

Testing

Test Plan

Function testing: Testing a specific function

System testing: Testing the system/multiple functions working together

Valid data: Expected data

Invalid data: Unexpected data

Extreme data: On the outer edge of expected data

Test Num.	Form/ Module	Type of test	Description
1	Login	Function	Test with no ID, no password, and neither
2		Function	Test with valid ID and password
3		Function	Test with invalid ID, invalid password, and both invalid
4		Function	Test "Forgot Password" with no ID and after ID has been entered
5		Function	Test that clue shows up after 3 failed login attempts with invalid ID and with valid ID
6		Function	Test that cancel button works
7	Admin Menu	Function	Test that all buttons open correct forms and that the logout button works
8		Function	Test that the stock check button shows all equipment below their individual stock levels
9		Function	Test that the equipment test check button shows all the equipment that requires testing
10	Staff Menu	Function	Test that all buttons open correct forms and that the logout button works
11		Function	Test that the stock check button shows all equipment below their individual stock levels
12		Function	Test that the "My Data" button shows the logged-on staff member's data
13	Adding Customer	Function	Test "Generate ID" button with no entered values within the textboxes
14		Function	Test "Title" textbox with valid, invalid, and no values
15		Function	Test "First Name" with valid and no values
16		Function	Test "Surname" with valid and no values

17		Function	Test "1st Address Line" with valid and no values
18		Function	Test "2nd Address Line" with valid and no values
19		Function	Test "Postcode" with valid and no values
20		Function	Test "Town/City" with valid and no values
21		Function	Test "Phone Number" with letters, string of length <11, string of length = 11, string of length > 11
22		Function	Test "Email" with valid format, invalid format, and no values
23		Function	Test "DoB" with valid, extreme, and invalid (i.e. unchanged and after today) values
24		System	Test that "Generate ID" button works after some/all the appropriate textboxes have been filled
25		System	Test saving without a generated ID

26	Adding Customer	System	Test that "Save" shows a confirmation message and saves the data to the customer text file in the alphabetically correct position
27		System	Test that the first name and surname are saved with correct capitalisation
28		Function	Test that "Clear" works with none, some (e.g. ID, DoB, email, etc.), and all values
29		Function	Test that "Quit" closes the form
30	Adding Equipment	Function	Test "Generate ID" button works appropriately
31		Function	Test "Name" with none, valid, and invalid values
32		Function	Test "Amount in stock" with none, valid, extreme, and invalid (out of range or non-integer) values
33		Function	Test "Reorder stock level" with none, valid, extreme, and invalid (out of range or non-integer) values
34		Function	Test "Reorder quantity" with none, valid, extreme, and invalid (out of range or non-integer) values
35		Function	Test "Last Test Date" with valid, extreme, and invalid (i.e. unchanged or after today) values
36		Function	Test "Next Test Date" with valid, extreme, and invalid (i.e. unchanged or before today) values
37		Function	Test "Tested By" with valid and no values
38		System	Test saving without a generated ID
39		System	Test that "Save" shows a confirmation message and saves the data to the equipment text file in the alphabetically correct position
40		Function	Test that "Clear" clears and resets values
41		Function	Test that "Quit" closes the form

42	Adding Staff	Function	Test "Generate ID" button with no entered values within the textboxes
43		Function	Test "Title" textbox with valid, invalid, and no values
44		Function	Test "First Name" with valid and no values
45		Function	Test "Surname" with valid and no values
46		Function	Test the address part with valid, none, and some missing values
47		Function	Test "Phone Number" with letters, string of length <11, string of length = 11, string of length > 11
48		Function	Test "Email" with valid format, invalid format, and no values
49		Function	Test "Speciality" with none and valid values
50		Function	Test "Staff Type" with none, valid, and invalid values
51		Function	Test "Password" with none, valid, and invalid values
52		Function	Test "Clue" with none, valid and invalid values
53		System	Test saving without a generated ID
54		System	Test that "Save" shows a confirmation message and saves the staff data to the staff text file in the alphabetically correct position
55		System	Test that "Save" saves the password data to the password text file and creates an appropriate password ID
56		Function	Test that "Clear" clears and resets the values
57	Calculating Payroll	Function	Test that once drop down list values are selected then the staff members data for that month is loaded
58		System	Test "Generate Payroll Slip" with no entered values, only no month selected, and only no pay rate selected
59		System	Test "Generate Payroll Slip" with invalid values where the payroll slip already exists
60		System	Test "Generate Payroll Slip" with valid values and that it amends the Masterfile and also creates and opens a new text file for the individual payroll slip
61	Creating Invoice	Function	Test "Generate Invoice" with no value
62		System	Test "Generate Invoice" with valid booking ID, that a confirmation message appears and that the data is saved to the invoice Masterfile and an individual invoice is created and displayed

63	Customer Logs	Function	Test "Search" with no entered customer ID, no selected dates, only the min date, only the max date, and both dates
64	My Bookings Today	Function	Test that when the form is loaded, the bookings of the logged-on worker are displayed or a message is showed if there are no bookings
65	Pay For Invoice	Function	Test that selecting an item into the drop down list loads all the invoices data
66		Function	Test "Search Invoices" opens the searching invoices form
67		System	Test "Confirm Payment" with no selected invoice ID
68		System	Test "Confirm Payment" with a valid invoice ID displays a confirmation message and alters the invoice text file
69	Place a Booking	Function	Test "Generate ID" with no altered textbox values
70		Function	Test that altering the "Job Type" displays the staff with that speciality within the staff ID drop down list, and if those staff members are not available then it displays all the available staff members
71		Function	Test "Booking Date" with valid, invalid, and extreme data values (for both date and time)
72		Function	Test "Price" with no, valid, and invalid values
73		Function	Test "Add Tool" with no item in the tool drop down list and also with a tool selected
74		Function	Test "Remove Tool" with no items in the rich textbox, one item, and multiple items
75		Function	Test "Job Notes" with no, valid, and invalid values
76		System	Test "Save" displays confirmation message and saves the bookings data within the booking file in the correct order according to its date
77	Quick Stock Update	System	Test "Save All" with no entered tools
78		Function	Test loading the equipment data into the textboxes for each drop down list and check that tools are removed from the other drop down lists when selected in one (and vice versa for reappearing)
79		Function	Test amount in stock for no, valid, invalid and extreme values
80		Function	Test "Save All" amends the values of all the selected equipment within the equipment text file
81	Search Booking	Function	Test that all relevant data is loaded when booking ID is selected

