

Testing

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Testing strategy

I will test my system using Black box testing, white box testing.

Black box testing

System testing where overall results of the actions in the system are checked. Eg checking that I can set the settings for a day or that I can as a member of staff set when im available

On top of this I will be doing function testing in which I will check that each function produces the correct results ie importing csv to dat files or changing the appointment length radio button and checking if it has changed the lengths for the appointments in cmbstart and cmbfinish.

White box testing

I will do Path testing for each of my functions by putting up breakpoints at all of the major subroutines to make sure they are being executed and in the right order by the program.

Function testing, I will check that each subroutine and function when executed return the correct results. Ie weather or not subroutines like militarytime, a subroutine that converts a number from 0 to 287 to a number in military form, generates the correct results.

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Testing plan

frmstart				
Test No	event	Test data	Reason for test	Expected outcome
1	Form loads and the the username is retrived by the program	The users network area username in my case 112544	If the correct username is not obtained then the system will not work	The variable user will contain my username
2	Form loads and the number or each kind of record is found	The dat files	A lot of the for loops in the program rely on an accurate value for the number of each type of record. If it works for staff it will work for the other files as they are in the same.	The number of staff files recorded to be 97 as the file size is 97 times the record size and there is 97 staff
3	Form loads and the number or each kind of record is found	The dat files exept that the staff dat file will be missing	If it does not properly handle the situation it could crash the code	The program will continue as if nothing out of the ordinary was happening with nstaff as 0
3.b	Form loads and the number or each kind of record is found	The dat files exept that the staff dat file will be missing	If it does not properly handle the situation it could crash the code	The program will continue as if nothing out of the ordinary was happening with nstaff as 0
4	Form loading	Whether or not the user is an admin	If the user is an admin then the admin button must present itself or the admin will not be able to wield his or her power.	btnAdmin should be visible
5	A a user who is a student trys to log on	The variable "User" will be set to "112544" who is added to students.dat	If when a correct student user uses the program they need to be recognised or they cant do anything	The user type should be set to 1 and student.studID should be 112544
6	A user who is a staff member trys to log on to the availability form	The variable "User" will be set to "RKI" who will be added to staff.dat	If when a correct staff member user uses the program they need to be recognised or they cant do anything	The user type should be set to 2 and staff.staffid should be RKI And the frm availability should open
7	A user with the name of an admin tries to log	The variable "User" will be set to "SBE"	If when a correct staff member user uses the program they need to be recognised as admin	The admin button should be visible. User type shoud be 2 and staff.staffid = SSB

	on to the availability form	and the record will be changed to admin	or no one can edit the settings	and the availability form should open when the availability button is clicked
8	A user with the name of an admin tries to log on to the admin	The variable "User" will be set to "SBE" and the record will be changed to admin	If when a correct staff member user uses the program they need to be recognised as admin or no one can edit the settings	The admin button should be visible. User type should be 2 and staff.staffid = SSB and the admin form should open when the admin button is clicked
9	Some one with the format of a student but is not on the system	The variable "User" will be set to "999999" which is in the format of a students logon but is not in the students.dat file	I If when a user of an incorrect user name tries to use the system it should notify them and not crash so if they should be on the system the can see that that is the error and get someone to fix it	Usertype should be = 0 And an error message should come up telling them that their username is not valid and to contact admin if this is wrong Also there will be no buttons visible except for exit
10	Someone who does not have the format of a student but is not on the system and there is a staff file loaded	The variable "user" will be set to "librarycomputer1" which is in the correct format to be checked to be a staff and is not in the staff.dat file	If when a user of an incorrect user name tries to use the system it should notify them and not crash so if they should be on the system the can see that that is the error and get someone to fix it	Usertype should be = 0 And an error message should come up telling them that their username is not valid and to contact admin if this is wrong
11	Btnexit clicked	Btnexit clicked	The windows are locked so they will not be able to be closed any other way.	The window will close

frmavailability				
Test No	event	Test data	Reason for test	Expected outcome
	Form loading and lblname displaying a welcome message when a student is using	I student.forename to simon and student.surname to surname and usertype	If it though if it doesn't work	Lblname will say "welcome simon bellows"

	it	to 1		
	Form loading and lblname displaying a welcome message when a student is using it	I staff.forename to simon and staff.surname to surname and usertype to 2	If it though if it doesn't work	Lblname will say "welcome simon bellows"
	Form loads populates the chkdstavailability Checked combo box	Appointmentlength = 5 Nday = 2 and day.start = 204 and day.finnish = 246 for day.dayno = 1 and day.dayno = 2	If it doesn't correctly display the appointment blocks then user will not be able to accurately set there availability.	A set of un checked items in the list starting with "day 1 1700 to 1800" to "day 2 1930 to 2030"
	Form loads populates the chkdstavailability Checked combo box but for appointment length 10	Appointmentlength = 10 Nday = 2 and day.start = 204 and day.finnish = 252 for day.dayno = 1 and day.dayno = 2	If it doesn't correctly display the appointment blocks then user will not be able to accurately set there availability.	A set of un checked items in the list starting with "day 1 1700 to 1800" to "day 2 1930 to 2030"
	The check box on one of the items in chkdstavailability is checked with a staff member using at appointment length 5	Appointment length = 5. Usertype = 2 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1800	If a member of staff is unable to check that they will be available for any appointments then they will not be able to be seen by any students	checkedlistbox item day 1 1700 to 1800 will be checked and in the staffav.dat file there will be a record that says the staff member is available
	The check box on one of the items in chkdstavailability is checked with a staff member using at appointment length 10	Appointment length = 10. Usertype = 2 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1830	If a member of staff is unable to check that they will be available for any appointments then they will not be able to be seen by any students	checkedlistbox item day 1 1700 to 1830 will be unchecked and in the staffav.dat file there will be a record that says the staff member is available
	The check box on one of the items in chkdstavailability is	Appointment length = 5. Usertype = 2 Staffav record. The	If a member of staff is unable to uncheck that they will be available for any appointments then they will be assigned appointments they	checkedlistbox item day 1 1700 to 1800 will be checked and in the staffav.dat file there will be a record that says the staff member is

	unchecked with a staff member using at appointment length 5	checked checkedlistbox item day 1 1700 to 1800	won't be available for and will mislead students	unavailable
	The check box on one of the items in chklstavailability is unchecked with a staff member using at appointment length 10	Appointment length = 10. Usertype = 2 Staffav record. The checked checkedlistbox item day 1 1700 to 1830	If a member of staff is unable to uncheck that they will be available for any appointments then they will be assigned appointments they won't be available for and will mislead students	checkedlistbox item day 1 1700 to 1830 will be unchecked and in the staffav.dat file there will be a record that says the staff member is unavailable
	The check box on one of the items in chklstavailability is checked by a student using at appointment length 5	Appointment length = 5. Usertype =1 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1800	If a student is unable to check that they will be available for any appointments then they will not be able to be seen by any members of staff	checkedlistbox item day 1 1700 to 1800 will be checked and in the studav.dat file there will be a record that says the staff member is available
	The check box on one of the items in chklstavailability is checked by a student using at appointment length 10	Appointment length = 10. Usertype =1 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1830	If a student is unable to check that they will be available for any appointments then they will not be able to be seen by any members of staff	checkedlistbox item day 1 1700 to 1830 will be unchecked and in the studav.dat file there will be a record that says the staff member is available
	The check box on one of the items in chklstavailability is unchecked by a student using at appointment length 5	Appointment length = 5. Usertype =1 Staffav record. The checked checkedlistbox item day 1 1700 to 1800	If a student is unable to uncheck that they will be available for any appointments then they will be assigned appointments they won't be available for and will mislead members of staff	checkedlistbox item day 1 1700 to 1800 will be checked and in the studav.dat file there will be a record that says the staff member is unavailable
	The check box on one of the items in chklstavailability is unchecked by a student using at appointment length 10	Appointment length = 10. Usertype = 1 Staffav record. The checked checkedlistbox item day 1 1700 to 1830	If a student is unable to uncheck that they will be available for any appointments then they will be assigned appointments they won't be available for and will mislead members of staff.	checkedlistbox item day 1 1700 to 1830 will be unchecked and in the studav.dat file there will be a record that says the staff member is unavailable

	Btnexit clicked	btnExit being clicked	Because if button exit does not work then the user won't be able to exit the program without forcequiting it.	Frmavailability will close and the start form will open.
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frmAdmin				
Test No	event	Test data	Reason for test	Expected outcome
	btnReset	Clicking button reset	Between parents evenings the admin may want to cleanse the system and start anew	The file lengths for the different dat files will be changed back to 0
	Clicking Btnback	Clicking btnback	If the user is unable to use the back button then he would be unable to leave the form without forcequiting it.	The form will close and the start form will open
	btnDaysettings	Clicking btndaysettings	If they are unable to get to the daysettings form then they can not generate the appointment records and availability records.	The day settings form will open
	Import staff and student data button is clicked	Clicking on the import classSlots, studetnclass, staff and student file. With them all existing and none of the data in the wrong format	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a series of message boxes notifying me that different parts have imported and there will be populated dat files by the names of student staff and lesson.
	Import staff and student data button is clicked	Clicking on the import classSlots, studetnclass, staff and student file. With the only problem being that there is no student file	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file
	Import staff and student data button is	Clicking on the import classSlots,	If the import does not work then there will be none of the basic data that the whole system	I will get a message telling me that there was an error and the system could not find the file

	clicked	studentnclass, staff and student file. With the only problem being that there is no staff file	feeds off so none of it will work.	
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is no studentclass file	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is no classslotfile file	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is errors in the student.csv	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error with the student.csv file
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is errors in the studentclass.csv	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error with the studentclass.csv file

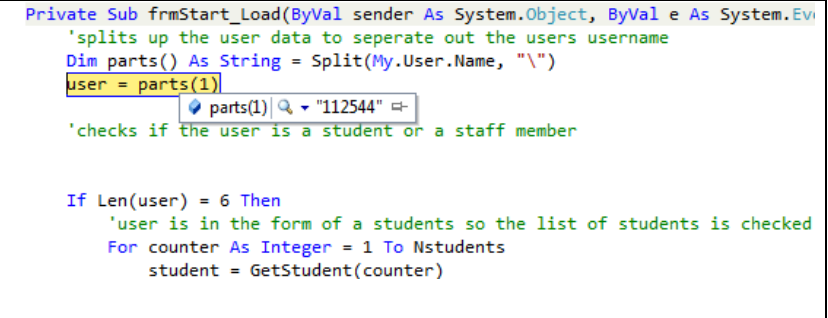
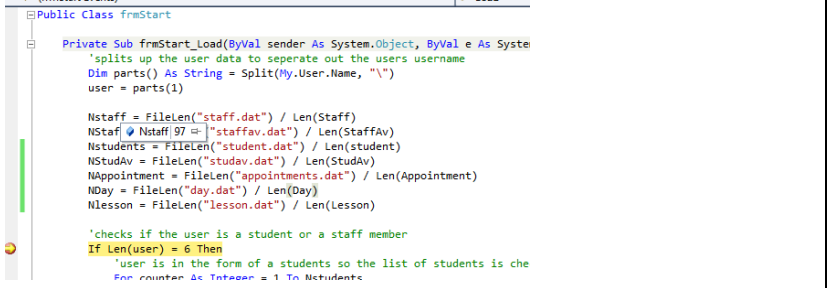
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is errors in the staff.csv	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error with the staff.csv file
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is errors in the classslots.csv	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error with the classslots.csv file
	Btnalgorithm clicked	Btnalgorithm clicked	If the button does not start the algorithm then no appointments will be created and the program will be impetant	I it will hit a breakpoint I will stick inside the subroutine
	The sorting algorithm I run	The student and staff availability files with 10 students and 4 staff as a small scale experitment.	If it works for small numbers it will work the same or large numbers, though there will be an increase in people with out appointments unless the number of appointments is increased.	When I look at the appointment form I will see a number of appointments depending on the effectiveness of the algorithm
	Clicking btnemail	Clicking btnemail and for the purposes of this test I will be changing the email address to @ssfc.ac.uk instead because I don't have access to the other domains email's. and I will be just using the student simon bellows	If this does not work then there is no way for anyone to find out what their appointments are.	I will expect to recive an email at 112544@ssfc.ac.uk detailing appointments of simon bellows

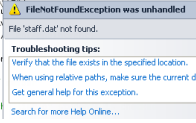
frmDaySettings				
Test No	event	Test data	Reason for test	Expected outcome
	Form loads	The form loads	When the form loads the neither the number of days or the length of appointments are decided ergo one can not set the times for the days so they should be invisible	Cmbstart, cmbday and cmbend will be invisible
	Form loads	The form loads	Cmbndays should be filled with the numbers 1 to 255 days for the user to select as the number of days	The combobox will contain the numbers from 1 to 255
	Ndays is changed But appointment length is not set	The combo box ndays is changed to 3 days	When the ndays combo box changes its value the combo box need to display it and the variable ndays needs to register it	Ndays will be 3 The selected item in the combobox will be 3
	Rad5min is selected and ndays is not set yet	Rad5min is selected	When rad5min is selected the variable appointmentlength needs to regeister it	Appointmentlength will equal 5
	Rad10min is selected and ndays is not set yet	Rad10min is selected	When rad10min is selected the variable appointmentlength needs to regeister it	Appointmentlength will equal 10
	Rad5min is selected after ndays is set to 3	Rad5min is selected after ndays is set to 3	When rad5min is selected the variable appointmentlength needs to regeister it and because there is an ndays set it has to make cmbend, cmbstart, and cmbday visible and populated	Appointmentlength will equal 5 ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated
	Rad10min is selected after ndays is set to 3	Rad10min is selected after ndays is set to 3	When rad10min is selected the variable appointmentlength needs to regeister it and because there is an ndays set it has to make cmbend, cmbstart, and cmbday visible and populated	Appointmentlength will equal 10 ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated
	Rad5min is selected then ndays is set to 3	Rad5min is selected then ndays is set to 3	When rad5min is selected the variable appointmentlength needs to regeister it and then ndays set to 3 so cmbend, cmbstart, and	Appointmentlength will equal 5 ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated

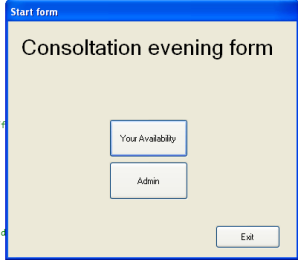
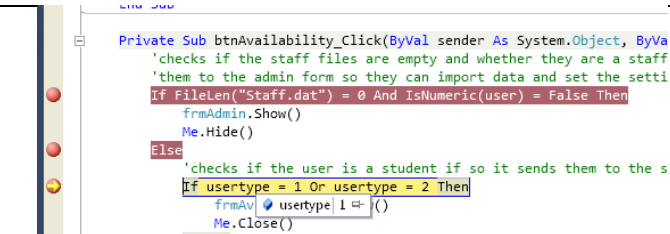
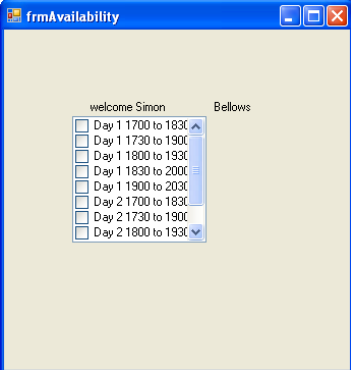
			cmbday visible and populated	
	Rad10min is selected then ndays is set to 3	Rad10min is selected then ndays is set to 3	When rad10min is selected the variable appointmentlength needs to regeister it and then ndays set to 3 so cmbend, cmbstart, and cmbday visible and populated	Appoinmentlength will equal 10 ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated
	Rad5min is selected when ndays = 3, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	Rad5min is selected when ndays = 3, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When appointment length is changed the values below may not be rellevant and theirfore are reset if not they might be values that are imposible	Rad5min will be set and ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected
	Rad10min is selected when ndays = 3, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	Rad10min is selected when ndays = 3, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When appointment length is changed the values below may not be rellevant and theirfore are reset if not they might be values that are imposible	Rad10min will be set and ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected
	ndays is changed from 3 to 4, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	ndays changed from 3 to 4, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When the number of days is changed due to the fact that in some situations if the cmb boxes were left as is there could be issues it is easier to just change them all and the test is to check whether it does	ndays will be set to 4 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected
	ndays is changed from 3 to 4, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	Ndays is changed from 3 to 4, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When the number of days is changed due to the fact that in some situations if the cmb boxes were left as is there could be issues it is easier to just change them all and the test is to check whether it does	ndays will be set to 4 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected
	Btnback clicked	Btnback clicked	The user must be able to leave the form or they will be stuck there until they use	The day settings form will close and the admin form will open.

