.
                            ToString) Then
00292
                                onrec = onrec + 1
00293
                                lastlesson = currentrow(0)
00294
                                For counter As Integer = 1 To Nlesson
00295
                                    Getlesson(counter)
00296
                                    Try
00297
                                         If Lesson.StaffNO = currentrow(0) Then
00298
                                             Lesson.StaffNO = currentrow(3)
00299
                                         End If
00300
                                    Catch
00301
                                         'this is trigered if there was a problem with inputing
                                          to the lesson structure
00302
                                         'it stops the importing and telles the suer what has
                                         happened
00303
                                         stopimport = True
00304
                                         MsgBox("error with classslots.csv" )
00305
                                         Exit Sub
00306
                                    End Try
00307
                                    Putlesson(Lesson, Lesson.LessonNO)
00308
00309
                           End If
00310
                      Catch ex As
00311
                                   Microsoft.VisualBasic.FileIO.MalformedLineException
00312
                           'error in text sends error message and ends try
00313
                           MsgBox("Line " & ex.Message & "is not valid and will be skipped." )
00314
                       End Try
00315
                  End While
00316
                  'sends message box notifying admin that the staff side of lessons have been
                   imported
00317
                  MsgBox("staff half imported" )
00318
                  TextFileReader.Dispose()
00319
00320
             End Sub
00321
              ' retrives a student record
00322
             Public Function GetStudent(ByVal RecNo As Integer) As StudRec
                  'function for getting data from student dat file
00323
00324
                  Dim Filenum As Integer = FreeFile()
00325
                  GetStudent = Nothing
00326
                  'opens the student dat file
                  FileOpen(Filenum, "Student.dat", OpenMode.Random, OpenAccess.Default,
00327
                   OpenShare.Default, Len(student))
00328
                  'gets data
00329
                  FileGet(Filenum, GetStudent, RecNo)
00330
                  'closes file
00331
                  FileClose (Filenum)
00332
             End Function
00333
00334
              'retrives a staff record
00335
              Public Function GetStaff(ByVal RecNo As Integer) As StaffRec
                  'function for getting data from staff dat file
00336
00337
                  Dim Filenum As Integer = FreeFile()
00338
                  GetStaff = Nothing
00339
                  'opens the staff dat file
00340
                  FileOpen(Filenum, "Staff.dat", OpenMode.Random, OpenAccess.Default,
                   OpenShare.Default, Len(Staff))
00341
                  'gets data
00342
                  FileGet(Filenum, GetStaff, RecNo)
00343
                  'closes file
```

```
00344
                  FileClose (Filenum)
00345
             End Function
00346
00347
             'retrives a student availability record
00348
             Public Function GetStudAV(ByVal RecNo As Integer) As StudAvRec
00349
                  'function for getting data from studAV dat file
00350
                  Dim Filenum As Integer = FreeFile()
                  GetStudAV = Nothing
00351
                  'opens the studay dat file
00352
                  FileOpen(Filenum, "StudAV.dat", OpenMode.Random, OpenAccess.Default,
00353
                   OpenShare.Default, Len(StudAv))
00354
                  'gets data
00355
                  FileGet (Filenum, GetStudAV, RecNo)
00356
                  'closes file
00357
                  FileClose (Filenum)
00358
             End Function
00359
              'retrives a staff availiability record
00360
00361
             Public Function GetStaffAV(ByVal RecNo As Integer) As StaffAvRec
00362
                  'function for getting data from staffav dat file
00363
                  Dim Filenum As Integer = FreeFile()
00364
                  GetStaffAV = Nothing
00365
                  'opens the staffav dat file
                  FileOpen(Filenum, "StaffAV.dat", OpenMode.Random, OpenAccess.Default,
00366
                   OpenShare.Default, Len(StaffAv))
00367
                  'gets data