82		Function	Test "Add Tool" with no item in the tool drop down list, with a tool selected, and with adding 2 tools
83		Function	Test "Remove Tool" with the loaded tools, one new tool, and multiple new tools
84		System	Test "Save" displays confirmation message and saves the bookings data within the booking file in the correct order according to its date
85		System	Test "Cancel Edit" clears and/or resets all the textboxes
86		System	Test "Cancel Booking" deletes the booking from the bookings text file
87	Search Customers	Function	Test that selecting a unique surname automatically loads the customer data
88		Function	Test that if a surname that is identical to another is selected, then a prompt appears for user to select a postcode and thus load the customer data
89		System	Test that "Save" shows a confirmation message and saves the data to the customer text file in the alphabetically correct position
90		System	Test that "Cancel" loads the customer's unedited data
91		System	Test that "Delete User" deletes the customer's data from the customer text file
92	Search Equipment	Function	Test that the equipment data is loaded into the textboxes if an item name is selected
93		System	Test that "Save Edit" shows a confirmation message and amends the data within the equipment text file
94		Function	Test that "Cancel" loads the equipment's unedited data
95		System	Test that "Delete" deletes the equipment data from the equipment textfile
96	Search Invoice	Function	Test that once a booking ID or invoice ID is selected, the appropriate booking and invoice data is loaded into the textboxes and drop down lists
97		Function	Test that "Show Full Invoice" (with no and valid values) shows the appropriate individual invoice text file
98	Search Monthly Payroll	Function	Test that data is loaded into textboxes once staff ID entered
99		System	Test "Open" with no drop down list values, a missing drop down list value, two missing drop

			down list values, an invalid payroll slip, and a valid payroll slip
100	Search Staff	Function	Test that selecting a unique surname automatically loads the staff and password data
101		Function	Test that if a surname that is identical to another is selected, then a prompt appears for user to select a postcode and thus load the staff and password data
102		System	Test that "Save Edit" shows a confirmation message and amends the staff data within the staff text file
103		System	Test that "Cancel" loads the staff member's unedited data
104		System	Test that "Delete Member" deletes the staff member's data from the staff text file
105	Searching Yearly Payroll	System	Test selecting staff ID with and without the year and whether it loads the staff data into the staff data textboxes
106	Searching Uninvoiced Bookings	Function	Test searching with valid and invalid dates
107	Searching Unpaid Invoices	Function	Test searching with valid and invalid dates
108	Worker Logs	Function	Test "Search" with no entered staff ID, no selected dates, only the min date, only the max date, and both dates

NOTES:

- "Close"/"Quit" within forms was all coded the same way so it was not necessary to test more than one close/quit function
- Opening forms coding is all the same (i.e. in searching invoices "search bookings") so it was not necessary to repeat tests for opening forms
- Validation such as phone number length checks, email format checks, and title list checks were all coded the same way (i.e. adding customer validation coded the same as searching customers, adding equipment validation coded the same as searching equipment, placing booking validation coded the same as searching bookings) so it was not necessary to repeat tests

Test Runs

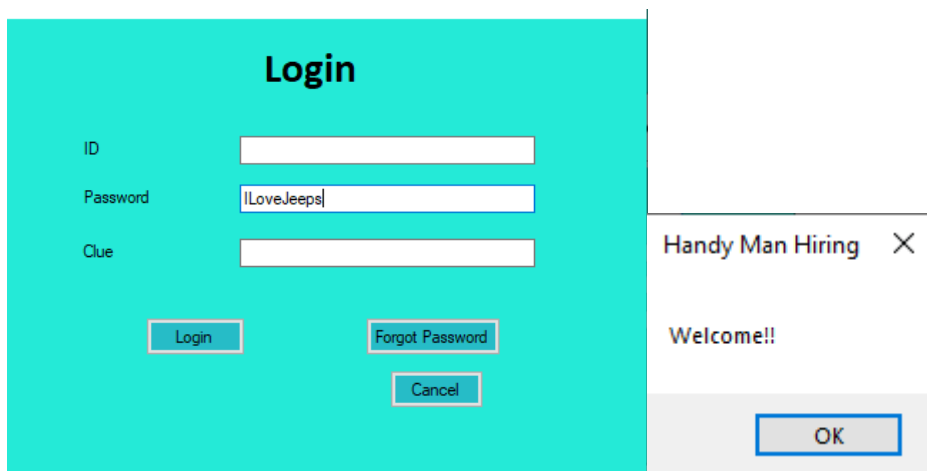
1	Login	Function	Test with no ID, no password, and neither
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When "Login" clicked with no ID or password, error message (right) appears



When "Login" clicked with no password, error message (right) appears



When "Login" clicked with no ID, the welcome screen is displayed which is not supposed to happen. This is because the ID from the previous test was stored as a variable and was not reset once the ID text had been changed.

```

18      'Loop through staff file to find staff ID whenever the textbox value is changed
19      For x = 0 To (NumStaff - 1)
20          If txtID.Text = AllStaff(x).StaffID Then 'Comparing if the staff ID exists
21              FoundID = AllStaff(x).StaffID
22              Exit For
23          End If
24      Next