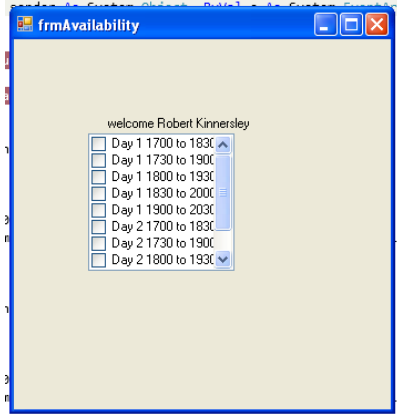
			taskmanager to end the form which would likely be impossible unless the admin of the consultation evening program is that of the school.	
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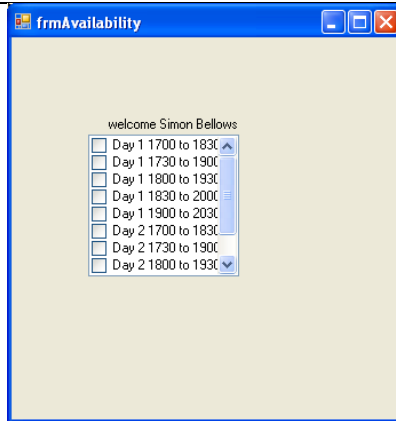
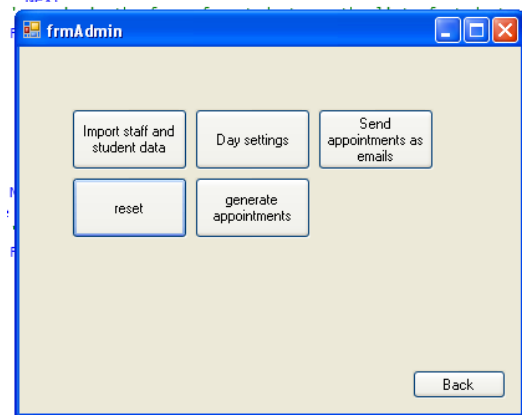
Testing

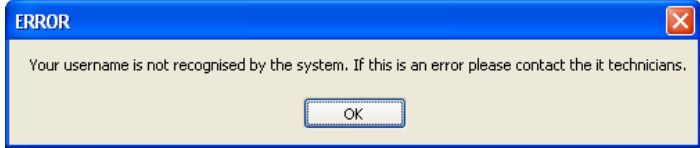
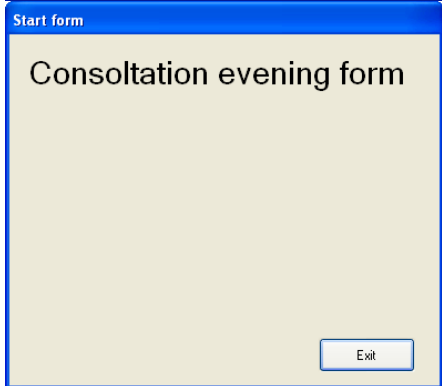
frmStart						
Test No	event	Test data	Reason for test	Expected outcome	outcome	screenshots
1	Form loads and the the username is retrived by the program	The users network area username in my case 112544	If the correct username is not obtained then the system will not work	The variable user will contain my username	The variable user was set to 112544 which is my username	 <pre> Private Sub frmStart_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load 'splits up the user data to separate out the users username Dim parts() As String = Split(My.UserName, "\") user = parts(1) 'checks if the user is a student or a staff member If Len(user) = 6 Then 'user is in the form of a students so the list of students is checked For counter As Integer = 1 To Nstudents student = GetStudent(counter) Next counter End If End Sub </pre>
2	Form loads and the number or each kind of record is found	The dat files	A lot of the for loops in the program rely on an accurate value for the number of each type of record. If it works for staff it will work for the other files	The number of staff files recorded to be 97 as the file size is 97 times the record size and there is 97 staff	It says there is 97 staff thus it works	 <pre> Public Class frmStart Private Sub frmStart_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load 'splits up the user data to separate out the users username Dim parts() As String = Split(My.UserName, "\") user = parts(1) Nstaff = FileLen("staff.dat") / Len(Staff) Nstaff = FileLen("staffav.dat") / Len(StaffAv) Nstudents = FileLen("student.dat") / Len(student) NstudAv = FileLen("studav.dat") / Len(StudAv) NAppointment = FileLen("appointments.dat") / Len(Appointment) NDay = FileLen("day.dat") / Len(Day) NLesson = FileLen("lesson.dat") / Len(Lesson) 'checks if the user is a student or a staff member If Len(user) = 6 Then 'user is in the form of a students so the list of students is checked For counter As Integer = 1 To Nstudents student = GetStudent(counter) Next counter End If End Sub End Class </pre>

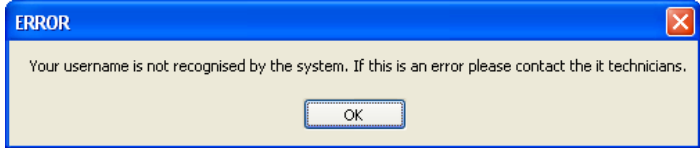
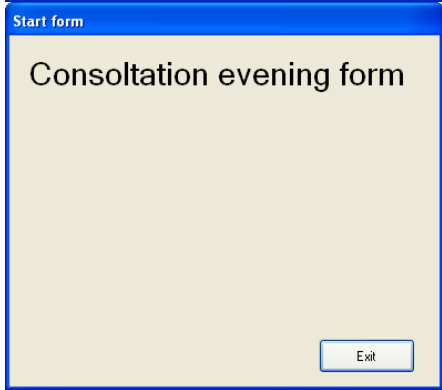
			as they are in the same.			
3	Form loads and the number or each kind of record is found	The dat files exept that the staff dat file will be missing	If it does not properly handle the situation it could crash the code	The program will continue as if nothing out of the ordinary was happening with nstaff as 0	The program crashed when it got to the line of code that worked out the number of records	<pre> nstaff = FileLen("staff.dat") / Len(Staff) NStaffAv = FileLen("staffav.dat") / Len(StaffAv) NStudents = FileLen("student.dat") / Len(stu) NStudAv = FileLen("studav.dat") / Len(StudAv) NAppointment = FileLen("appointments.dat") / Len(Appointment) NDay = FileLen("day.dat") / Len(Day) NLesson = FileLen("lesson.dat") / Len(Lesson) 'checks if the user is a student or a staff member If Len(user) = 6 Then 'user is in the form of a students so the list of For counter As Integer = 1 To NStudents </pre> 
3.b	Form loads and the number or each kind of record is found	The dat files exept that the staff dat file will be missing	If it does not properly handle the situation it could crash the code	The program will continue as if nothing out of the ordinary was happening with nstaff as 0	The program set nstaff to 0 and did not crash	<pre> Catch Nstaff = 0 End Try Try NStaffAv = FileLen("staffav.dat") / Len(StaffAv) Catch NStaffAv = 0 End Try Try NStudents = FileLen("student.dat") / Len(student) Catch NStudents = 0 End Try Try NStudAv = FileLen("studav.dat") / Len(StudAv) Catch NStudAv = 0 End Try Try NAppointment = FileLen("appointments.dat") / Len(Appointment) Catch NAppointment = 0 End Try Try NDay = FileLen("day.dat") / Len(Day) Catch NDay = 0 End Try Try NLesson = FileLen("lesson.dat") / Len(Lesson) Catch NLesson = 0 End Try 'checks if the user is a student or a staff member If Len(user) = 6 Then 'user is in the form of a students so the list of </pre>

4	Form loading	Whether or not the user is an admin	If the user is an admin then the admin button must present itself or the admin will not be able to wield his or her power.	btnAdmin should be visible	Btnadmin is visible.	 <pre> If user.ToUpper = Staff.staffID.ToUpper Then 'records that the user is a member of staff usertype = 2 'checks if the user is an admin If Staff.admin = True Then 'makes the admin button visible so that the admin form may be accessed btnAvailability.Text = "Your Availability" btnadmin.Visible = True End If End If ext f ks if the system is empty and whether they are a staff member. if so then it will not report 1 </pre>
5	A a user who is a student tries to log on	The variable "User" will be set to "112544" who is added to students.dat	If when a correct student user uses the program they need to be recognised or they cant do anything	The user type should be set to 1 and student.studID should be 112544	Frmavaila bility loaded	 <pre> Private Sub btnAvailability_Click(ByVal sender As System.Object, ByVal 'checks if the staff files are empty and whether they are a staff 'them to the admin form so they can import data and set the setti If FileLen("Staff.dat") = 0 And IsNumeric(user) = False Then frmAdmin.Show() Me.Hide() Else 'checks if the user is a student if so it sends them to the s If usertype = 1 Or usertype = 2 Then frmAv. usertype = 1 Me.Close() End If End Sub </pre> 

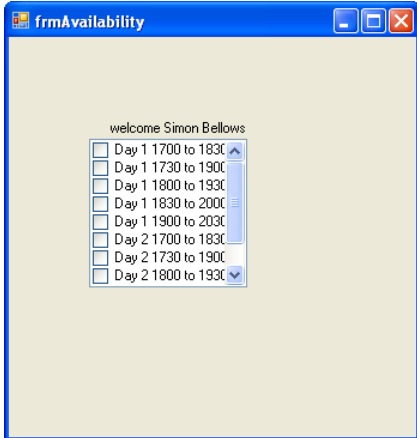
6	A user who is a staff member tries to log on to the availability form	The variable "User" will be set to "RKI" who will be added to staff.dat	If when a correct staff member user uses the program they need to be recognised or they cant do anything	The user type should be set to 2 and staff.staffid should be RKI And the frm availability should open	Frm availability opened and usertype = 2 and staff.staffid was set to RKI	 <pre> 'user is not in the form of a student so the list of staff is For counter as integer = 1 To Nstaff Staff = GetStaff(counter) 'checks if the user has been found If user.ToUpper = Staff.staffID.ToUpper Then 'records that the user is usertype = 2 'checks if the user is an admin If Staff.admin = True Then 'makes the admin button visible so that the admin btnAvailability.Text = "Your Availability" btnadmin.Visible = True End If End If Exit For End If </pre>
7	A user with the name of an admin tries to log on to the availability form	The variable "User" will be set to "SBE" and the record will be changed to admin	If when a correct staff member user uses the program they need to be recognised as admin or no one	The admin button should be visible. User type should be 2 and staff.staffid = SSB and the availability form should open when	Frm availability opened and usertype = 2 and staff.staffid was set to SBE	<pre> 'user is not in the form of a student so the list of staff is For counter as integer = 1 To Nstaff Staff = GetStaff(counter) 'checks if the user has been found If user.ToUpper = Staff.staffID.ToUpper Then 'records that the user usertype = 2 'checks if the user is an admin If Staff.admin = True Then 'makes the admin button visible so that the admin btnAvailability.Text = "Your Availability" btnadmin.Visible = True End If End If Exit For End If Next </pre>

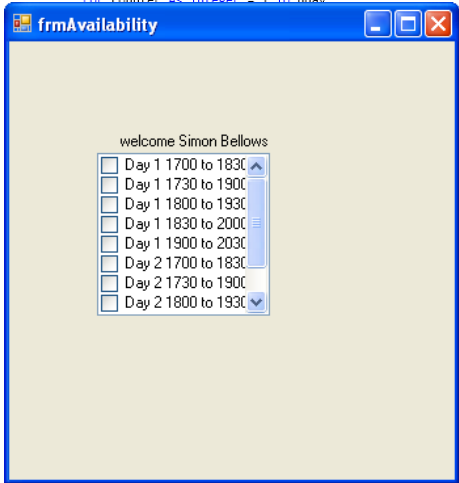
			can edit the settings	the availability button is clicked		
8	A user with the name of an admin tries to log on to the admin	The variable “User” will be set to “SBE” and the record will be changed to admin	If when a correct staff member user uses the program they need to be recognised as admin or no one can edit the settings	The admin button should be visible. User type should be 2 and staff.staffid = SSB and the admin form should open when the admin button is clicked	Frmadmin opened and usertype = 2 and staff.staff id was set to SBE	<pre>'user is not in the form of a student so the list of staff is For counter as integer = 1 To Nstaff Staff = GetStaff(counter) 'checks if the user has been found If user.ToUpper = Staff.staffID.ToUpper Then 'records that the user usertype = 2 'checks if the user is an admin If Staff.admin = True Then 'makes the admin button visible so that the admin btnAvailability.Text = "Your Availability" btnadmin.Visible = True End If Exit For End If Next</pre> 

9	Some one with the format of a student but is not on the system	The variable "User" will be set to "999999" which is in the format of a students logon but is not in the students.dat file	If when a user of an incorrect user name tries to use the system it should notify them and not crash so if they should be on the system the can see that that is the error and get someone to fix it	Usertype should be = 0 And an error message should come up telling them that their username is not valid and to contact admin if this is wrong Also there will be no buttons visible except for exit	Usertype was set to 0 and a error message was sent to the user	<pre> frmadmin.show me.close Else If usertype = 0 Then btnAvailability.Visible = False MsgBox("Your username is not recognised by the system. If End If End If End Sub </pre> <pre> this is an error please contact the it technicians.", , "ERROR") </pre>  
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10	Someone who does not have the format of a student but is not on the system and there is a staff file loaded	The variable "user" will be set to "librarycomputer1" which is in the correct format to be checked to be a staff and is not in the staff.dat file	If when a user of an incorrect user name tries to use the system it should notify them and not crash so if they should be on the system the can see that that is the error and get someone to fix it	Usertype should be = 0 And an error message should come up telling them that their username is not valid and to contact admin if this is wrong	Usertype was set to 0 and a error message was sent to the user	<pre> frmadmin.show me.close Else If usertype = 0 Then btnAvailability.Visible = False MsgBox("Your username is not recognised by the system. If End If End If End Sub </pre> <p>this is an error please contact the it technicians.", , "ERROR")</p>  
11	Btnexit clicked	Btnexit clicked	The windows are locked so they	The window will close	The window closed closing	<pre> Private Sub btnExit_Click(sender As System.Object, e As System.EventArgs) Handles btnExi 'closes the form Me.Close() End Sub </pre>

			will not be able to be closed any other way.		the program	
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Frmavailability						
Test No	event	Test data	Reason for test	Expected outcome	outcome	screenshots
1	Form loading and lblname displaying a welcome message when a student is using it	I student.forename to simon and student.surname to surname and usertype to 1	If it though if it doesn't work	Lblname will say "welcome simon bellows"	Lblname said "welcome simon bellows"	<pre>Private Sub frmAvailability_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load frmStart.Hide() If usertype = 1 Then lblname.Text = "welcome " + student.Forename.Trim + " " + student.Surname.Trim ElseIf usertype = 2 Then lblname.Text = "welcome " + Staff.Forename.Trim + " " + Staff.Surname.Trim End If If appointmentlength = 5 Then ' End If End Sub</pre> <pre>Private Sub frmAvailability_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load frmStart.Hide() If usertype = 1 Then lblname.Text = "welcome " + student.Forename.Trim + " " + student.Surname.Trim ElseIf usertype = 2 Then lblname.Text = "welcome " + Staff.Forename.Trim + " " + Staff.Surname.Trim End If End Sub</pre> 

2	Form loading and lblname displaying a welcome message when a staff member is using it	I staff.forename to simon and staff.surname to surname and usertype to 2	If it though if it doesn't work	Lblname will say "welcome simon bellows"	Lblname said "welcome simon bellows"	<pre> Private Sub frmAvailability_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load frmStart.Hide() If usertype = 1 Then lblname.Text = "welcome " + student.Forename.Trim + " " + student.Surname.Trim ElseIf usertype = 2 Then lblname.Text = "welcome " + Staff.Forename.Trim + " " + Staff.Surname.Trim End If If appointmentlength = 5 Then frmStart.Hide() If usertype = 1 Then lblname.Text = "welcome " + student.Forename.Trim + " " + student.Surname.Trim ElseIf usertype = 2 Then lblname.Text = "welcome " + Staff.Forename.Trim + " " + Staff.Surname.Trim End If If appointmentlength = 5 Then For counter As Integer = 1 To nday Day = GetDay(counter) Day.Start = 204 Day.Finish = 246 For counter2 As Integer = 0 To (Day.Finish - Day.Start) \ 6 - 2 chklstavailability.Items.Add("Day " + counter.ToString + " " + militarytime(Day.Start + (counter2 * 6)) + " to " + militarytime(Day.Start + 12 + (counter2 * 6))) Next Next Else ' ... (code for usertype = 1) End If End If End Sub </pre> 
3	Form loads populates the chklstavailability Checked combo box	Appointmentlength = 5 Nday = 2 and day.start = 204 and day.finnish = 246 for day.dayno = 1 and day.dayno = 2	If it doesn't correctly display the appointment blocks then user will not be able to accurately set there availability.	A set of unchecked items in the list starting with "day 1 1700 to 1800" to "day 2 1930 to 2030"	Checked opens loaded as describe in expected results	<pre> If appointmentlength = 5 Then For counter As Integer = 1 To nday Day = GetDay(counter) Day.Start = 204 Day.Finish = 246 For counter2 As Integer = 0 To (Day.Finish - Day.Start) \ 6 - 2 chklstavailability.Items.Add("Day " + counter.ToString + " " + militarytime(Day.Start + (counter2 * 6)) + " to " + militarytime(Day.Start + 12 + (counter2 * 6))) Next Next Else ' ... (code for usertype = 1) End If </pre>