00368
                  FileGet(Filenum, GetStaffAV, RecNo)
00369
                  'closes file
00370
                  FileClose (Filenum)
00371
             End Function
00372
00373
              'retrives a day record
00374
              Public Function GetDay(ByVal RecNo As Integer) As DayRec
00375
                  'function for getting data from day dat file
                  Dim Filenum As Integer = FreeFile()
00376
00377
                  GetDay = Nothing
00378
                  'opens the day dat file
                  FileOpen(Filenum, "Day.dat", OpenMode.Random, OpenAccess.Default, OpenShare
00379
                   .Default, Len(Day))
00380
                  'gets data
00381
                  FileGet (Filenum, GetDay, RecNo)
00382
                  'closes file
00383
                  FileClose (Filenum)
00384
             End Function
00385
00386
              'retrives a lesson record
00387
             Public Function Getlesson(ByVal RecNo As Integer) As LessonRec
00388
                  'function for getting data from lesson dat file
00389
                  Dim Filenum As Integer = FreeFile()
00390
                  Getlesson = Nothing
                  'opens the lesson dat file
00391
00392
                  FileOpen(Filenum, "Lesson.dat", OpenMode.Random, OpenAccess.Default,
                   OpenShare.Default, Len(Lesson))
00393
                  'gets data
00394
                  FileGet (Filenum, Getlesson, RecNo)
00395
                  'closes file
00396
                  FileClose (Filenum)
00397
             End Function
00398
00399
              'retreives a appointment record
```

```
00400
             Public Function Getappointmentrec(ByVal RecNo As Integer) As AppointmentsRec
00401
                  'function for getting data from Appointments dat file
00402
                  Dim Filenum As Integer = FreeFile()
00403
                  Getappointmentrec = Nothing
00404
                  'opens the appointments dat file
00405
                  FileOpen(Filenum, "Appointments.dat", OpenMode.Random, OpenAccess.Default,
                  OpenShare.Default, Len(Appointment))
00406
                  'gets data
00407
                  FileGet (Filenum, Getappointmentrec, RecNo)
00408
                  'closes file
00409
                  FileClose (Filenum)
00410
             End Function
00411
00412
              'overwrites an student onto the student dat file
00413
             Public Sub PutStudent (ByVal EditedStudent As StudRec, ByVal RecNo As Integer)
00414
                  'sub for putting data into the student dat file
00415
                  Dim Filenum As Integer = FreeFile()
00416
                  'opens student dat file
00417
                  FileOpen(Filenum, "Student.dat", OpenMode.Random, OpenAccess.Default,
                  OpenShare.Default, Len(student))
00418
                  'puts data into student dat file
00419
                  FilePut(Filenum, EditedStudent, RecNo)
00420
                  'closes student dat file
00421
                  FileClose(Filenum)
             End Sub
00422
00423
00424
              'overwrites an staff onto the staff dat file
00425
             Public Sub PutStaff(ByVal EditedStaff As StaffRec, ByVal RecNo As Integer)
00426
                  'sub for putting data into the staff dat file
00427
                  Dim Filenum As Integer = FreeFile()
                  'opens staff dat file
00428
00429
                  FileOpen(Filenum, "Staff.dat", OpenMode.Random, OpenAccess.Default,
                  OpenShare. Default, Len(Staff))
00430
                  'puts data into staff dat file
00431
                  FilePut (Filenum, EditedStaff, RecNo)
00432
                  'closes staff dat file
00433
                  FileClose (Filenum)
00434
             End Sub
00435
00436
              'overwrites an studavrec onto the studav dat file
00437
             Public Sub PutStudAv(ByVal EditedStudAv As StudAvRec, ByVal RecNo As Integer)
00438
                  'sub for putting data into the studAv dat file
00439
                  Dim Filenum As Integer = FreeFile()
00440
                  'opens studAv dat file
                  FileOpen (Filenum, "StudAv.dat", OpenMode.Random, OpenAccess.Default,
00441
                  OpenShare.Default, Len(StudAv))
00442
                  'puts data into studAv dat file
00443
                  FilePut(Filenum, EditedStudAv, RecNo)
00444
                  'closes studAv dat file
00445
                  FileClose (Filenum)
00446
             End Sub
00447
00448
              'overwrites an staffAv onto the staffAv dat file
00449