```

I would fix this by introducing an 'Else Found ID = "" ', as shown below

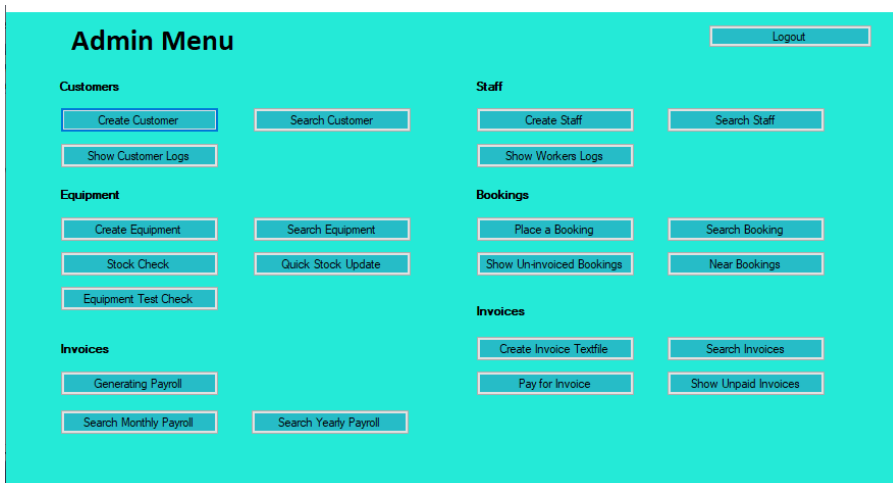
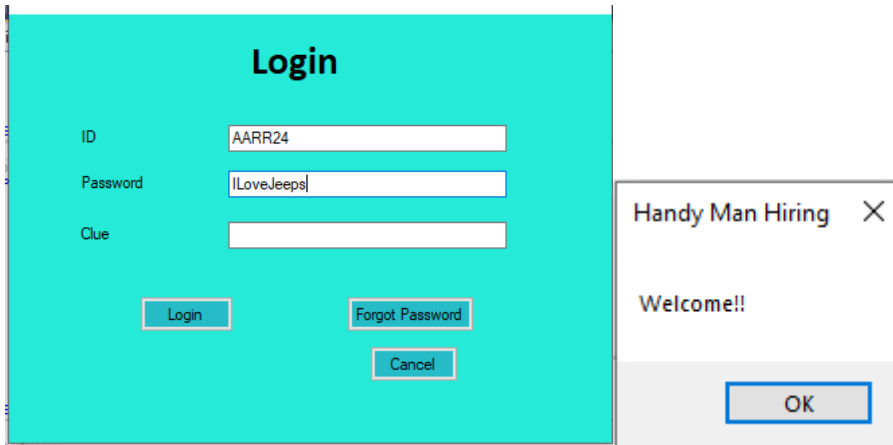
```

0 references
Private Sub txtID_TextChanged(sender As Object, e As EventArgs) Handles txtID.TextChanged

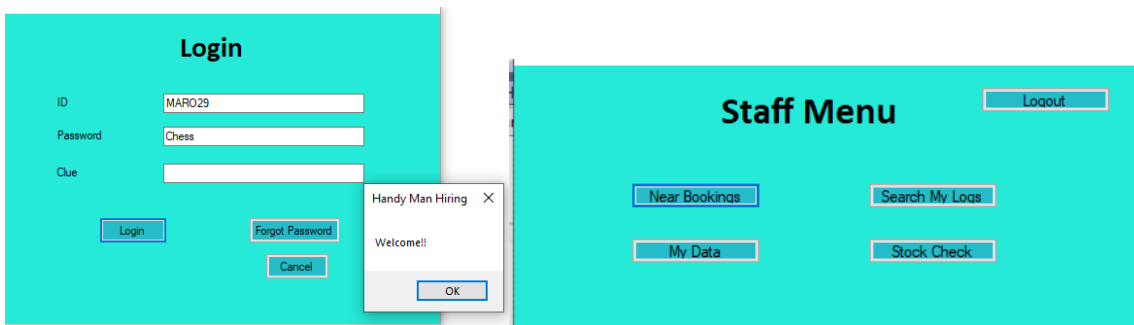
    'Loop through staff file to find staff ID whenever the textbox value is changed
    For x = 0 To (NumStaff - 1)
        If txtID.Text = AllStaff(x).StaffID Then 'Comparing if the staff ID exists
            FoundID = AllStaff(x).StaffID
            Exit For
        Else
            FoundID = ""
        End If
    Next

```

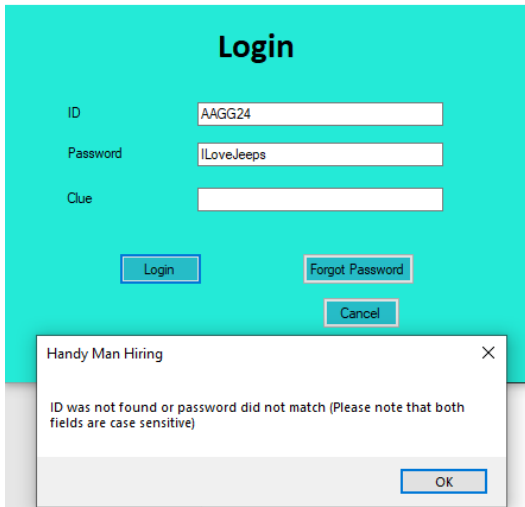
2	Login	Function	Test with valid ID and password
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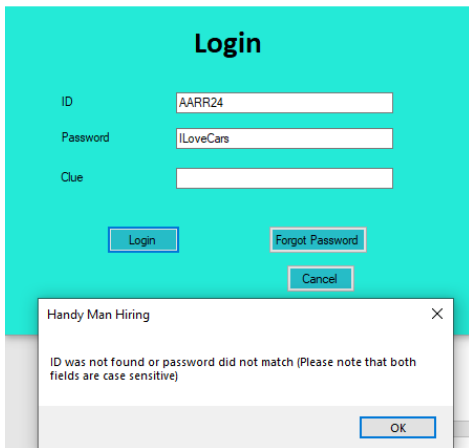
When the valid ID and password are entered, a welcome message is displayed and the user is taken to the appropriate menu depending on the staff type (Admin – displayed above, worker – displayed below).



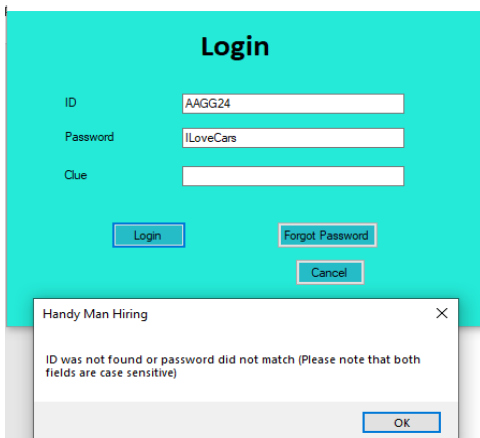
3	Login	Function	Test with invalid ID, invalid password, and both invalid
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When invalid ID entered, error message shown above is displayed

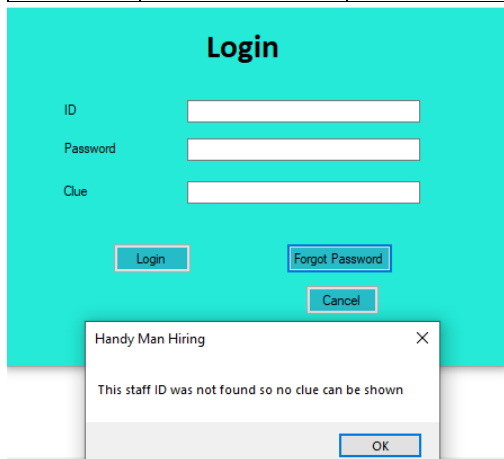


When invalid password entered, error message shown above is displayed

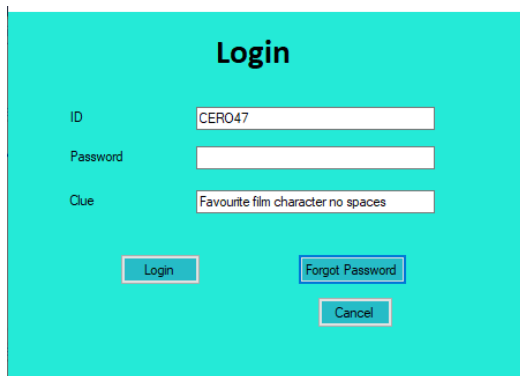


When both invalid ID and password are entered, error message shown above is displayed

4	Login	Function	Test "Forgot Password" with no ID and after ID has been entered
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When no ID entered, error message shown above is displayed



When valid ID is entered, the clue for that user is displayed

5	Login	Function	Test that clue shows up after 3 failed login attempts with invalid ID and with valid ID
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When an invalid ID is entered, no matter how many login attempts occur there will be no clue that appears



After 3 failed login attempts occur then the clue automatically appears for that ID.