						<div data-bbox="1243 193 1727 703"><div data-bbox="1243 193 1727 231">frmAvailability</div><div data-bbox="1361 331 1523 351">welcome Simon Bellows</div><div data-bbox="1341 355 1523 528"><div><input type="checkbox"/> Day 1 1700 to 1800</div><div><input type="checkbox"/> Day 1 1730 to 1830</div><div><input type="checkbox"/> Day 1 1800 to 1900</div><div><input type="checkbox"/> Day 1 1830 to 1930</div><div><input type="checkbox"/> Day 1 1900 to 2000</div><div><input type="checkbox"/> Day 1 1930 to 2030</div><div><input type="checkbox"/> Day 2 1700 to 1800</div><div><input type="checkbox"/> Day 2 1730 to 1830</div></div></div>
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frmAvailability

welcome Simon Bellows

☐ Day 1 1900 to 2000

☐ Day 1 1930 to 2030

☐ Day 2 1700 to 1800

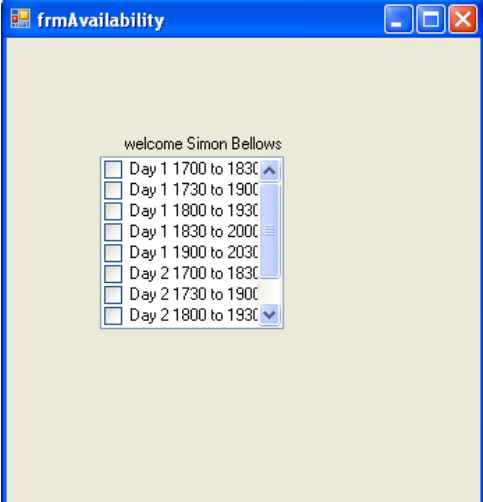
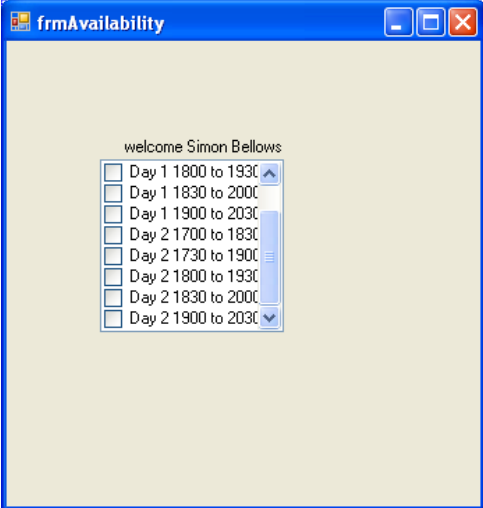
☐ Day 2 1730 to 1830

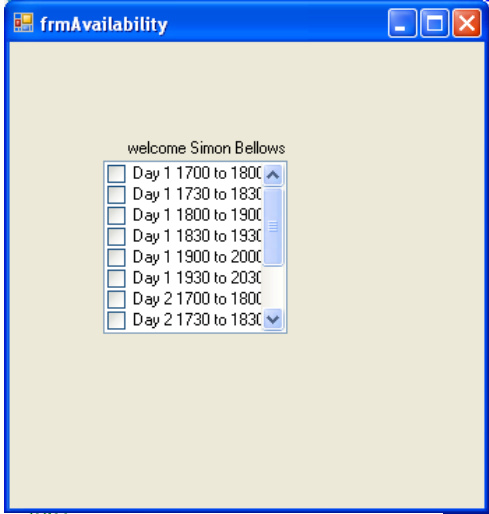
☐ Day 2 1800 to 1900

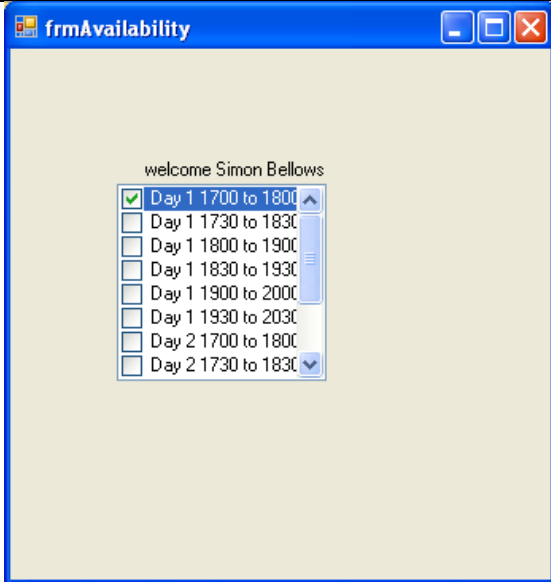
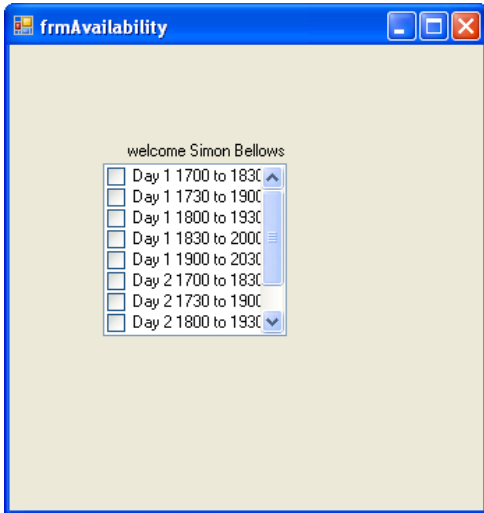
☐ Day 2 1830 to 1930

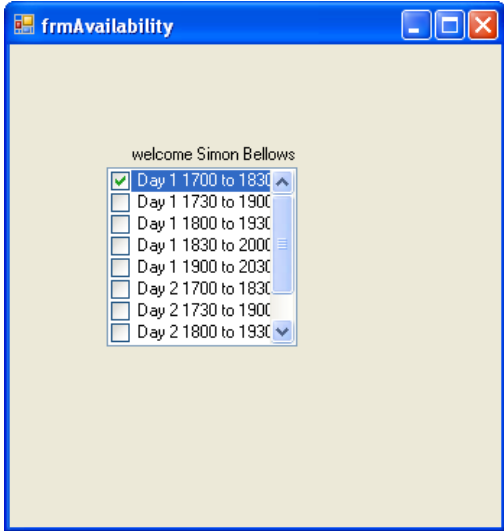
☐ Day 2 1900 to 2000

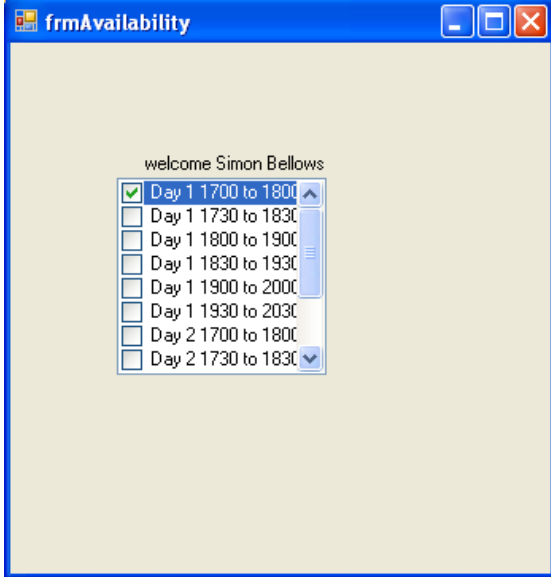
☐ Day 2 1930 to 2030

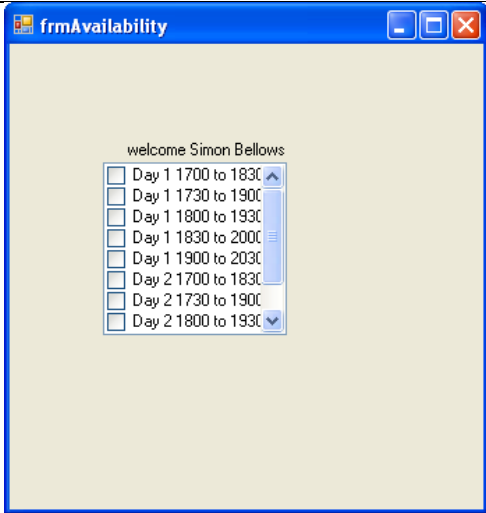
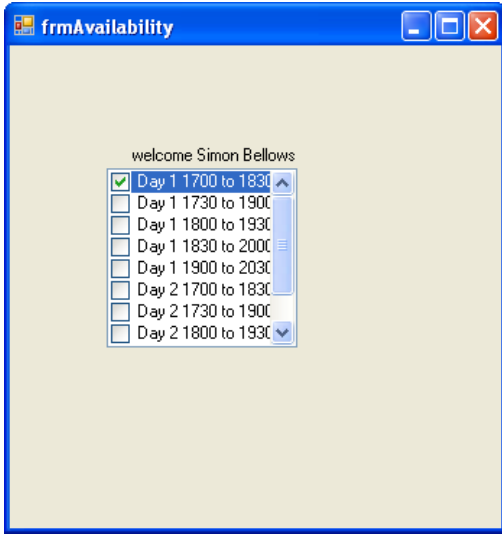
4	Form loads populates the chklstavailability Checked combo box but for appointment length 10	Appointmentlength = 10 Nday = 2 and day.start = 204 and day.finnish = 252 for day.dayno = 1 and day.dayno = 2	If it doesn't correctly display the appointment blocks then user will not be able to accurately set there availability.	A set of un checked items in the list starting with "day 1 1700 to 1800" to "day 2 1930 to 2030"	Checked opens loaded as describe in expected results	  <pre> or counter As Integer = 1 To nday Day = GetDay(counter) Day.Start = 204 Day.finnish = 252 For counter2 As Integer = 0 To (Day.finnish - Day.Start) \ 6 - 4 chklstavailability.Items.Add("Day " + counter.ToString + " " + militarytime(Day.Start + Next </pre>
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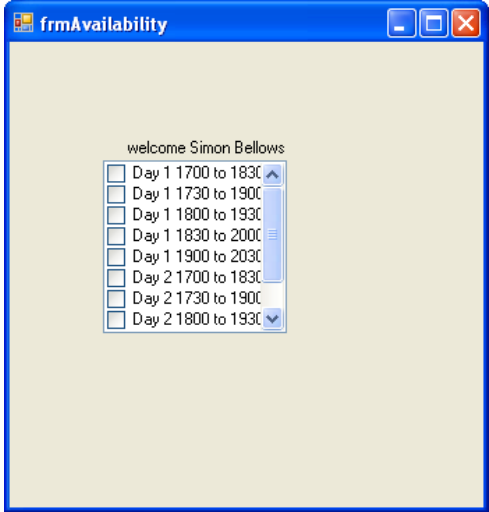
						<pre>+ (counter2 * 6)) + " to " + militarytime(Day.Start + 18 + (counter2 * 6)))</pre>
5	The check box on one of the items in chklstavailability is checked with a staff member using at appointment length 5	Appointment length = 5. Usertype = 2 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1800	If a member of staff is unable to check that they will be available for any appointments then they will not be able to be seen by any students	checkedlistbox item day 1 1700 to 1800 will be checked and in the staffav.dat file there will be a record that says the staff member is available	The item was checked and the staffav record was updated	<pre>o i bo</pre>  <pre> If appointmentlength = 5 Then For counter As Integer = (parts(2) \ 100) For counter1 As Integer = 1 To NStaff# GetStaffAV(counter1) If StaffAv.StaffNO = Staff.StaffNO Exit For End If Next StaffAv.Available = True StaffAv.Block += 1 PutStaffAv(StaffAv, StaffAv.staffAVNO) </pre> <pre>o i booyy</pre>

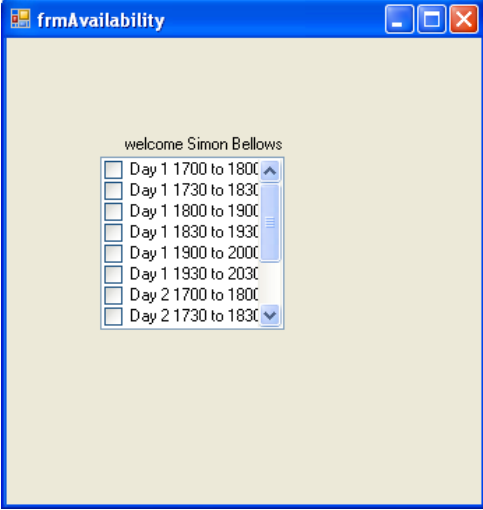
						
	<p>The check box on one of the items in chkIstavailability is checked with a staff member using at appointment length 10</p>	<p>Appointment length = 10. Ustertype = 2 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1830</p>	<p>If a member of staff is unable to check that they will be available for any appointments then they will not be able to be seen by any students</p>	<p>checkedlist box item day 1 1700 to 1830 will be unchecked and in the staffav.dat file there will be a record that says the staff member is available</p>	<p>The item was checked and the staffav record was updated</p>	<p>o i bo</p> 

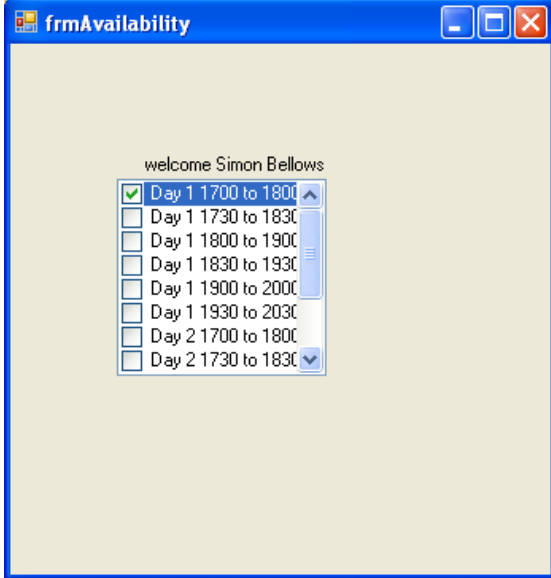
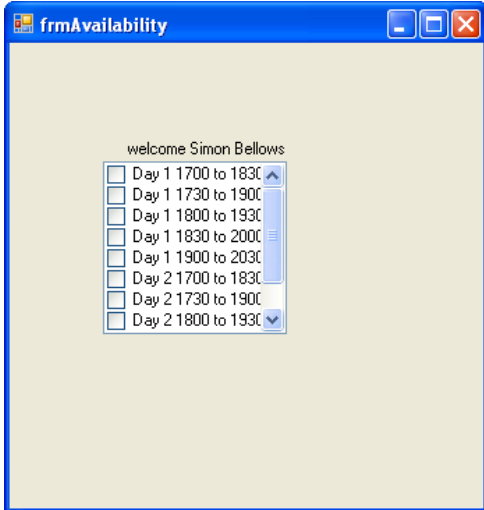
						<pre>Else For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((parts(2)) \ 100) * 100)) / : For counter1 As Integer = 1 To NStaffAv GetStaffAv(counter1) If StaffAv.StaffNO = Staff.StaffNO And StaffAv.Appointment = counter And StaffAv.i Exit For End If Next StaffAv.Available = True StaffAv.Block += 1 PutStaffAv(StaffAv, StaffAv.staffAVNO) Next</pre> <p>□ b□□yŷ</p> 
	The check box on one of the items in chkListavailability is unchecked with a staff member using	Appointment length = 5. Usertype = 2 Staffav record. The checked checkedlistbox item day 1 1700 to 1800	If a member of staff is unable to uncheck that they will be available for any appointment	checkedlist box item day 1 1700 to 1800 will be checked and in the staffav.dat file there	The item was unchecked and the staffav record was updated	<p>□ b□□yŷ</p>