             Public Sub PutStaffAv(ByVal EditedStaffAv As StaffAvRec, ByVal RecNo As Integer)
00450
                  'sub for putting data into the staffAv dat file
00451
                  Dim Filenum As Integer = FreeFile()
00452
                  'opens staffAv dat file
                  FileOpen(Filenum, "StaffAv.dat", OpenMode.Random, OpenAccess.Default,
00453
                   OpenShare.Default, Len(StaffAv))
00454
                  'puts data into staffAv dat file
00455
                  FilePut(Filenum, EditedStaffAv, RecNo)
```

```
00456
                  'closes staffAv dat file
00457
                  FileClose (Filenum)
00458
             End Sub
00459
00460
              'overwrites an Day onto the day dat file
00461
             Public Sub Putday (ByVal Editedday As DayRec, ByVal RecNo As Integer)
00462
                  'sub for putting data into the day dat file
00463
                  Dim Filenum As Integer = FreeFile()
                  'opens day dat file
00464
00465
                  FileOpen(Filenum, "day.dat" , OpenMode.Random, OpenAccess.Default, OpenShare
                   .Default, Len(Day))
00466
                  'puts data into day dat file
00467
                  FilePut(Filenum, Editedday, RecNo)
00468
                  'closes day dat file
                  FileClose (Filenum)
00469
00470
             End Sub
00471
00472
              'overwrites an lesson onto the lesson dat file
00473
             Public Sub Putlesson(ByVal Editedlesson As LessonRec, ByVal RecNo As Integer)
00474
                  'sub for putting data into the lesson dat file
00475
                  Dim Filenum As Integer = FreeFile()
00476
                  'opens lesson dat file
                  FileOpen(Filenum, "Lesson.dat", OpenMode.Random, OpenAccess.Default,
00477
                   OpenShare. Default, Len (Lesson))
00478
                  'puts data into lesson dat file
00479
                  FilePut(Filenum, Editedlesson, RecNo)
00480
                  'closes lesson dat file
00481
                  FileClose(Filenum)
00482
             End Sub
00483
00484
              'overwrites an appointment onto the appointment dat file
00485
             Public Sub Putappointment(ByVal Editedappointment As AppointmentsRec, ByVal
              RecNo As Integer)
00486
                  'sub for putting data into the appointment dat file
                  Dim Filenum As Integer = FreeFile()
00487
00488
                  'opens appointment dat file
00489
                  FileOpen(Filenum, "appointments.dat" , OpenMode.Random, OpenAccess.Default,
                   OpenShare.Default, Len(Appointment))
00490
                  'puts data into appointment dat file
00491
                  FilePut (Filenum, Editedappointment, RecNo)
00492
                  'closes the appointment dat file
00493
                  FileClose(Filenum)
00494
             End Sub
00495
00496
              Public Sub populateStartEndDaySettings()
00497
                  'populates cmbstart with the times at the required appiontment length apart
00498
                  Day = GetDay(frmDaySettings.cmbDay.SelectedItem)
00499
                  If Appointmentlength = 5 Then
00500
                       'populates cmbstart with 5 min appointments slots
00501
                       For counter As Integer = 0 To (Day.finish - 12) Step 6
00502
                           'each slot contained between the beginin and the finsish time is
                            converted into 24hour
00503
                           'military style time
00504
                           frmDaySettings.cmbStart.Items.Add(militarytime(counter))
00505
                       Next
00506
00507
                       'populates the cmbEnd list witht the available times
                       For counter As Integer = (Day.Start + 12) To 288 Step 6
00508
00509
                            'each slot contained between the beginin and the finsish time is
                            converted into 24hour
00510
                           'military style time
```

```
00511
                            frmDaySettings.cmbEnd.Items.Add(militarytime(counter))
00512
                       Next
00513
                  Else
                       'populates cmbstart with 10 min appointments slots
00514
00515
                       For counter As Integer = 0 To (Day.finish - 18) Step 6
00516
                            'each slot contained between the beginin and the finsish time is
                            converted into 24hour
00517
                           'military style time
00518
                           frmDaySettings.cmbStart.Items.Add(militarytime(counter))
00519
                       Next.