However, if 3 failed login attempts occur and then the ID is changed, the clue still appears which should not happen. To fix this I reset the count for attempted logins whenever the ID textbox was altered (as shown below).

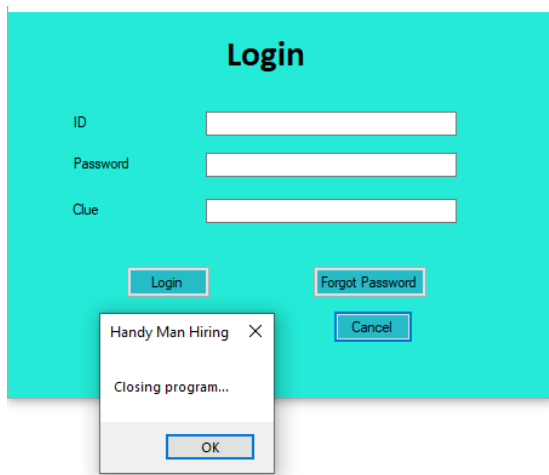
```
16 16 references
17 Private Sub txtID_TextChanged(sender As Object, e As EventArgs) Handles txtID.TextChanged
18
19 'Loop through staff file to find staff ID whenever the textbox value is changed
20 For x = 0 To (NumStaff - 1)
21     If txtID.Text = AllStaff(x).StaffID Then 'Comparing if the staff ID exists
22         FoundID = AllStaff(x).StaffID
23         Exit For
24     Else
25         FoundID = ""
26     End If
27 Next
28 End Sub
29
30
31
32 0 references
33 Private Sub txtID_TextChanged(sender As Object, e As EventArgs) Handles txtID.TextChanged
34
35 'Loop through staff file to find staff ID whenever the textbox value is changed
36 For x = 0 To (NumStaff - 1)
37     If txtID.Text = AllStaff(x).StaffID Then 'Comparing if the staff ID exists
38         FoundID = AllStaff(x).StaffID
39         Exit For
40     Else
41         FoundID = ""
42     End If
43 Next
44
45 'Resets login attempts count
46 AttemptCount = 0
47 End Sub
```

6	Login	Function	Test that cancel button works
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When the "Cancel" button is clicked then the program closes. It would be more appropriate for a message to appear before closure.

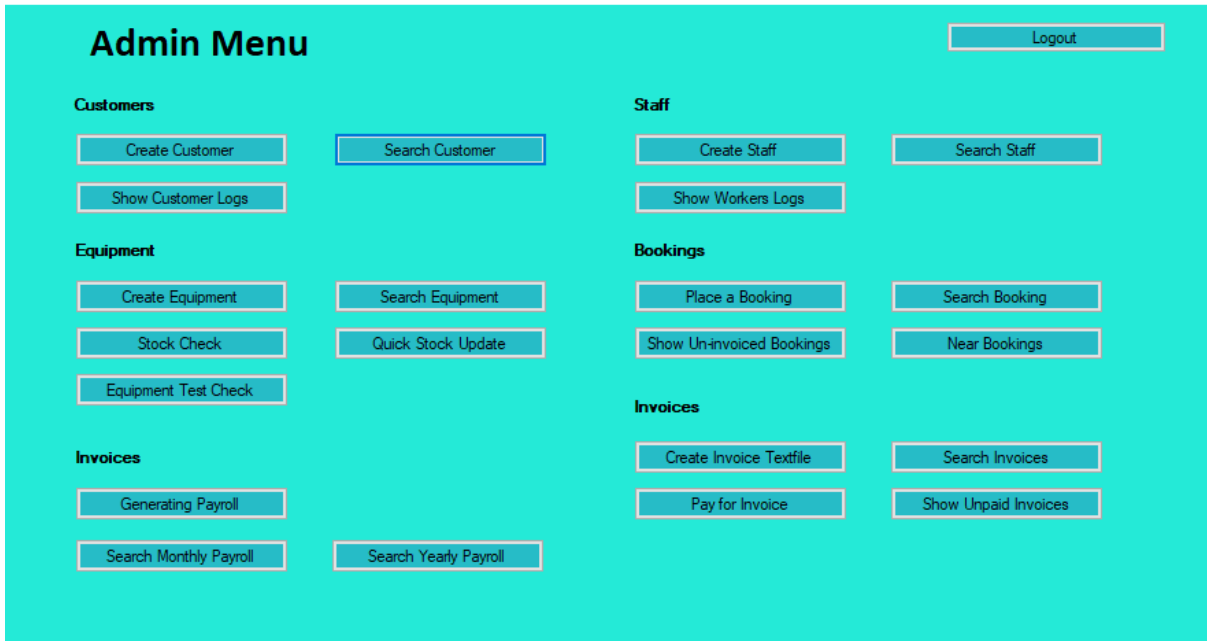
I added the following code (shown by the yellow line) to display a message.

```
90 0 references  
91 Private Sub butCancel_Click(sender As Object, e As EventArgs) Handles butCancel.Click  
92     'Goodbye message  
93     MsgBox("closing program...")  
94  
95     Me.Close()  
96  
97 End Sub  
98 End Class
```



7	Admin Menu	Function	Test that all buttons open correct forms and that the logout button works
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All the buttons open the appropriate forms as shown below



Creating customer –

The screenshot shows the 'Adding Customer' form on a yellow background. It includes the following fields and buttons:

- Customer ID:** Input field with a 'Generate ID' button.
- Title:** Input field.
- First name:** Input field.
- Surname:** Input field.
- 1st Address Line:** Input field.
- 2nd Address Line:** Input field.
- Postcode:** Input field.
- Town/City:** Input field.
- Phone Number:** Input field.
- Email:** Input field.
- DoB:** Date picker showing '01/01/1900'.
- Action Buttons:** Save, Clear, and Quit.