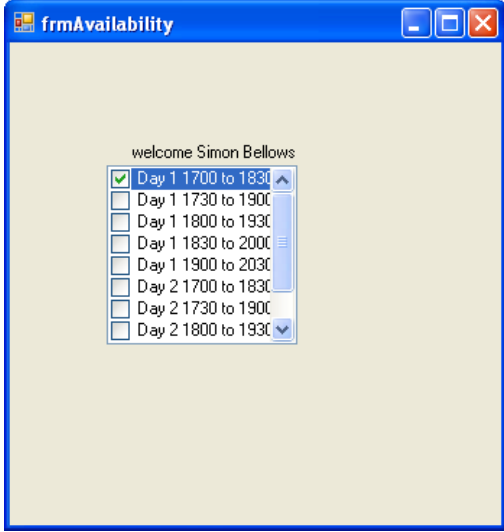
	at appointment length 5		s then they will be assigned appointments they won't be available for and will mislead students	will be a record that says the staff member is unavailable	 <pre> for counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((parts(2)) \ 100) for counter1 As Integer = 1 To NStaffAv GetStaffAV(counter1) If StaffAv.StaffNO = Staff.StaffNO And StaffAv.Appointment = counter Exit For End If Next StaffAv.Block -= 1 If StaffAv.Block = 0 Then StaffAv.Available = True End If </pre>
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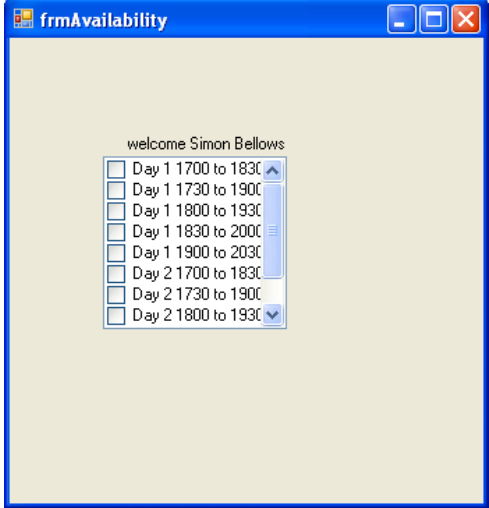
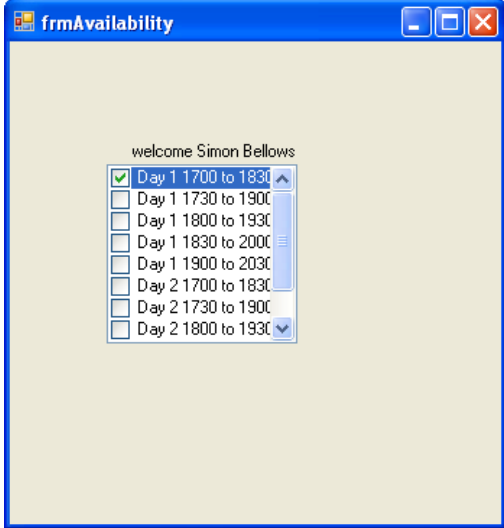
						
	<p>The check box on one of the items in chklstavailability is unchecked with a staff member using at appointment length 10</p>	<p>Appointment length = 10. Usertype = 2 Staffav record. The checked checkedlistbox item day 1 1700 to 1830</p>	<p>If a member of staff is unable to uncheck that they will be available for any appointments then they will be assigned appointments they won't be available for and will mislead students</p>	<p>checkedlist box item day 1 1700 to 1830 will be unchecked and in the staffav.dat file there will be a record that says the staff member is unavailable</p>	<p>The item was unchecked and the staffav record was updated</p>	<p>□ i b o o y y</p> 

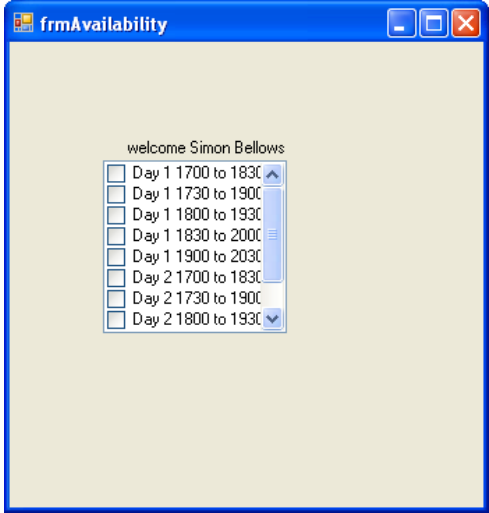
						<pre>For counter1 As Integer = 1 To NStaffAv GetStaffAV(counter1) If StaffAv.StaffNO = Staff.StaffNO And StaffAv.Appointment = counter A Exit For End If Next StaffAv.Block -= 1 If StaffAv.Block = 0 Then StaffAv.Available = True End If</pre> <p>o i bo</p> 
	The check box on one of the items in chkIstavailablity is checked by a student using at	Appointment length = 5. Usertype =1 Staffav record. The unchecked checkedlistbox item day 1 1700 to	If a student is unable to check that they will be available for any appointment	checkedlist box item day 1 1700 to 1800 will be checked and in the studav.dat	The item was checked and the studav record was	<p>o i S o o o y y</p>

	appointment length 5	1800	s then they will not be able to be seen by any members of staff	file there will be a record that says the staff member is available	updated	 <pre> For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((parts(2)) \ 100) * 100)) / 5) For counter1 As Integer = 1 To NStudAv GetStudAV(counter1) If StudAv.StudNo = student.StudNO And StudAv.Appointment = counter And StudAv.DayNO Exit For End If Next StudAv.available = True StudAv.Block += 1 Print StudAv.StudNo, StudAv.Appointment, StudAv.DayNO </pre>
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	<p>The check box on one of the items in chkIstavailability is checked by a student using at appointment length 10</p>	<p>Appointment length = 10. Usertype =1 Staffav record. The unchecked checkedlistbox item day 1 1700 to 1830</p>	<p>If a student is unable to check that they will be available for any appointments then they will not be able to be seen by any members of staff</p>	<p>checkedlist box item day 1 1700 to 1830 will be unchecked and in the studav.dat file there will be a record that says the staff member is available</p>	<p>The item was checked and the studav record was updated</p>	<p>□ S o o o y y </p> 

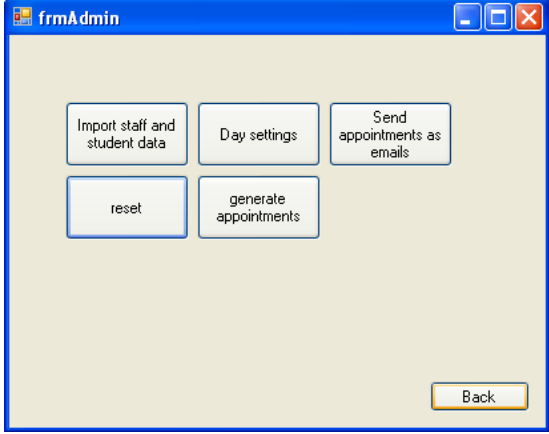
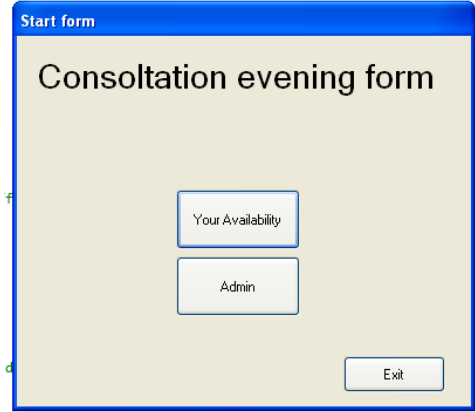
					<pre> For counter As Integer = (parts(2) \ 100) + (((parts(2)) - ((parts(2)) \ 100) * 100) / 5) To ((parts(2) \ 1 For counter1 As Integer = 1 To NstudAv GetStudAv(counter1) If StudAv.StudNo = student.StudNO And StudAv.Appointment = counter And StudAv.DayNO = parts(1) Then Exit For End If Next StudAv.available = True StudAv.Block += 1 PutStudAv(StudAv, StudAv.studAVNO) </pre> 
	The check box on one of the items in chklstavailability is unchecked by a student using at appointment length 5	Appointment length = 5. Usertype =1 Staffav record. The checked checkedlistbox item day 1 1700 to 1800	If a student is unable to uncheck that they will be available for any appointments then they will be assigned	checkedlist box item day 1 1700 to 1800 will be checked and in the studav.dat file there will be a record that	The item was unchecked and the studav record was updated

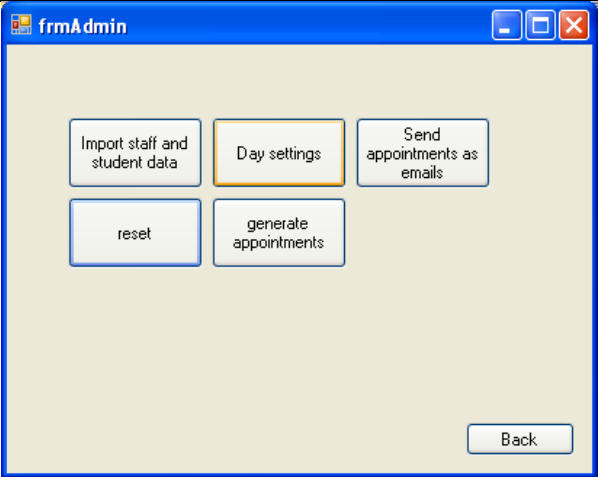
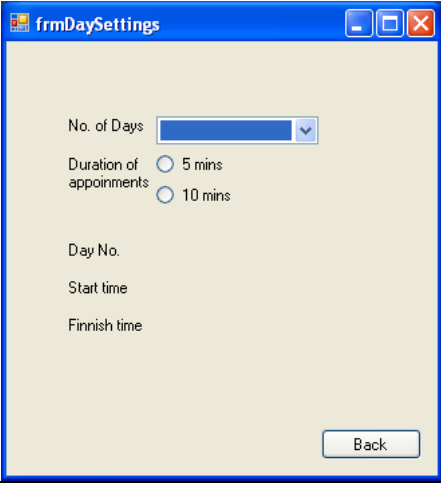
						
	<p>The check box on one of the items in chklstavailability is unchecked by a student using at appointment length 10</p>	<p>Appointment length = 10. Usertype = 1 Staffav record. The checked checkedlistbox item day 1 1700 to 1830</p>	<p>If a student is unable to uncheck that they will be available for any appointments then they will be assigned appointments they won't be available for and will mislead members of staff.</p>	<p>checkedlist box item day 1 1700 to 1830 will be unchecked and in the studav.dat file there will be a record that says the staff member is unavailable</p>	<p>The item was unchecked and the studav record was updated</p>	<p>□ S □ □ y </p> 

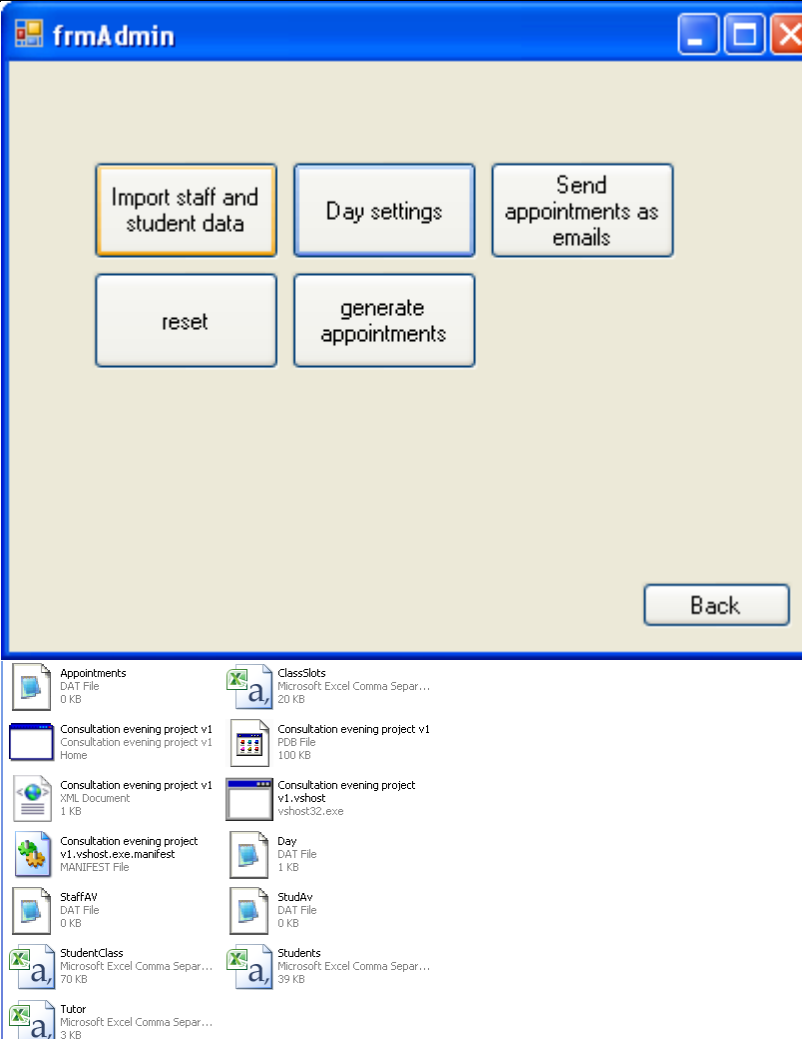
						<pre> 56 For counter As Integer = (parts(2) \ 100) + (((parts(2)) - (((parts(2)) \ 100) * 100)) / 5) To ((parts(2) \ For counter1 As Integer = 1 To NStudAv GetStudAv(counter1) If StudAv.StudNo = student.StudNo And StudAv.Appointment = counter And StudAv.DayNo = parts(1) Then Exit For End If Next StudAv.Block += 1 If StudAv.Block = 0 Then StudAv.available = True </pre> 
	Btnexit clicked	btnExit being clicked	Because if button exit does not work then the user wont be able to exit the program with out	Frmavailabi lity will close and the start form will open.	Frmavaila bility closed and frmstart opend again	<pre> Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e As S frmStart.Show() Me.Close() End Sub End Class </pre>

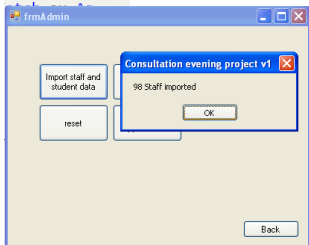
			forcequiting it.			
frmAdmin						
Test No	event	Test data	Reason for test	Expected outcome	outcome	screenshots
	btnReset	Clicking button reset	Between parents evenings the admin may want to cleanse the system and start anew	The file lengths for the different dat files will be changed back to 0	The files had there size changed to 0 meaning they were reset	

					<pre>Private Sub btnResent_Click(sender As System.Object, e As EventArgs) Handles btnResent.Click For counter As Integer = 1 To Nstaff Staff = Nothing PutStaff(Staff, counter) Next For counter As Integer = 1 To NstaffAv StaffAv = Nothing PutStaffAv(StaffAv, counter) Next For counter As Integer = 1 To Nstudents student = Nothing PutStudent(student, counter) Next For counter As Integer = 1 To NstudAv StudAv = Nothing PutStudAv(StudAv, counter) Next For counter As Integer = 1 To NDay Day = Nothing Putday(Day, counter) Next For counter As Integer = 1 To Nlesson Lesson = Nothing PutLesson(Lesson, counter) Next For counter As Integer = 1 To NAppointment Appointment = Nothing Putappointment(Appointment, counter) Next End Sub</pre> <div><div> ClassSlots Microsoft Excel Comma Separ... 20 KB</div><div> Staff DAT File 0 KB</div><div> StaffAV DAT File 0 KB</div><div> Appointments DAT File 0 KB</div><div> lesson DAT File 0 KB</div><div> Student DAT File 0 KB</div><div> StudAv DAT File 0 KB</div><div> Day DAT File 0 KB</div></div>
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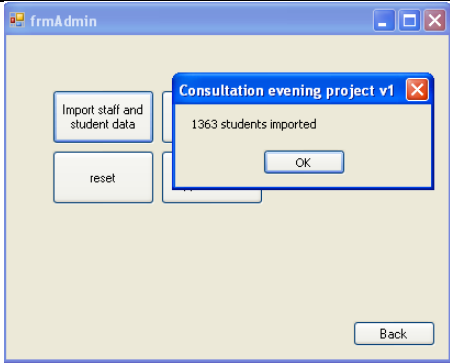
	Clicking Btnback	Clicking btnback	If the user is unable to use the back button then he would be unable to leave the form without forcequiting it.	The form will close and the start form will open	Btn back was pressed and the form closed and	 <pre> Private Sub btnBack_Click(sender As System.Object, e As System.EventArgs) Handles btnBack.Click 'opens form start and close the admin form frmStart.Show() Me.Close() End Sub </pre> 
	btnDaysettings	Clicking btndaysettings	If they are unable to get to the daysettings form then	The day settings form will open	The day settings form opened	