00520
00521
                       'populates the cmbEnd list witht the available times
00522
                       For counter As Integer = (Day.Start + 18) To 288 Step 6
00523
                           'each slot contained between the beginin and the finsish time is
                            converted into 24hour
00524
                           'military style time
00525
                           frmDaySettings.cmbEnd.Items.Add(militarytime(counter))
00526
                       Next.
00527
00528
                  End If
00529
00530
             End Sub
00531
              'fucntion that changes a number from 0 to 287 into its coresponidng 24 hour
              clock time
00532
              Public Function militarytime (ByVal timeNO As Integer) As String
00533
                  Dim hours As String
00534
                  Dim minuets As String
00535
00536
                  'works out how many hours there are
00537
                  hours = (timeNO \ 12).ToString
00538
                  'puts in the place filler zeroes to keep it 2 characters
00539
                  If Len(hours) = 1 Then
00540
                       hours = "0" + hours
00541
                  ElseIf Len(hours) = 0 Then
                      hours = "00"
00542
00543
                  End If
00544
                  'works out how many minuets remain not counting the hours
00545
                  minuets = (timeNO - ((timeNO \setminus 12) * 12))
00546
                  minuets = minuets * 5
00547
                  'puts in the place filling zeroes if need to keep it to 2 characters
00548
                  If Len(minuets) = 1 Then
                      minuets = "0" + minuets
00549
00550
                  ElseIf Len(minuets) = 0 Then
00551
                      minuets = "00"
00552
                  End If
00553
                  'puts the 2 halves to gether to be returned
00554
                  militarytime = hours + minuets
00555
             End Function
00556
00557
              Public Sub TheSortingAlogorithm()
00558
                  Dim OnAppointment As Integer = 0
                  Dim lowerbound As Integer = 0
00559
00560
00561
                  'for loop goes through every student
00562
                  For counter1 As Integer = 0 To Nstudents
00563
                       'gets studnet information
00564
                       student = GetStudent(counter1)
00565
                       'finds all the lessons with the student and retives the teacher
00566
                       For counter2 As Integer = 0 To Nlesson
00567
                           Lesson = Getlesson(counter2)
                           If Lesson.StudNO = student.StudNO Then
00568
```

```
00569
                                Staff = GetStaff(counter2)
00570
                                'for each students availablity it looks for avaliable spots that
                                 are also available for the teacher
00571
                                For counter3 As Integer = 0 To NStudAv
00572
                                     StudAv = GetStudAV(counter3)
00573
                                     If StudAv.StudNo = student.StudNO And StudAv.available =
                                      True Then
00574
                                         For counter4 As Integer = 0 To NStaffAv
00575
                                              StaffAv = GetStaffAV(counter4)
00576
                                              If StaffAv.StaffNO = Staff.StaffNO And StaffAv.
                                               Available = True Then
00577
                                                   'an appointment slot has been found for which
                                                   both the studen and staff memver are available
                                                    for
00578
                                                   'the record for the appointment is populated
00579
                                                   Appointment.AppointmentNO = OnAppointment
00580
                                                   Appointment.studNO = StudAv.StudNo
00581
                                                   Appointment.StaffNO = StaffAv.StaffNO
00582
                                                   Appointment.day = StudAv.DayNO
00583
                                                   Appointment.StaffNO = StudAv.Appointment
00584
                                                   'handels block values for the student so as to
                                                   make sure that the values are only within one
                                                   block.