Searching customer –

Searching a Customer

Please fill the drop down lists below to load the corresponding data

Surname

Postcode

Customer ID

Title

First name

Surname

1st Address Line

2nd Address Line

Postcode

Town/City

Phone number

Email

DoB

Show Customer Logs –

Customer Logs

Customer ID

Dates from to

Create Equipment –

Adding Equipment

Equipment ID	<input type="text"/>	<input type="button" value="Generate ID"/>
Item Name	<input type="text"/>	
Amount in stock	<input type="text"/>	
Reorder stock level	<input type="text"/>	
Reorder quantity	<input type="text"/>	
Last test date	<input type="text" value="01/01/2020"/>	<input type="button" value="Calendar"/>
Next test date	<input type="text" value="01/01/2020"/>	<input type="button" value="Calendar"/>
Tested by	<input type="text"/>	

Search Equipment –

Searching Equipment

Item Name	<input type="text"/>	<input type="button" value="v"/>
Equipment ID	<input type="text"/>	
Amount in stock	<input type="text"/>	
Reorder stock level	<input type="text"/>	
Reorder quantity	<input type="text"/>	
Last test date	<input type="text" value="01/01/2020"/>	<input type="button" value="Calendar"/>
Next test date	<input type="text" value="01/01/2020"/>	<input type="button" value="Calendar"/>
Tested by	<input type="text"/>	

Quick Stock Update –

Quick Stock Update

Item Name	Equipment ID	Amount in stock	Last Test Date	Next Test Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	25 April 2022 <input type="button" value="▼"/>	25 April 2022 <input type="button" value="▼"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	25 April 2022 <input type="button" value="▼"/>	25 April 2022 <input type="button" value="▼"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	25 April 2022 <input type="button" value="▼"/>	25 April 2022 <input type="button" value="▼"/>

Generating Payroll –

Calculating Payroll

Please fill out the options below

Staff ID

Month

Rate of Pay (£)

Payroll ID	<input type="text"/>
Hours Worked	<input type="text"/>
Gross Pay (£)	<input type="text"/>
NI (£)	<input type="text"/>
Tax (£)	<input type="text"/>
Pension (£)	<input type="text"/>
Net Pay (£)	<input type="text"/>

Search Monthly Payroll –

Searching a Monthly Pay Slip

Please fill these options then click OPEN

Staff ID

Month

Year

Staff Details (cannot edit these here)

First Name	<input type="text"/>	<input type="button" value="Open"/>
Surname	<input type="text"/>	<input type="button" value="Quit"/>

Search Yearly Payroll –

Searching a Yearly Pay Slip

Please fill these options to load corresponding data

Staff ID

Year

<p>Staff Details (cannot edit these here)</p> <p>First Name <input type="text"/></p> <p>Surname <input type="text"/></p>	<p>Hours Worked <input type="text"/></p> <p>Gross Pay (£) <input type="text"/></p> <p>NI (£) <input type="text"/></p> <p>Tax (£) <input type="text"/></p> <p>Pension (£) <input type="text"/></p> <p>Net Pay (£) <input type="text"/></p>
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Create Staff –

Adding Staff

Staff ID	<input type="text"/>	<input type="button" value="Generate ID"/>
Staff Type	<input type="text"/>	
Speciality	<input type="text"/>	<input type="button" value="v"/>
Title	<input type="text"/>	
First Name	<input type="text"/>	
Surname	<input type="text"/>	
1st Address Line	<input type="text"/>	
2nd Address Line	<input type="text"/>	
Postcode	<input type="text"/>	
Town/City	<input type="text"/>	
Phone Number	<input type="text"/>	
Email	<input type="text"/>	
DoB	<input type="text" value="01/01/1900"/>	<input type="button" value="v"/>
Password	<input type="text"/>	
Clue	<input type="text"/>	

Search Staff –

Searching a Staff Member

Please fill the drop down lists below to load the corresponding data

Surname

Postcode

Staff ID	<input type="text"/>	1st Address Line	<input type="text"/>
Staff Type	<input type="text"/>	2nd Address Line	<input type="text"/>
Speciality	<input type="text"/>	Postcode	<input type="text"/>
Title	<input type="text"/>	Town/city	<input type="text"/>
First name	<input type="text"/>	Phone number	<input type="text"/>
Surname	<input type="text"/>	Email	<input type="text"/>
Password	<input type="text"/>	DoB	<input type="text" value="01/01/1900"/>
Clue	<input type="text"/>		

Save EditCancelDelete MemberQuit

Show Workers Logs –

Worker Logs

Worker ID Search Staff

Dates from to Search

Close

Place a Booking –

Placing a Booking

Booking ID	<input type="text" value="02204251"/>	<input type="button" value="Generate ID"/>	
Job Type	<input type="text"/>		(Data automatically filled once customer ID selected)
Date	<input type="text" value="25/04/2022 - 12:00 AM"/>		
Customer ID	<input type="text"/>	<input type="button" value="Search Customers"/>	
Staff ID	<input type="text"/>		
Allocated Time (hrs)	<input type="text"/>		
Price (£)	<input type="text"/>		
	(This does not including VAT)		

Tools for job	<input type="text"/>	<input type="button" value="Add Tool"/>	<input type="button" value="Remove Tool"/>	(Data automatically filled once staff ID selected)
	<input type="text"/>			
Job Specific Notes	<input type="text"/>			

<input type="button" value="Save"/>		<input type="button" value="Clear"/>	<input type="button" value="Quit"/>
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Customer Details (not editable)

First Name	<input type="text"/>
Surname	<input type="text"/>
1st Address Line	<input type="text"/>
2nd Address Line	<input type="text"/>
Postcode	<input type="text"/>
Town/City	<input type="text"/>

Staff Details (not editable)

First Name	<input type="text"/>
Surname	<input type="text"/>

Search Booking –

Searching a Booking

Please fill these options to load the corresponding data		Booking Details (editable)	
Booking ID	<input type="text"/>	Job Type	<input type="text"/>
Customer ID	<input type="text"/>	Date	<input type="text" value="25/04/2022 - 10:35 AM"/>
	<input type="button" value="Search Customers"/>	Staff ID	<input type="text"/>
Booking Date	<input type="text"/>	Allocated Time (hrs)	<input type="text"/>
		Price (£)	<input type="text"/>
		Invoiced?	<input type="text"/> (This cannot be edited)
		Tools for job	<input type="text"/>
			<input type="button" value="Add Tool"/>
			<input type="button" value="Remove Tool"/>
			<input type="button" value="Save"/>
			<input type="button" value="Cancel Booking"/>
			<input type="button" value="Cancel Edit"/>
			<input type="button" value="Quit"/>

Customer Details (cannot edit these here)

First Name	<input type="text"/>
Surname	<input type="text"/>
Address	<input type="text"/>

Staff Details (cannot edit these here)

First Name	<input type="text"/>
Surname	<input type="text"/>

Job Specific Notes

Show Un-Invoiced Bookings –

Searching Uninvoiced Bookings

From: 01 January 2020 **Until:** 31 December 2029

Booking ID: 02203171
Booking Date: 17/03/2022 14:20:00
Booking Notes: Create new garden bed - build flower racks and install