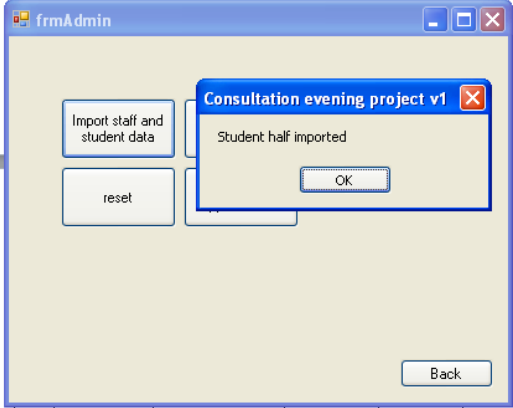
			they can not generate the appointment records and availability records.			<div data-bbox="1243 193 1839 671">The screenshot shows a Windows application window titled 'frmAdmin'. It has a blue title bar with standard minimize, maximize, and close buttons. The main area is light beige and contains five buttons: 'Import staff and student data', 'Day settings' (highlighted with a yellow border), 'Send appointments as emails', 'reset', and 'generate appointments'. A 'Back' button is located at the bottom right.</div> <div data-bbox="1267 691 2033 786"><pre>Private Sub btnDay_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnDay.Click 'opnes frm daysettings frmDaySettings.Show() End Sub</pre></div> <div data-bbox="1243 810 1682 1295">The screenshot shows a Windows application window titled 'frmDaySettings'. It has a blue title bar with standard minimize, maximize, and close buttons. The main area is light beige and contains a 'No. of Days' label next to a dropdown menu. Below this are two radio buttons for 'Duration of appointments': '5 mins' (selected) and '10 mins'. Further down are labels for 'Day No.', 'Start time', and 'Finnish time'. A 'Back' button is at the bottom right.</div>
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	<p>Import staff and student data button is clicked</p>	<p>Clicking on the import classSlots, studentnclass, staff and student file. With them all existing and none of the data in the wrong format</p>	<p>If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.</p>	<p>I will get a series of message boxes notifying me that different parts have imported and there will be populated dat files by the names of student staff and lesson.</p>	<p>I recieved message boxes after each import was complete and the dat files wer all populated at the end</p>	
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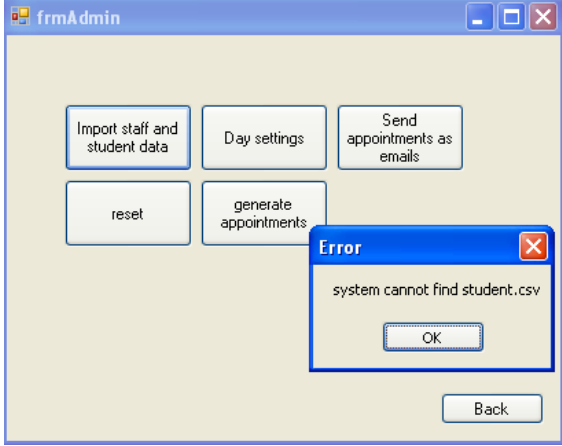
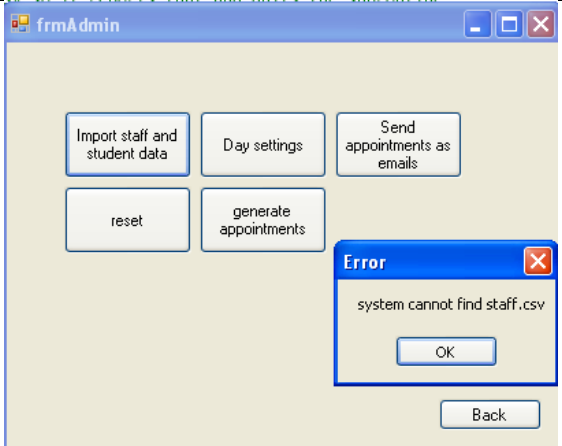
					<pre> Private Sub btnImport_Click(sender As System.Object, e As System.EventArgs) Handles btnImport.Click 'tries to import staff. if it failes then due to safeguards in 'with the csv so it reports that and quits the subroutine Try Call ImportStaff() Catch MsgBox("system cannot find staff.csv", , "Error") Exit Sub End Try 'if there was no problems with the staff csv but there were is ry CurrentRow = TextFileReader.ReadFields() If Not CurrentRow Is Nothing Then OnRec = OnRec + 1 'puts data into file structure staff With Staff If IsNumeric(CurrentRow(0)) = False Then stopimport = True MsgBox("error with staff.csv") Exit Sub End If If Len(CurrentRow(2)) <> 3 Then stopimport = True MsgBox("error with staff.csv") Exit Sub End If .StaffNO = CurrentRow(0) 'forename and surname are saved in the same field on t parts = Split(CurrentRow(1), " ") .Surname = parts(1) .Forename = parts(0) .staffID = CurrentRow(2) If CurrentRow(3) = 0 Then .admin = False Else : .admin = True End If End With 'puts data in file structure staff into the staff dat file FilePut(FileNum, Staff, OnRec) End If </pre> 
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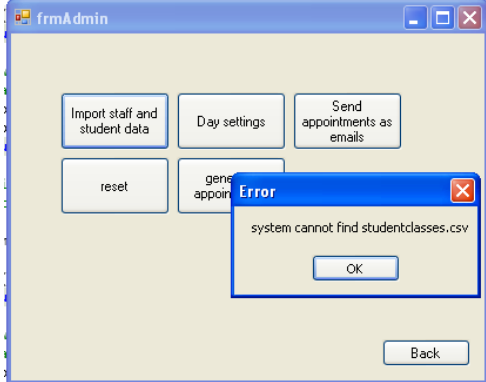
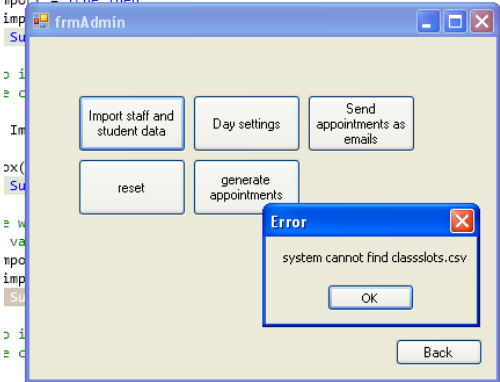
						<pre> Exit Sub End Try 'if there was no problems with the staff csv but there were 'and the variable stopimport will be set to true meaning it If stopimport = True Then stopimport = False Exit Sub End If 'tries to import students. if it fails then due to safety 'with the csv so it reports that and quits the subroutine Try Call ImportStudents() Catch MsgBox("system cannot find student.csv", , "Error") Exit Sub End Try CurrentRow = TextFileReader.ReadFields() If Not CurrentRow Is Nothing Then OnRec = OnRec + 1 'puts data into the student structure With student If IsNumeric(CurrentRow(0)) = False Then stopimport = True MsgBox("error with student.csv") Exit Sub End If If IsNumeric(CurrentRow(1)) = False Then stopimport = True MsgBox("error with student.csv") Exit Sub End If If IsNumeric(CurrentRow(4)) = False Then stopimport = True MsgBox("error with student.csv") Exit Sub End If .StudNO = CurrentRow(0) .StudID = CurrentRow(1) .Surname = CurrentRow(2) .Forename = CurrentRow(3) .Year = CurrentRow(4) End With 'puts data from the student structure into the student FilePut(FileNum, student, OnRec) End If </pre>
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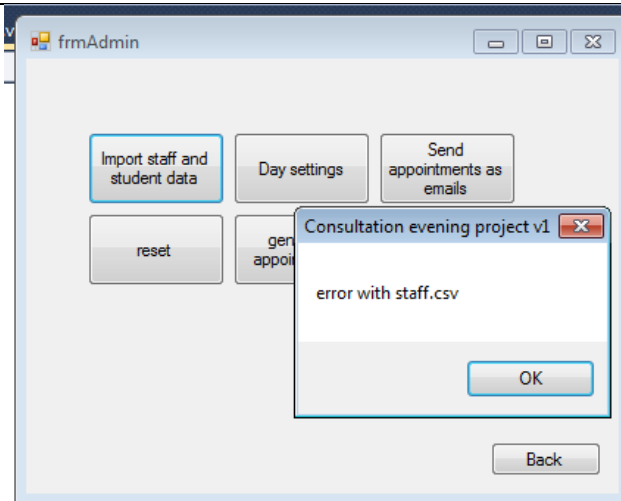
					<div data-bbox="1240 193 1688 557"></div> <pre data-bbox="1240 558 1778 774">If stopimport = True Then stopimport = False Exit Sub End If 'tries to inport student lesson information. if it failes then due 'with the csv so it reports that and quits the subroutine Try Call importLessonsStudent() Catch MsgBox("system cannot find studentclasses.csv", , "Error") Exit Sub End Try</pre>
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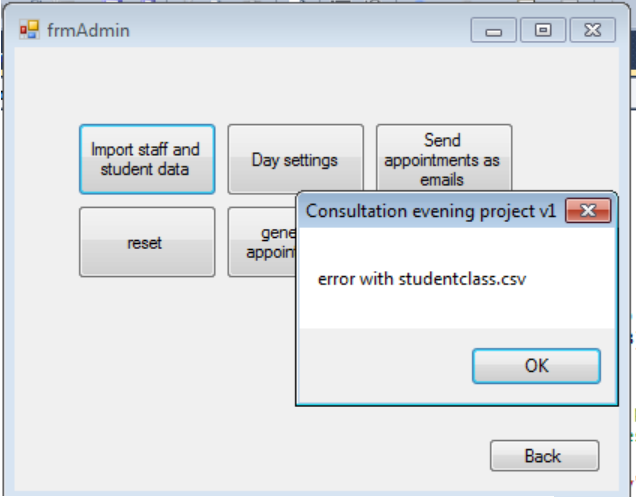
					<pre>FileOpen(FileNum, "lesson.dat", OpenMode.Random, OpenAccess. While Not TextFileReader.EndOfData Try CurrentRow = TextFileReader.ReadFields() If Not CurrentRow Is Nothing Then OnRec = OnRec + 1 'puts data into file structure staff With Lesson If IsNumeric(CurrentRow(1)) = False Then stopimport = True MsgBox("error with studentclass.csv") Exit Sub End If If IsNumeric(CurrentRow(0)) = False Then stopimport = True MsgBox("error with studentclass.csv") Exit Sub End If .LessonNO = OnRec .StaffNO = CurrentRow(1) .StudNO = CurrentRow(0) End With 'puts data in the lesson file structure into the FilePut(FileNum, Lesson, OnRec) End If Catch ex As _ Microsoft.VisualBasic.FileIO.MalformedLineException 'error in text sends error message and ends try MsgBox("Line " & ex.Message & "is not valid and will</pre> 
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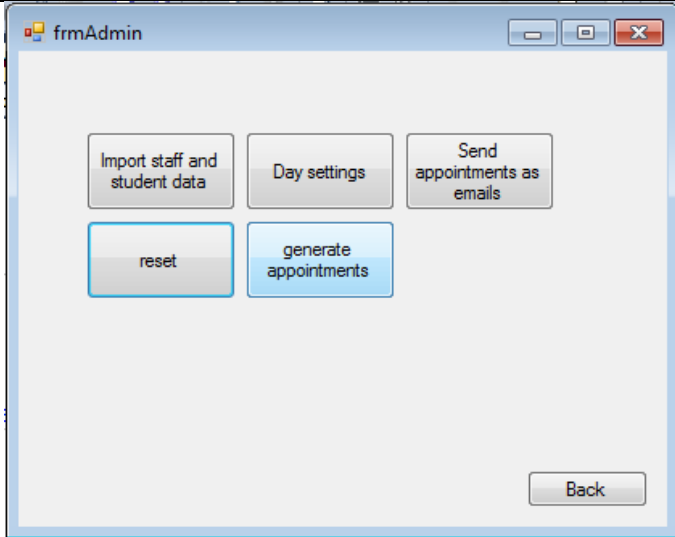
						<div><div><div><div><div><div><div>Appointments</div><div>DAT File</div><div>0 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Consultation evening project v1</div><div>Consultation evening project v1 Home</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Consultation evening project v1</div><div>XML Document</div><div>1 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Consultation evening project v1.vshost.exe.manifest</div><div>MANIFEST File</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>StaffAV</div><div>DAT File</div><div>0 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>StudentClass</div><div>Microsoft Excel Comma Separated Values File</div><div>70 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Tutor</div><div>Microsoft Excel Comma Separated Values File</div><div>3 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Lesson</div><div>DAT File</div><div>63 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>ClassSlots</div><div>Microsoft Excel Comma Separated Values File</div><div>20 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Consultation evening project v1.vshost.exe.manifest</div><div>PDB File</div><div>100 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Consultation evening project v1.vshost.exe</div><div>vshost32.exe</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Day</div><div>DAT File</div><div>1 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>StudAv</div><div>DAT File</div><div>0 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Students</div><div>Microsoft Excel Comma Separated Values File</div><div>39 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Staff</div><div>DAT File</div><div>5 KB</div></div></div><div><div></div><div></div><div></div></div></div></div><div><div><div><div><div><div>Student</div><div>DAT File</div><div>66 KB</div></div></div><div><div></div><div></div><div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>
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	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is no student file, or the name changed to simulate such an event	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file	Window opened showing that it had registered the error and what it was	 <pre> Call ImportStudents() Catch MsgBox("system cannot find student.csv", , "Error") Exit Sub End Try </pre> <p>'if there was no problems with the student csv but there we 'and the varialbe stonimport will be set to true meaning th</p>
	Import staff and student data button is clicked	Clicking on the import classSlots, studentnclass, staff and student file. With the only problem being that there is no staff file	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file	Window opened showing that it had registered the error and what it was	 <p>or no problems with the student csv but there were four u</p>

						<pre> with the csv so it reports that and quits the subroutine Try Call ImportStaff() Catch MsgBox("system cannot find staff.csv", , "Error") Exit Sub End Try 'if there was no problems with the staff csv but there w </pre>
	Import staff and student data button is clicked	Clicking on the import classSlots, studentclass, staff and student file. With the only problem being that there is no studentclass file	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file	Window opened showing that it had registered the error and what it was	 <pre> 'with the csv so it reports that and quits the subroutine Try Call importLessonsStudent() Catch MsgBox("system cannot find studentclasses.csv", , "Error") Exit Sub End Try 'if there was no problems with the studentclass csv but there wa </pre>
	Import staff and student data button is clicked	Clicking on the import classSlots, studentclass, staff and student file. With the only problem being that there is no classslotfile file	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	I will get a message telling me that there was an error and the system could not find the file	Window opened showing that it had registered the error and what it was	 <pre> import = True Then imp Su > i = C Im bx(Su = W va mpo imp Su > i = C importLessonsStudent() </pre>

				long	picked up.	
	Import staff and student data button is clicked	Clicking on the import classSlots, studetn class, staff and student file. This is a meta test, it will first be that there is a non numeric characters ("one") in the staffNO field in the csv, next forename surname or staffid are longer than the field(30 a's). And lastly that staffno is a value too large or too small(too large will be 1000000000000 and too small will be -1000000000000)	If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.	For all errors picked up I will get a message telling me that there was an error with the tutors.csv file. I expect the program to find errors with values that are too large and letters put into numeric variables and I reckon that it will truncate strings that are too long	The use of non numeric data for staffno caused an error which was picked up. Using too long a string caused truncation, using too large or too small a number for staffno again caused an error that was picked up.	 <pre> .Surname = parts(1) .Forename = parts(0) .staffID = CurrentRow(2) If CurrentRow(3) = 0 Then .admin = False Else : .admin = True End If Catch 'this is triggered if there was a problem with input 'it stops the importing and tells the user what has stopimport = True MsgBox("error with staff.csv") Exit Sub End Try With its data in file structure staff into the staff dat file Put(FileName Staff OnPer) 'if there was no problems with the staff csv but there 'and the variable stopimport will be set to true meani If stopimport = True Then stopimport = False Exit Sub End If 'tries to import students. if it fails then due to sa </pre>