00585
                                                   If Appointmentlength = 5 Then
00586
                                                       For counter5 As Integer = 0 To NStudAv
                                                            studav2 = GetStudAV(counter5)
00587
00588
                                                            'checks if teh block value of the
                                                             current spot is 21 because if it is
                                                             the other is 20 then they are
00589
                                                            'not in the same block and it needs to
                                                             be set as unavailable
00590
                                                            If StudAv.Block = 21 And studav2.Block F
                                                             20 Then
00591
                                                                 studay2.Block = 0
00592
                                                                 studav2.available = False
00593
                                                                 PutStudAv(studav2,
                                                                 studav2.studAVNO)
00594
                                                                 'checks if teh block value of the
                                                                 current spot is 20 because if it
                                                                 and the other is 21 then they are
00595
                                                                 'not in the same block and it needs \overline{\phantom{a}}
                                                                 to be set as unavailable
00596
                                                            ElseIf StudAv.Block = 20 And studav2.
                                                             Block = 21 Then
00597
                                                                 studav2.Block = 0
00598
                                                                 studav2.available = False
00599
                                                                PutStudAv(studav2.
                                                                 studav2.studAVNO)
00600
                                                            End If
00601
                                                       Next
00602
00603
                                                   Else
00604
                                                       'handles 10 min cases
00605
                                                       For counter5 As Integer = 0 To NStudAv
00606
                                                            studav2 = GetStudAV(counter5)
00607
                                                            'checks if teh block value of the
                                                             current spot is 20 because if it is
                                                            and
```

```
the other is 22 or 23 then they are
00608
                                                              'not in the same block and it needs to \overline{\phantom{a}}
                                                              be set as unavailable
00609
                                                              If StudAv.Block = 20 And (studav2.Block P
                                                               = 22 Or studav2.Block = 23) Then
00610
                                                                  studav2.Block = 0
00611
                                                                  studav2.available = False
00612
                                                                  PutStudAv(studav2,
                                                                  studav2.studAVNO)
00613
                                                                  'checks if teh block value of the
                                                                   current spot is 21 because if it
                                                                  is
                                                                   and the other is 23 then they are
00614
                                                                  'not in the same block and it needs \overline{\mathbf{r}}
                                                                   to be set as unavailable
00615
                                                             ElseIf StudAv.Block = 21 And studav2.
                                                              Block = 23 Then
00616
                                                                  studay2.Block = 0
00617
                                                                  studav2.available = False
00618
                                                                  PutStudAv(studav2,
                                                                  studav2.studAVNO)
00619
                                                                  'checks if teh block value of the
                                                                   current spot is 23 because if it
                                                                  is
                                                                   and the other is 20 or 21 then
                                                                  they
                                                                   are
00620
                                                                  'not in the same block and it needs ?
                                                                   to be set as unavailable
00621
                                                             ElseIf StudAv.Block = 23 And (studav2.
                                                              Block = 20 Or studav2.Block = 21) Then
00622
                                                                  studav2.Block = 0
00623
                                                                  studav2.available = False
00624
                                                                  PutStudAv(studav2,
                                                                  studav2.studAVNO)
00625
                                                                  'checks if teh block value of the
                                                                   current spot is 22 because if it
                                                                   and the other is 20 then they are
00626
                                                                  'not in the same block and it needs \overline{\phantom{a}}
                                                                   to be set as unavailable
00627
                                                             ElseIf StudAv.Block = 22 And studav2.