Staff name: Aron Arinson
Staff ID: AARR24

Staff name: Steven Barington
Staff ID: BALO19

Staff name: Polly Celestia
Staff ID: CERO47

Staff name: Chris Crowley
Staff ID: CRHR49

Staff name: Peter Craig
Staff ID: CROW16

Staff name: Lucy Keave
Staff ID: KEAV92

Staff name: Chris Keave
Staff ID: KER119

Close

Near Bookings –

My Near Bookings

No bookings were found for the next 3 days

Close

Create Invoice Textfile –

Create an Invoice

Booking ID

Date

Customer Name

Address

Job Notes

Search Invoices –

Searching an Invoice

Please fill these options to load the corresponding data

Invoice ID

Booking ID

Customer Data

Customer Name

Customer Address

Invoice Data

Invoice ID

Booking ID

Booking Date

Price

Paid

Booking Data

Job Notes

Pay for Invoice –

Paying for a Booking

Please enter Invoice ID

Invoice ID

Booking ID

Customer Name

Date

Job Notes

Price (£)

VAT (£)

Gross Price (£)

Show Unpaid Invoices –

Searching Unpaid Invoices

From: Until:

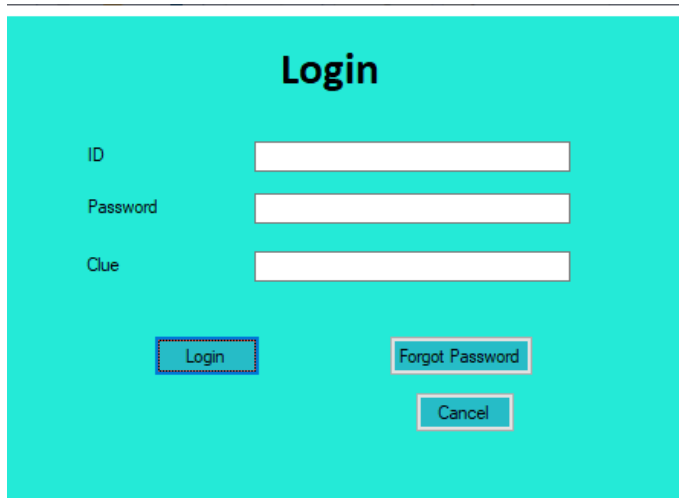
Invoice ID: 3
Booking ID: 02203201
Booking Date: 20/03/2022 08:30:33
Booking Notes: Put together the metal shed for the garden - metal sheets and nails etc. provided in the garden - lunch will be provided by the owner

Customer name: Raul Harrison
Customer ID: HAAU21
Address: 2198 Cat Street , , SA11 8PW , Neath
Phone number: 07647381292
Email: ScaryCarey@hotmail.com

Invoice ID: 4
Booking ID: 02202281
Booking Date: 28/02/2022 10:50:00
Booking Notes: Fix leaks + clear overflowed water + unclog drains + check electric socket safety/electric box /boiler

Customer name: Francesca Russeling
Customer ID: RURA82
Address: 14a Krook Road , , SA4 5GH , Swansea
Phone number: 07467382936

Logout –

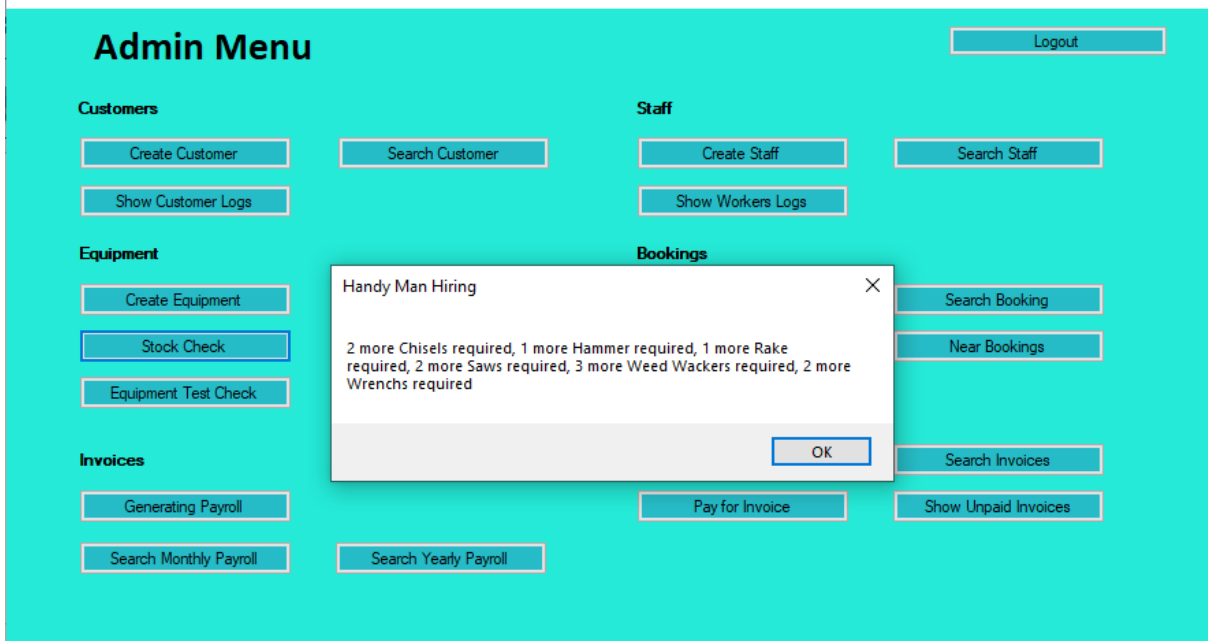


The image shows a login form titled "Login" on a light blue background. It contains three input fields: "ID", "Password", and "Clue". Below the fields are three buttons: "Login", "Forgot Password", and "Cancel".