	<p>Import staff and student data button is clicked</p>	<p>Clicking on the import classSlots, studentclass, staff and student file. This is a meta test, it will first test that the value being put into studNO then staffNO is non numeric ("six") then they will have values put in that are too large and too small (1000000000000 and -1000000000000)</p>	<p>If the import does not work then there will be none of the basic data that the whole system feeds off so none of it will work.</p>	<p>I will get a message telling me that there was an error with the staff.csv file. This will occur for each error picked up that would cause the program to crash. It will pick up on all of the proposed tests</p>	<p>For both the non numeric tests and the values that were too large and the values that were too small it was picked up and the program stopped and the error message was sent</p>	 <pre> .LessonNO = OnRec .StaffNO = CurrentRow(1) .StudNO = CurrentRow(0) Catch 'this is triggered if there was a problem with input 'it stops the importing and tells the user what has stopimport = True MsgBox("error with studentclass.csv") Exit Sub End Try 'End Try 'if there was no problems with the studentclass 'and the variable stopimport will be set to true If stopimport = True Then stopimport = False Exit Sub End If </pre>
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	Btnclicked	Btnclicked	If the button does not start the algorithm then no appointments will be created and the program will be impetant	It will hit a breakpoint I will stick inside the subroutine	The sorting algorithm was called	 <pre> Private Sub btnclick_Click(ByVal sender As 'calls the sorting algorithm which is sto Call TheSortingAlgorithm() End Sub End Class </pre>
	The sorting algorithm I run	The student and staff availability files with 10 students and 4 staff as a small scale experiment. There is no unviabe data that could be used due to the fact it has all been vetted to get to this point. Appointment length 5	If it works for small numbers it will work the same or large numbers, though there will be an increase in people without appointments unless the	The algorithm will generate a appointments for all the students in the system	The algorithm genearte d appointments for every one and follows the code as I had expected.	<pre> Public Sub TheSortingAlgorithm() Dim OnAppointment As Integer = 0 Dim lowerbound As Integer = 0 'for loop goes through every student For counter1 As Integer = 0 To Nstudents 'gets studnet information student = GetStudent(counter1) 'finds all the lessons with the student an For counter2 As Integer = 0 To Nlesson Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then Staff = GetStaff(counter2) </pre>

			number of appointments is increased.			<pre> For counter1 As Integer = 0 To NStudents 'gets student information student = GetStudent(counter1) 'finds all the lessons with the student and For counter2 As Integer = 0 To NLesson Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then Staff = GetStaff(counter2) 'for each students availability it looks 'finds all the lessons with the student and retrieves For counter2 As Integer = 0 To NLesson Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then Staff = GetStaff(counter2) 'for each students availability it looks for For counter3 As Integer = 0 To NStudAv StudAv = GetStudAV(counter3) If StudAv.StudNo = student.StudNO And Staff Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then Staff = GetStaff(counter2) 'for each students availability it looks for available For counter3 As Integer = 0 To NStudAv StudAv = GetStudAV(counter3) If StudAv.StudNo = student.StudNO And StudAv For counter4 As Integer = 0 To NStaffAv StaffAv = GetStaffAV(counter4) Staff = GetStaff(counter2) 'for each students availability it looks for available spot: For counter3 As Integer = 0 To NStudAv StudAv = GetStudAV(counter3) If StudAv.StudNo = student.StudNO And StudAv.available For counter4 As Integer = 0 To NStaffAv StaffAv = GetStaffAV(counter4) If StaffAv.StaffNO = Staff.StaffNO And StaffAv 'an appointment slot has been found for which 'the record for the appointment is populated </pre>
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						<pre> StaffAv = GetStaffAV(counter4) If StaffAv.StaffNO = Staff.StaffNO And StaffAv.Available = True 'an appointment slot has been found for which both the stud 'the record for the appointment is populated Appointment.AppointmentNO = OnAppointment Appointment.studNO = StudAv.StudNo Appointment.StaffNO = StaffAv.StaffNO Appointment.day = StudAv.DayNO Appointment.StaffNO = StudAv.Appointment Putappointment(Appointment, Appointment.AppointmentNO) 'handles block values for the student so as to make sure th , , Tf Appoinmentlength = 5 Then , , 'handles block va Appointment.StaffNO 0 as to r If Appointmentlength = 5 Then For counter5 As Integer = 0 To NStudAv studav2 = GetStudAV(counter5) 'checks if teh block value of the curren 'not in the same block and it needs to l If StudAv.Block = 21 And studav2.Block = studav2.Block = 0 studav2.available = False PutStudAv(studav2, studav2.studAVNO) 'checks if teh block value of the cu 'not in the same block and it needs ElseIf StudAv.Block = 20 And studav2.Blk studav2.Block = 0 studav2.available = False PutStudAv(studav2, studav2.studAVNO) End If </pre>
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						<pre> If Appointmentlength = 5 Then 'works out the first appointment of the half hour lowerbound = (studav2.Appointment \ 6) * 6 'checks if the studav is not already been set in the earlier chec If studav2.StudNo = student.StudNO And StudAv.Block <> 21 Or 20 T Select Case studav2.Appointment 'too early Case Is <= (lowerbound - 7) studav2.available = False studav2.Block = 0 'too late Case Is >= (lowerbound + 12) studav2.available = False studav2.Block = 0 'half hour early Case (lowerbound - 6) To (lowerbound - 1) studav2.Block = 20 'half hour later Case (lowerbound + 6) To (lowerbound + 11) studav2.Block = 21 'appointment before </pre>
	The sorting algorithm I run	The student and staff availability files with 10 students and 4 staff as a small scale experiment. There is no unviaible data that could be used due to the fact it has all been vetted to get to this point. Appointment length 10	If it works for small numbers it will work the same or large numbers, though there will be an increase in people without appointments unless the number of appointments is increased.	The algorithm will generate a appointments for all the students in the system	The algorithm genearte d appointments for every one and follows the code as I had expected.	<pre> Public Sub TheSortingAlgorithm() Dim OnAppointment As Integer = 0 Dim lowerbound As Integer = 0 'for loop goes through every student For counter1 As Integer = 0 To Nstudents 'gets studnet information student = GetStudent(counter1) 'finds all the lessons with the student an For counter2 As Integer = 0 To Nlesson Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then 'for each students availablity it low </pre>

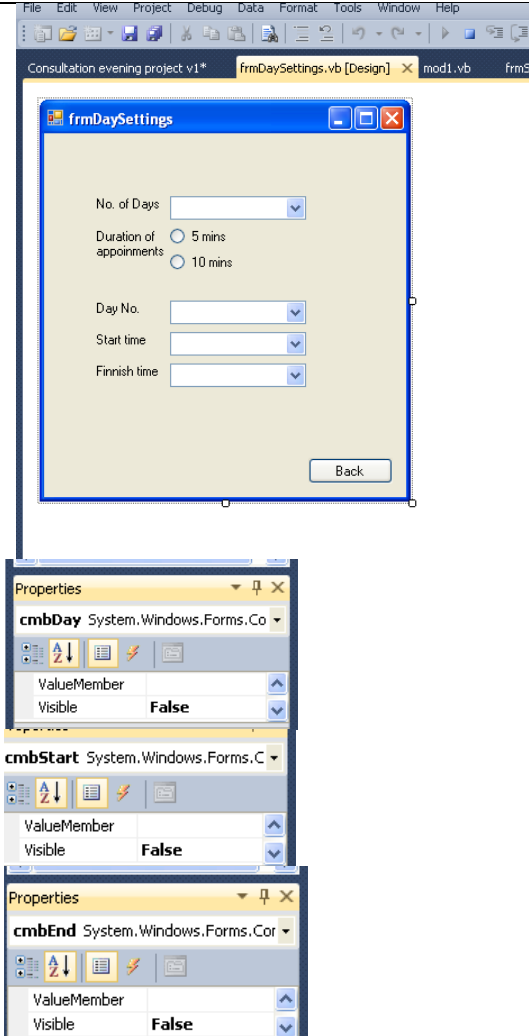
						<pre> 'finds all the lessons with the student and retives For counter2 As Integer = 0 To NLesson Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then Staff = GetStaff(counter2) 'for each students availablity it looks for For counter3 As Integer = 0 To NStudAv StudAv = GetStudAV(counter3) If StudAv.StudNo = student.StudNO And St Lesson = GetLesson(counter2) If Lesson.StudNO = student.StudNO Then Staff = GetStaff(counter2) 'for each students availablity it looks for aval For counter3 As Integer = 0 To NStudAv StudAv = GetStudAV(counter3) If StudAv.StudNo = student.StudNO And StudAv For counter4 As Integer = 0 To NStaffAv StaffAv = GetStaffAV(counter4) Staff = GetStaff(counter2) for each students availablity it looks for available spot: for counter3 As Integer = 0 To NStudAv StudAv = GetStudAV(counter3) If StudAv.StudNo = student.StudNO And StudAv.available For counter4 As Integer = 0 To NStaffAv StaffAv = GetStaffAV(counter4) If StaffAv.StaffNO = Staff.StaffNO And StaffAv. 'an appointment slot has been found for whi 'the record for the appointment is populat StaffAv = GetStaffAV(counter4) If StaffAv.StaffNO = Staff.StaffNO And StaffAv.Available = True 'an appointment slot has been found for which both the stud 'the record for the appointment is populated Appointment.AppointmentNO = OnAppointment Appointment.studNO = StudAv.StudNo Appointment.StaffNO = StaffAv.StaffNO Appointment.day = StudAv.DayNO Appointment.StaffNO = StudAv.Appointment Putappointment(Appointment, Appointment.AppointmentNO) 'handles block values for the student so as to make sure th If AppoinmentLength = 5 Then </pre>
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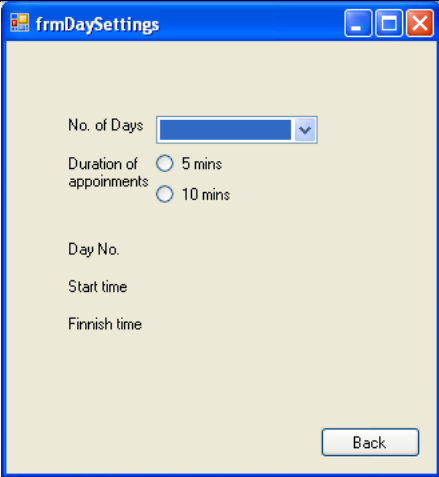
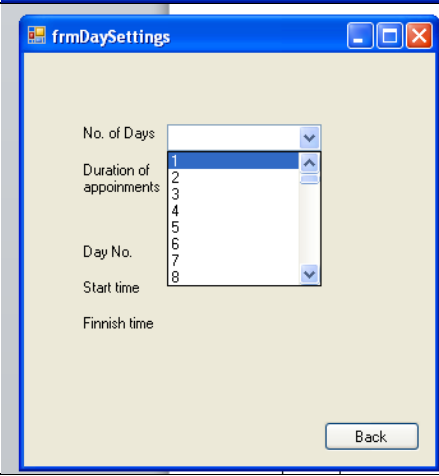
						<pre> Else 'handles 10 min cases For counter5 As Integer = 0 To NStudAv studav2 = GetStudAv(counter5) 'checks if teh block value of the curr 'not in the same block and it needs to If StudAv.Block = 20 And (studav2.Bloc studav2.Block = 0 studav2.available = False PutStudAv(studav2, studav2.studAVN 'checks if teh block value of the 'not in the same block and it need ElseIf StudAv.Block = 21 And studav2.B studav2.Block = 0 studav2.available = False PutStudAv(studav2, studav2.studAVN 'checks if teh block value of the 'works out the first appointment of the half hour lowerbound = (studav2.Appointment \ 6) * 6 'checks if the studav is not already been set in If studav2.StudNo = student.StudNO And StudAv.Blo Select Case studav2.Appointment 'too early Case Is <= (lowerbound - 13) studav2.available = False studav2.Block = 0 'too late Case Is >= (lowerbound + 18) studav2.available = False studav2.Block = 0 'half hour early Case (lowerbound - 6) To (lowerbound - 1) studav2.Block = 21 'half hour later Case (lowerbound + 6) To (lowerbound + 11 studav2.Block = 22 </pre>
	Clicking btnemail	Clicking btnemail and for the purposes of this test I will be	If this does not work then there is no way for	I will expect to recive an email at	The code followed the path expected	<pre> Private Sub btnEmail_Click(ByVal sender As System.Object, ByVal e 'calls the email algortim Call sendemailsparti() End Sub rd Class </pre>

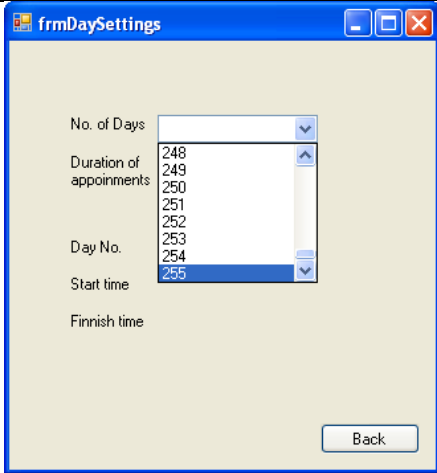
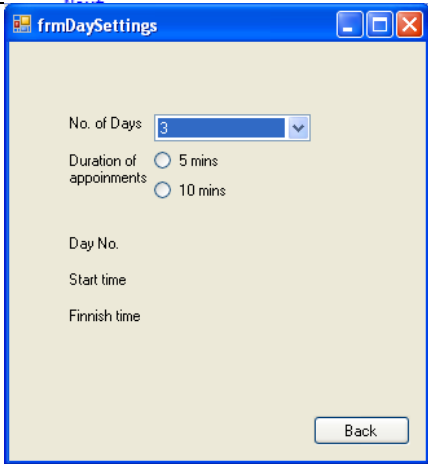
		changing the email address to @ssfc.ac.uk instead because I don't have access to the other domains email's. and I will be just using the student simon bellows	anyone to find out what their appointments are.	112544@ssfc.ac.uk detailing appointments of simon bellows	and sent me a set of emails exactly as I expected.	<pre> Recipient = student.StudID + @ssfc.ac.uk 'puts the initial greeting for the email and clears the old message body = "Dear " & student.Forename & " " & student.Surname & vbNewLine & vbNewLine 'finds each appointment of the student For counter2 As Integer = 1 To NAppointment If Appointment.StudNO = student.StudNO Then 'gets the name of the member of staff the appointment is with Staff = GetStaff(Appointment.StaffNO) 'puts in the details of the appointment into the email body = body & Staff.Forename & " " & Staff.Surname & "" & militarytime(Appoi End If Next 'puts the sign off of the email into the text body = body & vbNewLine & "thank you very much" & vbNewLine & "simon bellows" & vbNewLine 'calls the routine to send the email Call SendEmails2("sim.bellows@gmail.com", subject, body, username, password, recipie Next 'loop that cycles through each staff member so each gets an email For counter1 As Integer = 1 To Nstaff 'loads current staff members details Staff = GetStaff(counter1) body = body & Staff.Forename & " " & Staff.Surname & "" & militarytime(Appointment End If Next 'puts the sign off of the email into the text body = body & vbNewLine & "thank you very much" & vbNewLine & "simon bellows" & vbNewLine 'calls the routine to send the email Call SendEmails2("sim.bellows@gmail.com", subject, body, username, password, recipient) Next 'loop that cycles through each staff member so each gets an email For counter1 As Integer = 1 To Nstaff 'loads current staff members details Staff = GetStaff(counter1) 'generates the staff school email </pre>
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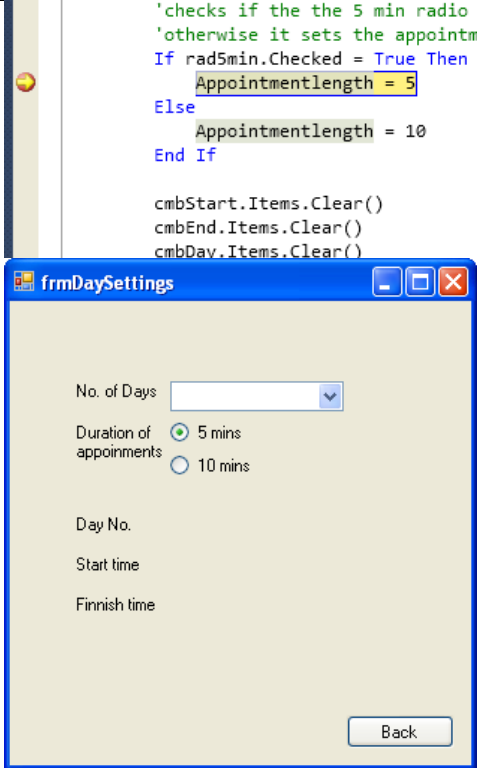
						<pre> Email.To.Add(Recipient) Next 'adds subject body and server, host and such information Email.Subject = Subject Email.Body = Body SMTPServer.Host = Server SMTPServer.Port = Port SMTPServer.Credentials = New System.Net.NetworkCredential SMTPServer.EnableSsl = True 'sends it SMTPServer.Send(Email) 'clears it Email.Dispose() 'notification if smtp failed Catch ex As SmtpException Email.Dispose() MsgBox("Sending Email Failed. Smt Error.") 'notification if portnumber was wrong Catch ex As ArgumentOutOfRangeException Email.Dispose() MsgBox("Sending Email Failed. Check Port Number.") 'notification if portnumber is wrong Catch Ex As InvalidOperationException Email.Dispose() MsgBox("Sending Email Failed. Check Port Number.") End Try 'puts the initial greeting for the email and clears the old message body = "Dear " & Staff.Forename & " " & Staff.Surname & vbNewLine & vbNewLine 'finds each appointment of the staff member For counter2 As Integer = 1 To NAppointment If Appointment.StaffNO = Staff.StaffNO Then 'gets the name of the student the appointment is with student = GetStudent(Appointment.studNO) 'puts in the details of the appointment into the email body = body & student.Forename & " " & student.Surname & "" & mi End If Next 'puts the sign off of the email into the message body = body & vbNewLine & "thank you very much" & vbNewLine & "simon bellows" End If Next 'puts the sign off of the email into the message body = body & vbNewLine & "thank you very much" & vbNewLine & "simon bellows" & vbNewLine & vbNewLine 'calls the routine to send the email Call SendEmails2("sim.bellows@gmail.com", subject, body, username, password, recipient) Next End Sub Public Sub SendEmails2(ByVal FromAddress As String, _ </pre>
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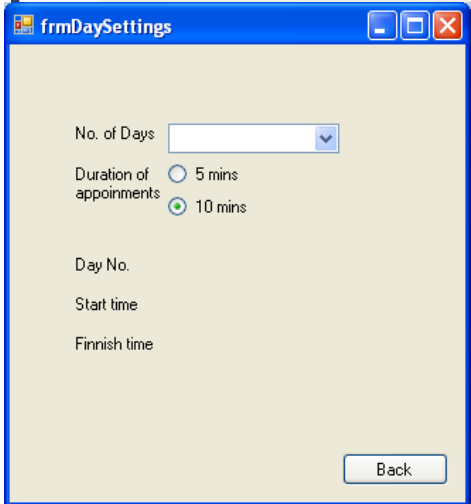
						<pre> Email.To.Add(Recipient) Next 'adds subject body and server, host and such information Email.Subject = Subject Email.Body = Body SMTPServer.Host = Server SMTPServer.Port = Port SMTPServer.Credentials = New System.Net.NetworkCredential SMTPServer.EnableSsl = True 'sends it SMTPServer.Send(Email) 'clears it Email.Dispose() 'notification if smtp failed Catch ex As SmtpException Email.Dispose() MsgBox("Sending Email Failed. Smt Error.") 'notification if portnumber owas wrong Catch ex As ArgumentOutOfRangeException Email.Dispose() MsgBox("Sending Email Failed. Check Port Number.") 'notification if portnumber is wrong Catch Ex As InvalidOperationException Email.Dispose() MsgBox("Sending Email Failed. Check Port Number.") End Try </pre> <hr/> <p>Dear Simon Bellows</p> <p>Tony Pyle 1835 day 2 Luke Skywalker 1845 day 2 Biggs Darkdighter 1855 day 2</p> <p>Thank you very much simon bellows Deputy head</p>
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frmDaySettings						
Test No	event	Test data	Reason for test	Expected outcome	outcome	screenshots
1	Form loads	The form loads	When the form loads the neither the number of days or the length of appointments are decided ergo one can not set the times for the days so they should be invisible	Cmbstart, cmbday and cmbend will be invisible		