                                                              Block = 20 Then
00628
                                                                  studav2.Block = 0
00629
                                                                  studav2.available = False
00630
                                                                  PutStudAv(studav2,
                                                                  studav2.studAVNO)
                                                             End If
00631
00632
                                                         Next
00633
                                                    End If
00634
                                                    'sets the staffav availablitity
00635
                                                    StaffAv.Available = False
00636
                                                    PutStaffAv(StaffAv, StaffAv.staffAVNO)
00637
00638
                                                    'sets the stud blocks and availablitity for
                                                     appointment blocks
00639
                                                    'cycles through each studavrecord
00640
                                                    For counter5 As Integer = 0 To NStudAv
00641
                                                         studav2 = GetStudAV(counter5)
00642
                                                         'for appointmetn length 5
00643
                                                         If Appointmentlength = 5 Then
```

```
00644
                                                              'works out the first appointment of the \overline{\phantom{a}}
                                                              half hour
00645
                                                              lowerbound = (studav2.Appointment \ 6) ₹
                                                               6
00646
                                                              'checks if the studav is not already
                                                              been set in the earlier check and if
                                                              it
                                                               is for the right student
00647
                                                              If studav2.StudNo = student.StudNO And
                                                               StudAv.Block <> 21 Or 20 Then
00648
                                                                  Select Case studav2.Appointment
00649
                                                                       'too early
00650
                                                                  Case Is <= (lowerbound - 7)</pre>
00651
                                                                      studav2.available = False
00652
                                                                       studav2.Block = 0
00653
                                                                       'too late
                                                                  Case Is >= (lowerbound + 12)
00654
00655
                                                                       studav2.available = False
00656
                                                                       studav2.Block = 0
00657
                                                                       'half hour early
00658
                                                                  Case (lowerbound - 6) To
                                                                   (lowerbound
                                                                   - 1)
00659
                                                                       studav2.Block = 20
00660
                                                                       'half hour later
00661
                                                                  Case (lowerbound + 6) To
                                                                   (lowerbound
                                                                   + 11)
00662
                                                                       studav2.Block = 21
00663
                                                                       'appointmetn before
00664
                                                                  Case (StudAv.Appointment - 1)
00665
                                                                       studav2.available = False
00666
                                                                       studav2.Block = 0
00667
                                                                       'appointment after
00668
                                                                  Case (StudAv.Appointment + 1)
00669
                                                                       studav2.available = False
00670
                                                                       studav2.Block = 0
00671
                                                                       'the appointmetn in question
00672
                                                                  Case StudAv.Appointment
00673
                                                                       studav2.Block = 0
00674
                                                                       studav2.available = False
00675
                                                                  End Select
00676
00677
00678
                                                             End If
00679
                                                         Else
00680
                                                              'works out the first appointment of the \overline{\phantom{a}}
                                                               half hour
00681
                                                              lowerbound = (studav2.Appointment \ 6)
00682
                                                              'checks if the studav is not already
                                                              been set in the earlier check and if
                                                              it
                                                               is for the right student
00683
                                                              If studav2.StudNo = student.StudNO And
                                                               StudAv.Block <> 21 Or 20 Then
00684
                                                                  Select Case studav2.Appointment
00685
                                                                       'too early
00686
                                                                  Case Is <= (lowerbound - 13)</pre>
```

```
00687
                                                                      studav2.available = False
                                                                      studav2.Block = 0
00688
00689
                                                                      'too late
                                                                 Case Is >= (lowerbound + 18)
00690
00691
                                                                      studav2.available = False
00692
                                                                      studav2.Block = 0
00693
                                                                      'half hour early
00694
                                                                 Case (lowerbound - 6) To
                                                                  (lowerbound
                                                                  - 1)
00695
                                                                      studav2.Block = 21
00696
                                                                      'half hour later
00697
                                                                 Case (lowerbound + 6) To
                                                                  (lowerbound
                                                                  + 11)
00698
                                                                      studav2.Block = 22
00699
                                                                      'hour early
00700
                                                                 Case (lowerbound - 12) To (
                                                                  lowerbound - 7)
00701
                                                                      studav2.Block = 20
00702
                                                                      'hour later
00703
                                                                 Case (lowerbound + 12) To (
                                                                  lowerbound + 17)
00704
                                                                      studav2.Block = 23
00705
                                                                      'appointmetn before
00706
                                                                 Case (StudAv.Appointment - 1)
00707
                                                                      studav2.available = False
00708
                                                                      studav2.Block = 0
00709
                                                                      'appointment after
00710
                                                                 Case (StudAv.Appointment + 1)
00711
                                                                      studav2.available = False
00712
                                                                      studav2.Block = 0
                                                                      'the appointmetn in question
00713
00714
                                                                 Case StudAv.Appointment
00715
                                                                      studav2.Block = 0
                                                                      studav2.available = False
00716
00717
                                                                 End Select
00718
                                                             End If
00719
                                                        End If
00720
                                                   Next.