When logout is clicked then the admin menu closes and login menu is left open. However, this does not mean that the user has logged out as there could be other forms the remain open. I fixed this by adding code to close the “Login” menu when the user clicks “Logout” as this closes the whole program. The code for this is shown below (altered code displayed with yellow line):

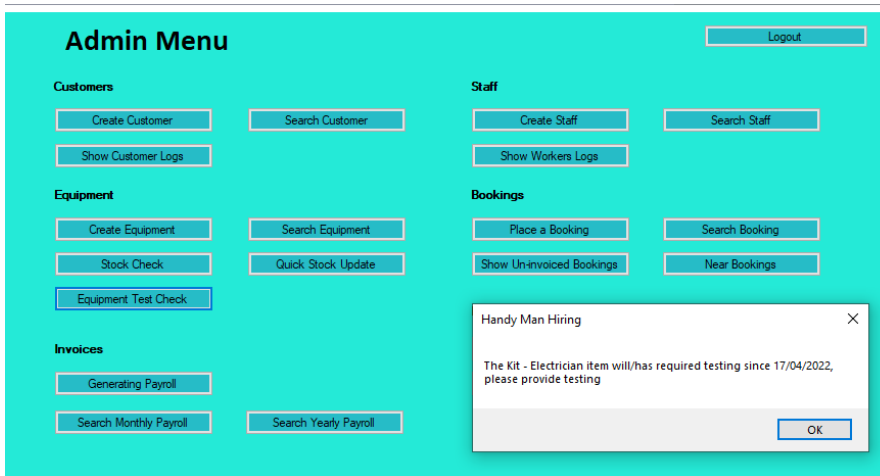
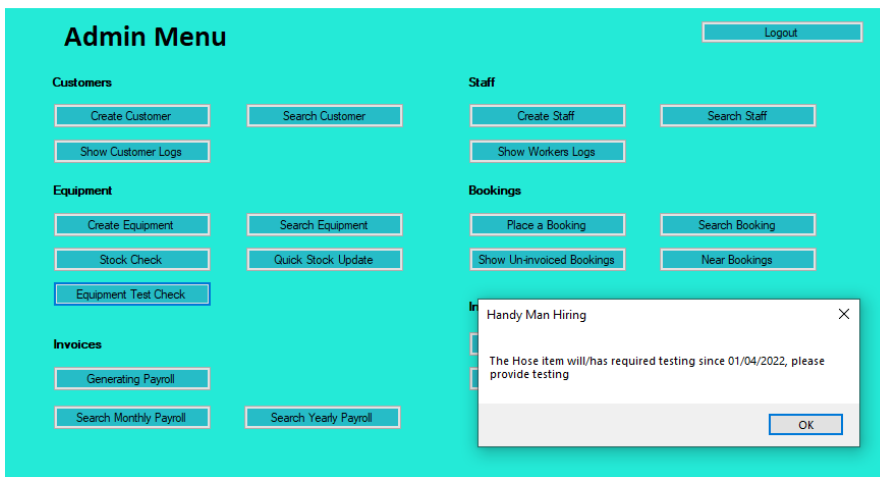
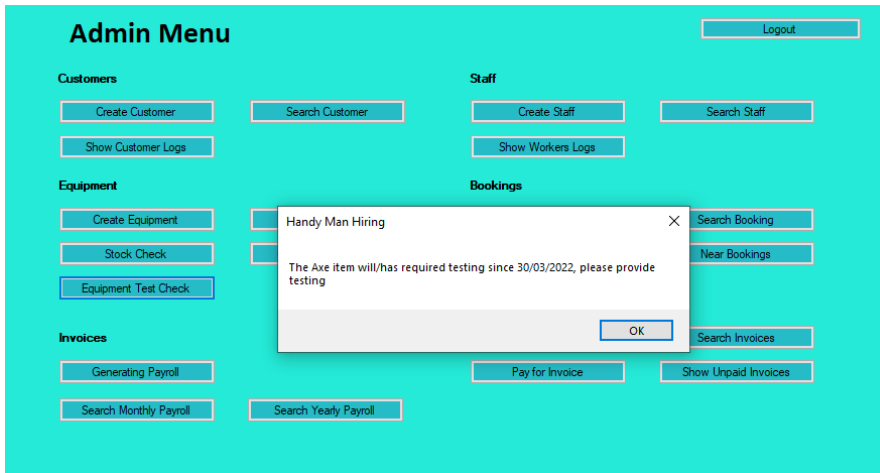
```
177     u references  
178     Private Sub butLogout_Click(sender As Object, e As EventArgs) Handles butLogout.Click  
179         'Close form  
180         Login.Close()  
181     End Sub  
182  
---
```

8	Admin Menu	Function	Test that the stock check button shows all equipment below their individual stock levels
---	------------	----------	--



When "Stock Check" is clicked then a message appears with a list of items that need restocking and the amount of each item required

9	Admin Menu	Function	Test that the equipment test check button shows all the equipment that requires testing
---	------------	----------	---

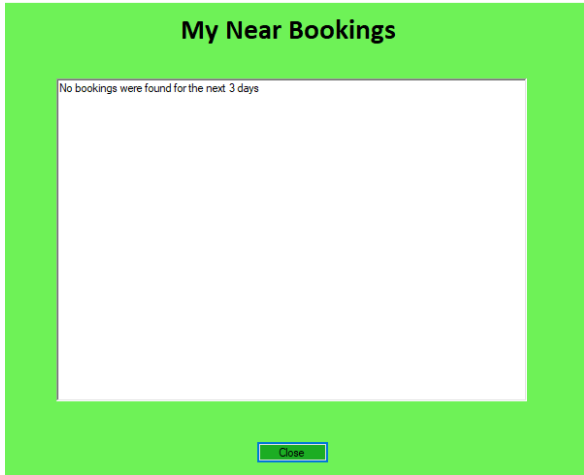


When "Equipment Test Check" clicked then a message appears with an item that requires testing and how long it has required testing. When "OK" is clicked then the next item is displayed until the end of the item array is reached.

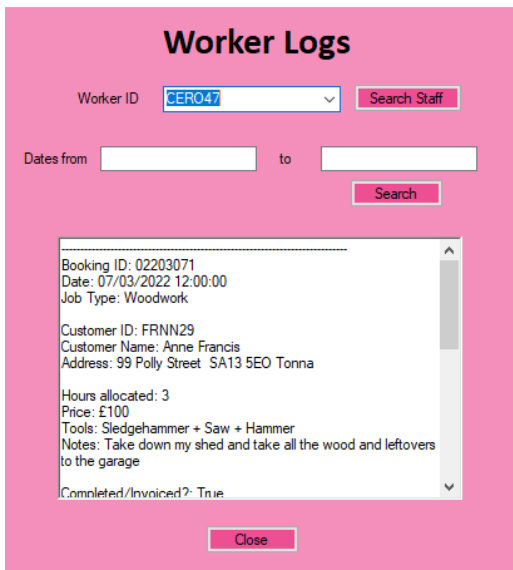
10	Staff Menu	Function	Test that all buttons open correct forms and that the logout button works
----	------------	----------	---

All the buttons open the appropriate forms as shown below

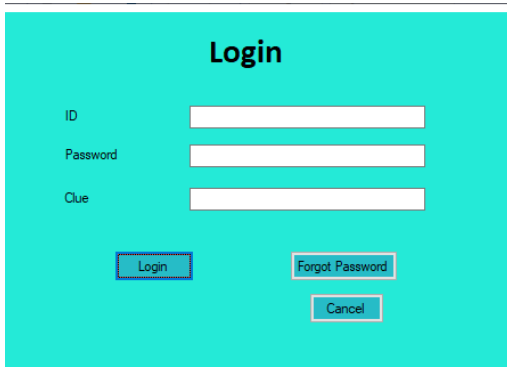
Near Bookings –



Search My Logs –



Logout –



When logout is clicked then the staff menu closes and login menu is left open. However, this does not mean that the user has logged out as there could be other forms the remain open. I fixed this by adding code to close the “Login” menu when the user clicks “Logout” as this closes the whole program. The code for this is shown below (altered code displayed with yellow line):