						
2	Form loads	The form loads	Cmbndays should be filled with the numbers 1 to 255 days for the user to select as the number of days	The combobox will contain the numbers from 1 to 255		

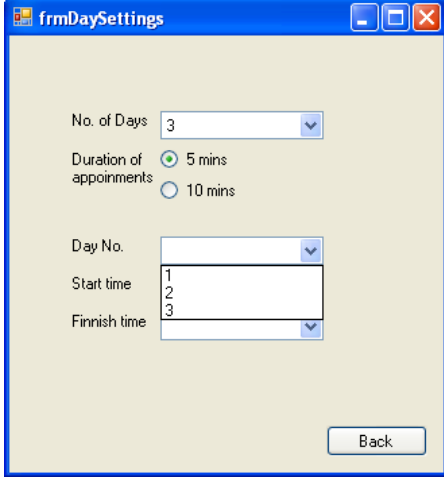
						 <pre> End Sub Private Sub frmDaySettings_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load 'populates the dropdown combobox with numbers 1 to 255 For counter As Integer = 1 To 255 cmbNdays.Items.Add(counter) Next End Sub </pre>
3	Ndays is changed But appointment length is not set	The combo box ndays is changed to 3 days	When the ndays combo box changes its value the combo box need to display it and the variable ndays needs to register it	Ndays will be 3 The selected item in the combobox will be 3	Cmbndays was 3 and the variable was ndays	

						<pre> Private Sub cmbNdays_SelectedIndexChanged(ByVal sender As Sy 'records the number of dayz NDay = cmbNdays.SelectedItem cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() </pre>
4	Rad5min is selected and ndays is not set yet	Rad5min is selected	When rad5min is selected the variable appointmentl ength needs to regeister it	Appoinmen tlength will equal 5	Appointm ent length was set to 5 and 5 min radio button was selected	<pre> 'checks if the the 5 min radio button is 'otherwise it sets the appointment lengt If rad5min.Checked = True Then Appointmentlength = 5 Else Appointmentlength = 10 End If cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() </pre> 

5	Rad10min is selected and ndays is not set yet	Rad10min is selected	When rad10min is selected the variable appointmentlength needs to register it	Appointmentlength will equal 10	Appointment length was set to 10 and 10 min radio button was selected	<pre>'records the new value of appointment length and check: Appointmentlength = 10 cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next</pre> 
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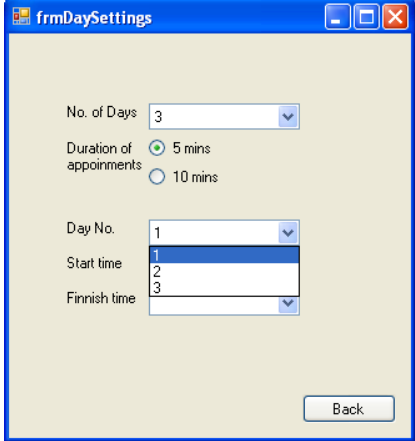
6	Rad5min is selected after ndays is set to 3	Rad5min is selected after ndays is set to 3	When rad5min is selected the variable appointmentlength needs to be registered and because there is an ndays set it has to make cmbend, cmbstart, and cmbday visible and populated	Appointmentlength will equal 5 ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated	Appointmentlength was set to 5 and Ndays was set to 3 which caused second half to be called. And caused cmbend, cmbstart, and cmbday visible and populated	<pre> Public Class frmDaySettings 'used in the time selecting subroutines Public change As Boolean = False Public change1 As Boolean = False Private Sub rad5min_CheckedChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles rad5min.CheckedChanged 'checks if the the 5 min radio button 'otherwise it sets the appointment length If rad5min.Checked = True Then Appointmentlength = 5 Else Appointmentlength = 10 End If cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() End Sub End Class Public Sub secondhalf() 'sub to check if the appointment length and day numbers have been chosen 'day.dat file If NDay <> -1 And Appointmentlength <> -1 Then For counter As Integer = 1 To NDay Day.DayNO = counter Day.Start = 0 Day.finish = 288 Putday(Day, counter) Next Else Exit Sub End If cmbDay.Visible = True cmbStart.Visible = True cmbEnd.Visible = True 'populates the day selector combo box with each of the days cmbDay.Items.Clear() For counter = 1 To NDay cmbDay.Items.Add(counter) Next End Sub </pre>
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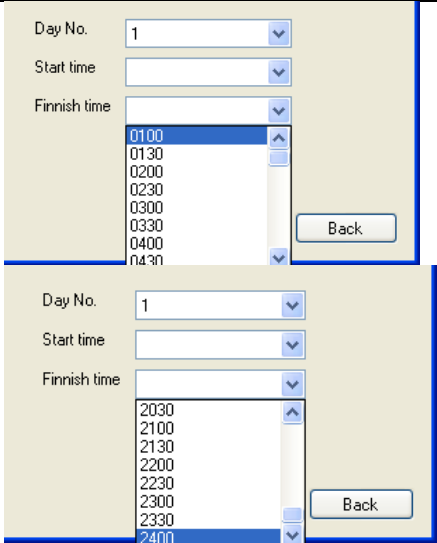
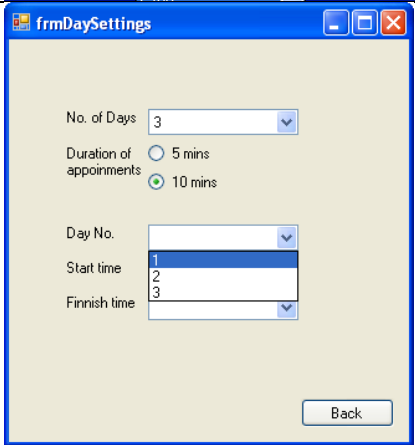
					<pre>Public Sub secondhalf() 'sub to check if the appointment length and day nu 'day.dat file If NDay <> -1 And Appointmentlength <> -1 Then For counter As Integer = 1 To NDay Day.DayNO = counter Day.Start = 0 Day.finish = 288 Putday(Day, counter) Next Else Exit Sub End If cmbDay.Visible = True cmbStart.Visible = True cmbEnd.Visible = True 'populates the day selector combo box with each of cmbDay.Items.Clear() For counter = 1 To NDay cmbDay.Items.Add(counter) Next</pre> <div><div>frmDaySettings</div><div><div>No. of Days</div><div>3</div></div><div><div>Duration of appointments</div><div><input checked="" type="radio"/> 5 mins</div><div><input type="radio"/> 10 mins</div></div><div><div>Day No.</div><div></div></div><div><div>Start time</div><div></div></div><div><div>Finnish time</div><div></div></div><div>Back</div></div>
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7	Rad10min is selected after ndays is set to 3	Rad10min is selected after ndays is set to 3	When rad10min is selected the variable appointmentlength needs to be registered and because there is an ndays set it has to make cmbend, cmbstart, and cmbday visible and populated	Appointmentlength will be 3 and cmbend, cmbstart, and cmbday is populated	Appointmentlength was set to 10 and Ndays was set to 3 which caused second half to be called. And caused cmbend, cmbstart, and cmbday visible and populated	<pre> Private Sub rad10min_CheckedChanged(ByVal sender As System.Object, ByVal e As EventArgs) Handles rad10min.CheckedChanged 'records the new value of appointment length and checks if it is 10 Appointmentlength = 10 cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() End Sub </pre>

					to be populated	
8	Rad5min is selected then ndays is set to 3	Rad5min is selected then ndays is set to 3	When rad5min is selected the variable appointment length needs to regeister it and then ndays set to 3 so cmbend, cmbstart, and cmbday visible and cmbday is populated	Appoinment length will equal 5 ndays will be 3 and cmbend, cmbstart, and cmbday visible and cmbday is populated	Appointment length was set to 5 then Ndays was set to 3 which caused second half to be called. And caused cmbend, cmbstart, and cmbday visible and cmbday to be populated	<pre> Private Sub cmbNdays_SelectedIndexChanged(ByVal sender As Sys 'records the number of dayz NDay = cmbNdays.SelectedItem cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() </pre>

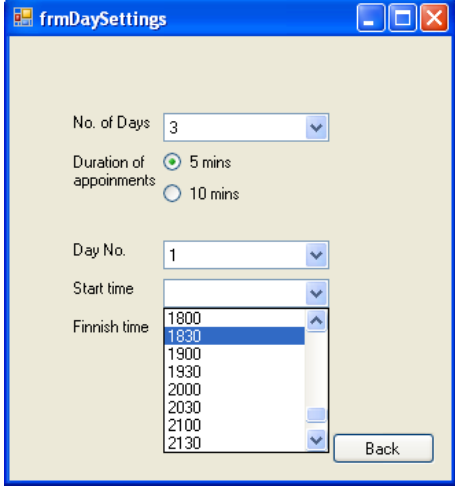
9	Rad10min is selected then ndays is set to 3	Rad10min is selected then ndays is set to 3	When rad10min is selected the variable appointmentlength needs to register it and then ndays set to 3 so cmbend, cmbstart, and cmbday visible and cmbday is populated	Appointmentlength will equal 10 ndays will be 3 and cmbend, cmbstart, and cmbday visible and cmbday is populated	Appointmentlength was set to 10 then Ndays was set to 3 which caused second half to be called. And caused cmbend, cmbstart, and cmbday visible and cmbday to be populated	<pre> Private Sub cmbNdays_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles cmbNdays.SelectedIndexChanged 'records the number of days NDay = cmbNdays.SelectedItem cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() </pre>
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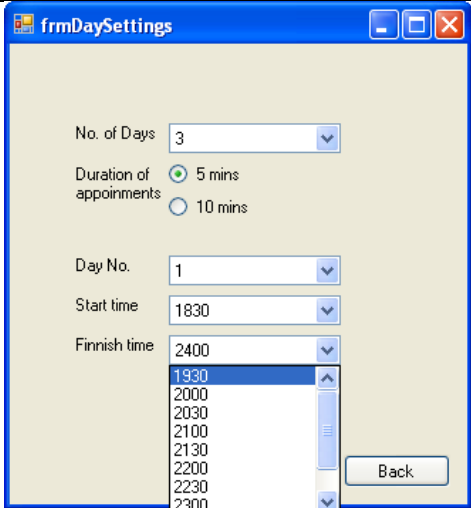
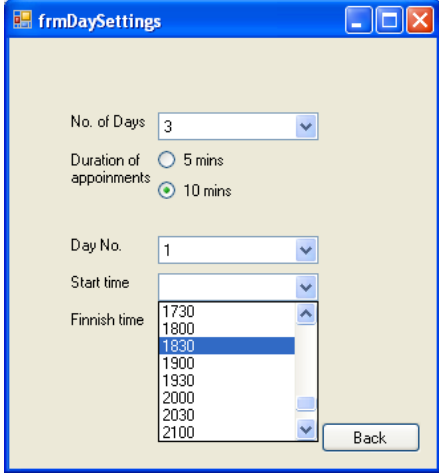
10	Rad5min is selected then ndays is set to 3 Then cmbday is set to 1	Rad5min is selected then ndays is set to 3 Then cmbday is set to 1	When a day is selected then the options for the start and finish times must populate so they may be set	Cmbstart will be populated with times in the military fashion 5 mins apart from 0000 to 2300 Cmbend will be populated the same way from 0100 to 2400	<p>Cmbstart was populated with times from 0000 to 2300 and Cmbend was populated from 0100 to 2400 in 5 min intervals</p>  <pre> Private Sub cmbDay_SelectedIndexChanged(ByVal sender As Object, ByVal e As EventArgs) Handles cmbDay.SelectedIndexChanged Call populateStartEndDaySettings() End Sub Private Sub cmbStart_SelectedIndexChanged(ByVal sender As Object, ByVal e As EventArgs) Handles cmbStart.SelectedIndexChanged Public Sub populateStartEndDaySettings() 'populates cmbstart with the times at the required appointment length apart Dim ampm As String = "" Day = GetDay(frmDaySettings.cmbDay.SelectedItem) If AppointmentLength = 5 Then 'populates cmbstart with 5 min appointments slots For counter As Integer = 0 To (Day.finish - 12) Step 6 'each slot contained between the beginin and the finsish time is conv 'military style time frmDaySettings.cmbStart.Items.Add(militarytime(counter)) Next 'populates the cmbEnd list with the available times For counter As Integer = (Day.Start + 12) To 288 Step 6 'each slot contained between the beginin and the finsish time is conv 'military style time frmDaySettings.cmbEnd.Items.Add(militarytime(counter)) Next Else 'populates cmbstart with 10 min appointments slots For counter As Integer = 0 To (Day.finish - 18) Step 6 </pre>
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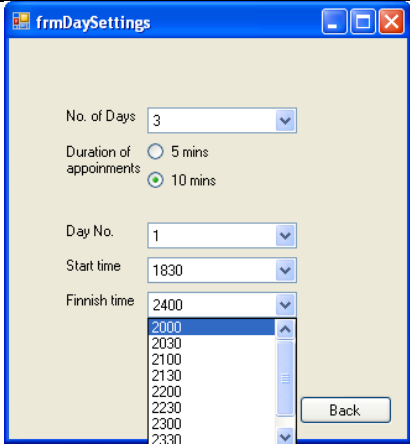
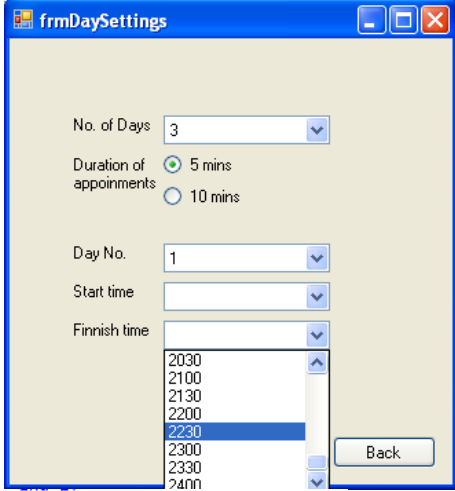
						