00721
                                              End If
00722
                                          Next
00723
                                     End If
                                Next
00724
00725
                            End If
00726
                       Next
00727
                   Next.
00728
00729
00730
00731
00732
00733
              public sub sendemailspart1()
                   Dim subject As String = "Consultation evening appointments"
00734
                  Dim body As String = ""
00735
00736
                   Dim username As String = "sim.bellows@gmail.com"
00737
                  Dim password As String = "109m3e?!"
00738
                   Dim recipient As String
00739
00740
00741
                   'loop that cycles through each student so each gets an email
```

```
00742
                  For counter1 As Integer = 1 To Nstudents
00743
                      'loads current students details
00744
                      student = GetStudent(counter1)
00745
                      'generates the students school email
                      recipient = student.StudID + "@WMSF.ac.uk"
00746
                      'puts the initial greeting for the email and clears the old message
00747
                      body = "Dear " & student.Forename & " " & student.Surname & vbNewLine
00748
                       & vbNewLine
00749
                      'finds each appointment of the student
                      For counter2 As Integer = 1 To NAppointment
00750
00751
                           If Appointment.studNO = student.StudNO Then
00752
                                'gets the name of the member of staff the appointment is with
00753
                               Staff = GetStaff(Appointment.StaffNO)
00754
                               'puts in the details of the appiontment into the email
                               body = body & Staff.Forename & " " & Staff.Surname & "" &
00755
                                militarytime(Appointment.start) & " day " & Appointment.day &
                                vbNewLine
00756
                          End If
00757
                      Next
00758
                      'puts the sign off of the email into the text
                      body = body & vbNewLine & "thank you very much" & vbNewLine & "simon
00759
                       bellows" & vbNewLine & vbNewLine & "deputy head"
00760
                      'calls the routine to send the email
00761
                      Call SendEmails2("sim.bellows@gmail.com" , subject, body, username,
                       password, recipient)
00762
                  Next.
00763
                  'loop that cycles through each staff member so each gets an email
00764
                  For counter1 As Integer = 1 To Nstaff
                      'loads current staff members details
00765
00766
                      Staff = GetStaff(counter1)
00767
                      'genereates the staff school email
00768
                      recipient = Staff.staffID + "@WMSF.ac.uk"
00769
                      'puts the intitial greeting for the email and clears the old message
00770
                      body = "Dear " & Staff.Forename & " " & Staff.Surname & vbNewLine &
                       vbNewLine
00771
                      'finds each appoointment of the staff member
00772
                      For counter2 As Integer = 1 To NAppointment
                           If Appointment.StaffNO = Staff.StaffNO Then
00773
00774
                               'gets the name of the student the appointmetn is with
00775
                               student = GetStudent(Appointment.studNO)
00776
                                'puts in the details of the appointment into the email
                               body = body & student.Forename & " " & student.Surname & "" &
00777
                                militarytime(Appointment.start) & " day " & Appointment.day &
                                vbNewLine
00778
                          End If
00779
00780
                      'puts the sign off of the email into the message
00781
                      body = body & vbNewLine & "thank you very much" & vbNewLine & "simon
                       bellows" & vbNewLine & vbNewLine & "deputy head"
00782
                      'calls the routine to send the email
00783
                      Call SendEmails2("sim.bellows@gmail.com" , subject, body, username,
                       password, recipient)
00784
                  Next
00785
00786
             end sub
             Public Sub SendEmails2(ByVal FromAddress As String,
00787
00788
                               ByVal Subject As String,
00789
                                  ByVal Body As String,
00790
                                    ByVal UserName As String,
00791
                                    ByVal Password As String,
00792
                                    ByVal recipient As String,
```

```
00793
                                     Optional ByVal Server As String = "smtp.gmail.com" ,
00794
                                     Optional ByVal Port As Integer = 587)
00795
00796
                  Dim Email As New MailMessage()
00797
00798
                  'trys to send the email
00799
                  Try
00800
                       Dim SMTPServer As New SmtpClient
00801
                       'fills in the senders email adress from the fromaddress parameter
                       Email.From = New MailAddress(FromAddress)
00802
00803
                       'puts in the recipent for the mail
00804
                       For Each Recipient As String In Recipients
00805
                           Email.To.Add(Recipient)
00806
                      Next.