11	Rad10min is selected then ndays is set to 3 Then cmbday is set to 1	Rad10min is selected then ndays is set to 3 Then cmbday is set to 1	When a day is selected then the options for the start and finnish tiems must populate so they may be set	Cmbstart will be populated with times in the military fassion 10 mins apart from 0000 to 2230 Cmbend will be populated the same way from 0130 to 2400	Cmbstart was populated with times from 0000 to 2230 and Cmbend was populated from 0130 to 2400 in 10 min intervals	 <pre> Private Sub cmbDay_SelectedIndexChanged(ByVal Call populateStartEndDaySettings() End Sub Private Sub cmbStart_SelectedIndexChanged(ByVal </pre>

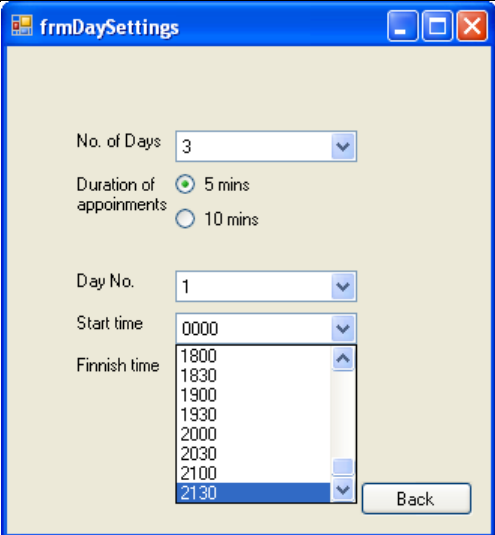
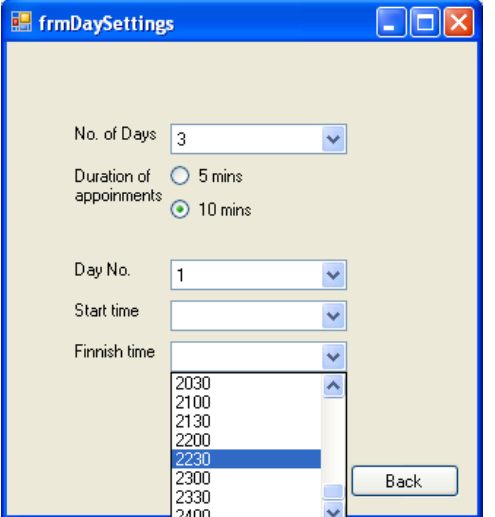
					<pre>'military style time frmDaySettings.cmbEnd.Items.Add(militarytime(counter)) Next Else 'populates cmbstart with 10 min appointments slots For counter As Integer = 0 To (Day.finish - 18) Step 6 'each slot contained between the beginin and the finish time 'military style time frmDaySettings.cmbStart.Items.Add(militarytime(counter)) Next 'populates the cmbEnd list with the available times For counter As Integer = (Day.Start + 18) To 288 Step 6 'each slot contained between the beginin and the finish time 'military style time frmDaySettings.cmbEnd.Items.Add(militarytime(counter)) Next Next Else 'populates cmbstart with 10 min appointments slots For counter As Integer = 0 To (Day.finish - 18) Step 6 'each slot contained between the beginin and the finish time i 'military style time frmDaySettings.cmbStart.Items.Add(militarytime(counter)) Next 'populates the cmbEnd list with the available times For counter As Integer = (Day.Start + 18) To 288 Step 6 'each slot contained between the beginin and the finish time i 'military style time frmDaySettings.cmbEnd.Items.Add(militarytime(counter)) Next Next End If</pre> <div><div>Day No.</div><div>1</div><div>Start time</div><div></div><div>Finnish time</div><div>0000 0030 0100 0130 0200 0230 0300 0330</div><div>Back</div></div>
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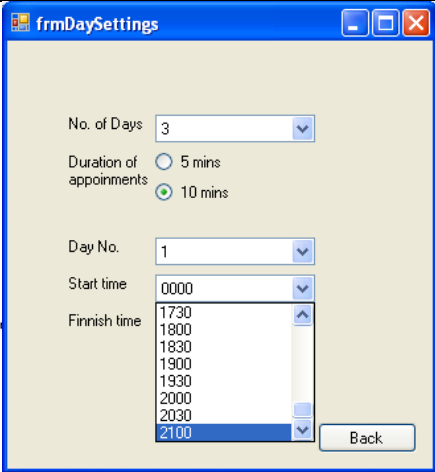
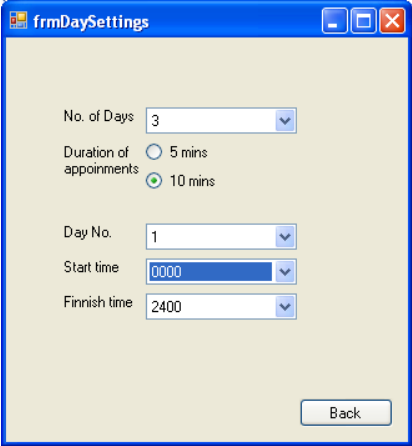
						<div><div>Day No. 1</div><div>Start time</div><div>Finnish time</div><div>1900</div><div>1930</div><div>2000</div><div>2030</div><div>2100</div><div>2130</div><div>2200</div><div>2230</div><div>Back</div></div> <div><div>Day No. 1</div><div>Start time</div><div>Finnish time</div><div>0130</div><div>0200</div><div>0230</div><div>0300</div><div>0330</div><div>0400</div><div>0430</div><div>0500</div><div>Back</div></div> <div><div>Day No. 1</div><div>Start time</div><div>Finnish time</div><div>2030</div><div>2100</div><div>2130</div><div>2200</div><div>2230</div><div>2300</div><div>2330</div><div>2400</div><div>Back</div></div>
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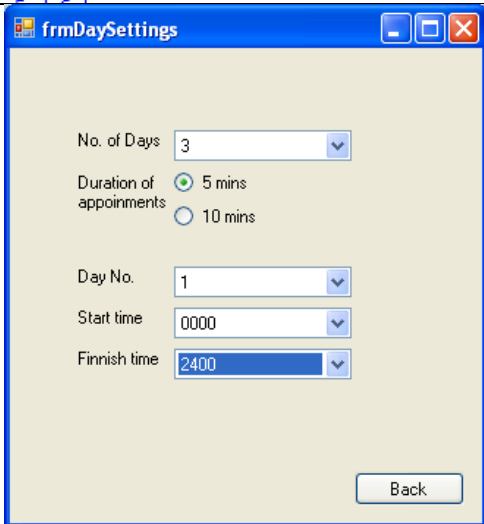
12	Appointment length selected is 5 ndays is 3 and the day is set to 1 and start time is changed to 6:30pm	Appointment length selected is 5 ndays is 3 and the day is set to 1 and start time is changed to 6:30pm	For 5 min appointment the there must be at least an hour of them and the finish time may not be before the start time	Day 1's start time will be set and stored as 222 and cmbfinnish will now be populated at 1930 to 2400	The start time was stored as described and the cmbfinnish was populated as described	 <pre> End If Day.Start = (hours * 12) + minuets Day.DayNO = Day.Start / 222 Putday(Day, Day.DayNO) cmbEnd.Items.Clear() cmbStart.Items.Clear() Call populateStartEndDaySettings() change = True </pre>
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13	Appointment length selected is 10 ndays is 3 and the day is set to 1 and start time is changed to 6:30pm	Appointment length selected is 10 ndays is 3 and the day is set to 1 and start time is changed to 6:30pm	For 10 min appointment the there must be at least an hour and a half of them and the finish time may not be before the start time	Day 1's start time will be set and stored as 222 and cmbfinnish will now be populated at 2000 to 2400	The start time was stored as described and the cmbfinnish was populated as described	 <pre> End If Day.Start = (hours * 12) + minuets Day.DayNo = Day.Start / 222 Putday(Day, Day.DayNO) cmbEnd.Items.Clear() cmbStart.Items.Clear() Call populateStartEndDaySettings() change = True </pre>

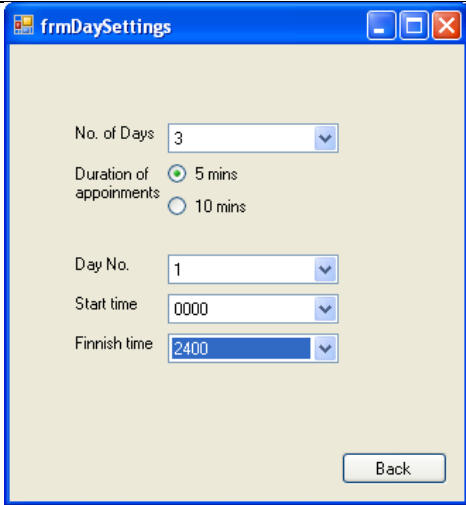
						
14	Appointment length selected is 5 ndays is 3 and the day is set to 1 and finnnish time is changed to 10:30pm	Appointment length selected is 5 ndays is 3 and the day is set to 1 and finish time is changed to 10:30pm	For 5 min appointment the there must be at least an hour of them and the finish time may not be before the start time	Day 1's finish time will be set and stored as 270 and cmbstart will now be populated at 0000 to 2130	The finish time was stored as described and the cmbstart was populated as described	 <pre> Day.finish = (hours * 12) + minu Day.Day Day.finish 270 Putday(Day, Day.DayNO) cmbEnd.Items.Clear() cmbStart.Items.Clear() Call populateStartEndDaySettings change = True </pre>

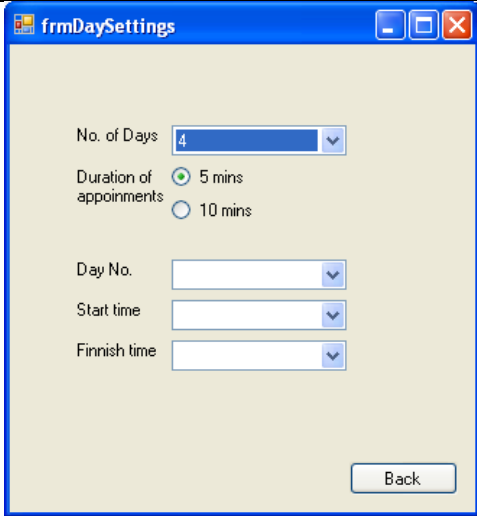
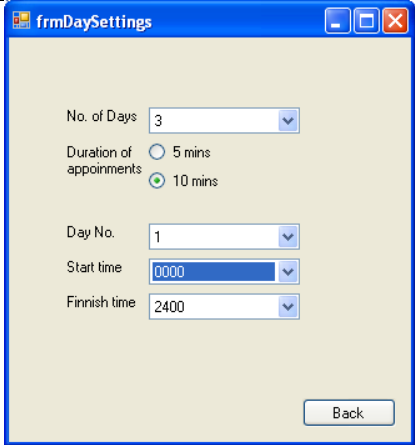
						
15	Appointment length selected is 10 ndays is 3 and the day is set to 1 and finnnish time is changed to 10:30pm	Appointment length selected is 10 ndays is 3 and the day is set to 1 and finish time is changed to 10:30pm	For 10 min appointment the there must be at least an hour and a half of them and the finish time may not be before the start time	Day 1's finish time will be set and stored as 270 and cmbstart will now be populated at 0000 to 2100	The finish time was stored as described and the cmbstart was populated as described	

						 <pre> Day.finish = (hours * 12) + minutes Day.Day Day.finish 270 Putday(Day, Day.DayNO) cmbEnd.Items.Clear() cmbStart.Items.Clear() Call populateStartEndDaySettings change = True </pre>
16	Rad5min is selected when ndays = 3, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	Rad5min is selected when ndays = 3, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When appointment length is changed the values below may not be relevant and therefore are reset if not they might be values that are impossible	Rad5min will be set and ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected		

						<pre> cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() </pre>
17	Rad10min is selected when ndays = 3, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	Rad10min is selected when ndays = 3, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When appointment length is changed the values below may not be relevant and therefore are reset if not they might be values that are impossible	Rad10min will be set and ndays will be 3 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected		

					<pre>cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf()</pre> <div data-bbox="1243 837 1704 1343"><p>frmDaySettings</p><p>No. of Days <input type="text" value="3"/></p><p>Duration of appointments <input type="radio"/> 5 mins <input checked="" type="radio"/> 10 mins</p><p>Day No. <input type="text"/></p><p>Start time <input type="text"/></p><p>Finnish time <input type="text"/></p><p>Back</p></div>
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18	ndays is changed from 3 to 4, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	ndays changed from 3 to 4, rad5min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1	When the number of days is changed due to the fact that in some situations if the cmb boxes were left as is there could be issues it is easier to just change them all and the test is to check whether it does	ndays will be set to 4 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected	 <pre> cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() cmbStart.Items.Clear() cmbEnd.Items.Clear() cmbDay.Items.Clear() For counter As Integer = 1 To NDay Day.DayNO = counter Day.finish = 288 Day.Start = 0 Putday(Day, Day.DayNO) Next Call secondhalf() </pre>
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19	<p>ndays is changed from 3 to 4, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1</p>	<p>Ndays is changed from 3 to 4, rad10min is set and cmbend is set to 2400 and cmbstart is set to 0000 and cmb day is set to 1</p>	<p>When the number of days is changed due to the fact that in some situations if the cmb boxes were left as is there could be issues it is easier to just change them all and the test is to check whether it does</p>	<p>ndays will be set to 4 and cmbend, cmbstart, and cmbday visible and populated but no values will be selected</p>		

```

cmbStart.Items.Clear()
cmbEnd.Items.Clear()
cmbDay.Items.Clear()
For counter As Integer = 1 To NDay
    Day.DayNO = counter
    Day.finish = 288
    Day.Start = 0
    Putday(Day, Day.DayNO)
Next

Call secondhalf()
End Sub

cmbStart.Items.Clear()
cmbEnd.Items.Clear()
cmbDay.Items.Clear()
For counter As Integer = 1 To NDay
    Day.DayNO = counter
    Day.finish = 288
    Day.Start = 0
    Putday(Day, Day.DayNO)
Next

Call secondhalf()
End Sub

```

frmDaySettings

No. of Days: 4

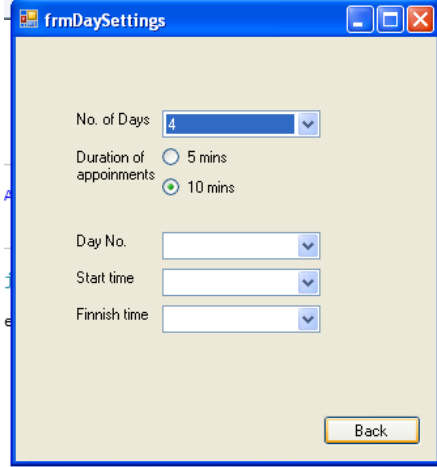
Duration of appointments: ☐ 5 mins ☒ 10 mins

Day No.: [dropdown]

Start time: [dropdown]

Finnish time: [dropdown]

Back

20	Btnback clicked	Btnback clicked	The user must be able to leave the form or they will be stuck there until they use taskmanager to end the form which would likely be impossible unless the admin of the consultation evening program is that of the school.	The day settings form will close and the admin form will open.	 <pre> End Sub Private Sub btnBack_Click(ByVal sender As S Me.Close() End Sub </pre>
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