00807
                       'adds subject body and server, host and such information
00808
                      Email.Subject = Subject
00809
                      Email.Body = Body
00810
                      SMTPServer.Host = Server
00811
                       SMTPServer.Port = Port
00812
                       SMTPServer.Credentials = New System.Net.NetworkCredential(UserName,
                       Password)
00813
                       SMTPServer.EnableSsl = True
00814
                       'sends it
00815
                      SMTPServer.Send(Email)
00816
                       'clears it
00817
                       Email.Dispose()
00818
                       'notificaltion if smtp failed
00819
                  Catch ex As SmtpException
00820
                      Email.Dispose()
00821
                      MsgBox("Sending Email Failed. Smtp Error." )
                       'notification if portnuimber owas wrong
00822
00823
                  Catch ex As ArgumentOutOfRangeException
00824
                       Email.Dispose()
00825
                       MsgBox("Sending Email Failed. Check Port Number." )
00826
                       'notification if portnumber is wrong
00827
                  Catch Ex As InvalidOperationException
00828
                       Email.Dispose()
00829
                      MsgBox("Sending Email Failed. Check Port Number." )
00830
                  End Trv
00831
             End Sub
00832
        End Module
```

```
00001
        Imports System
00002
        Imports System.Reflection
00003
        Imports System.Runtime.InteropServices
00004
00005
        ' General Information about an assembly is controlled through the following
00006
         ' set of attributes. Change these attribute values to modify the information
00007
         ' associated with an assembly.
80000
00009
         ' Review the values of the assembly attributes
00010
00011
        <Assembly:AssemblyTitle("Consultation evening project v1" )>
00012
        <assembly:AssemblyDescription("" )>
00013
        <Assembly:AssemblyCompany("Home")>
00014
        <Assembly:AssemblyProduct("Consultation evening project v1" )>
00015
        <Assembly:AssemblyCopyright("Copyright © Home 2013")>
00016
        <Assembly:AssemblyTrademark("" )>
00017
00018
        <Assembly:ComVisible(False)>
00019
00020
        'The following GUID is for the ID of the typelib if this project is exposed to COM
00021
        <Assembly:Guid("3808a6f4-30cc-4466-883e-d765ea8a54dd" )>
00022
00023
        ' Version information for an assembly consists of the following four values:
00024
               Major Version
00025
00026
               Minor Version
00027
               Build Number
00028
               Revision
00029
00030
        ' You can specify all the values or you can default the Build and Revision Numbers
        ' by using the '*' as shown below:
00031
00032
         ' <Assembly: AssemblyVersion("1.0.*")>
00033
00034
        <Assembly:AssemblyVersion("1.0.0.0")>
00035
        <Assembly:AssemblyFileVersion("1.0.0.0")>
```

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