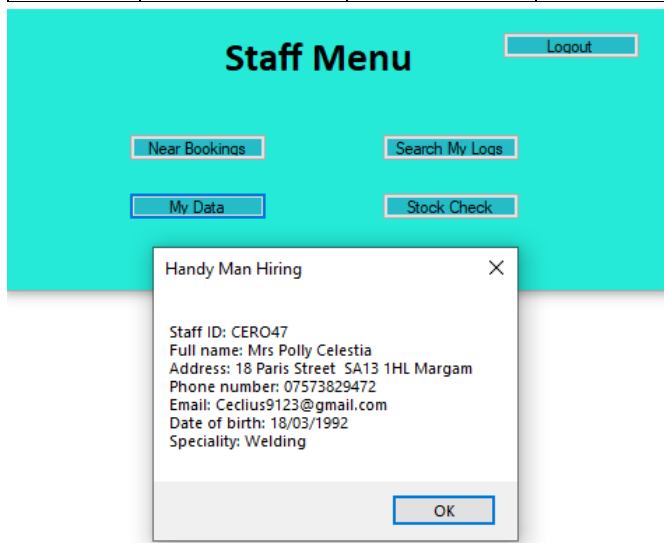
```
177  u references
178  Private Sub butLogout_Click(sender As Object, e As EventArgs) Handles butLogout.Click
179      'Close form
180      Login.Close()
181
182  End Sub
---
```

11	Staff Menu	Function	Test that the stock check button shows all equipment below their individual stock levels
----	------------	----------	--



When "Stock Check" is clicked then a message appears with a list of items that need restocking and the amount of each item required

12	Staff Menu	Function	Test that the “My Data” button shows the logged-on staff member’s data
----	------------	----------	--



When “My Data” clicked then the saved data of the staff member is displayed within a message box

13	Adding Customer	Function	Test "Generate ID" button with no entered values within the textboxes
----	-----------------	----------	---

The screenshot shows a web form titled "Adding Customer" on a yellow background. The form contains several input fields: "Customer ID" (with a "Generate ID" button), "Title", "First name", "Surname", "1st Address", "2nd Address", "Postcode", "Town", "Phone Number", "Email", and "DoB" (with a date picker set to 01/01/1900). At the bottom are "Save", "Clear", and "Quit" buttons. A modal dialog box titled "Handy Man Hiring" is open, displaying the message "Please fill out the rest of the form before generating ID" and an "OK" button. The "Generate ID" button on the form is highlighted with a blue border.

If user tries to generate an ID without filling any of the required textboxes, the above error message is displayed

14	Adding Customer	Function	Test "Title" textbox with valid, invalid, and no values
----	-----------------	----------	---

The screenshot shows the 'Adding Customer' form with a yellow background. The form includes fields for Customer ID, Title, First name, Surname, Phone Number, Email, and DoB. A 'Generate ID' button is next to the Customer ID field. An error message dialog box titled 'Handy Man Hiring' is displayed over the form, containing the text: 'Incorrect title entered, correct titles; Mr, Mrs, Miss, Ms, Mx, Sir, Dr, Cllr, Lord, Lady. Please try again'. The dialog box has an 'OK' button. At the bottom of the form are 'Save', 'Clear', and 'Quit' buttons.

With no title values, the program displays this error message

The screenshot shows the 'Adding Customer' form with a yellow background. The form includes fields for Customer ID, Title, First name, Surname, Phone Number, Email, and DoB. A 'Generate ID' button is next to the Customer ID field. The Title field contains the value 'Mister'. An error message dialog box titled 'Handy Man Hiring' is displayed over the form, containing the text: 'Incorrect title entered, correct titles; Mr, Mrs, Miss, Ms, Mx, Sir, Dr, Cllr, Lord, Lady. Please try again'. The dialog box has an 'OK' button. At the bottom of the form are 'Save', 'Clear', and 'Quit' buttons.

With an invalid title value, the program displays this error message

Adding Customer

Customer ID

Title

First name

Surname

1st Address Line

2nd Address Line

Postcode

Town/City

Phone Number

Email

DoB

If valid title is entered, then program continues as it's suppose to

15	Adding Customer	Function	Test "First Name" with valid and no values
----	-----------------	----------	--

Adding Customer

Customer ID

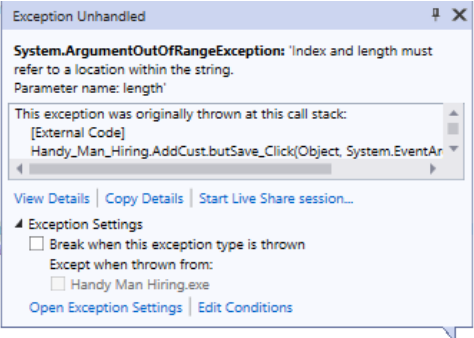
Title

First name

```

70 Private Sub butSave_Click(sender As Object, e As EventArgs) Handles butSa
71
72 'Checking if generate ID button has been clicked
73 'If IDGenClick = False Then
74 'MsgBox("Please generate an ID before saving")
75 'Exit Sub
76 'End If
77
78 'Entering textbox value into Title
79 NewCustomer.Title = txtTitle.Text
80 'List check on title
81 If NewCustomer.Title <> "Mr" And NewCustomer.Title <> "Mrs" And NewCu
82     MsgBox("Incorrect title entered, correct titles; Mr, Mrs, Miss, M
83     Exit Sub
84 End If
85
86 'Correct capitalisation on first name and surname
87 NewCustomer.Fname = txtFname.Text.Substring(0, 1).ToUpper & txtFname.Text.Substring(1, txtFname.Text.Length - 1).ToLower
88 NewCustomer.Sname = txtSname.Text.Substring(0, 1).ToUpper & txtSname.Text.Substring(1, txtSname.Text.Length - 1).ToLower

```



If no first name is entered, the program runs into an error as it attempts to convert the first letter of the name to a capital letter. Sub sequentially I added presence checks on first name and surname as I noticed the same error there. This new code is shown below (altered code is shown by the yellow line):

```

85
86 'Presence check on first name and surname
87 If txtFname.Text = "" Or txtSname.Text = "" Then
88     MsgBox("First name and surname cannot be empty, please try again")
89     Exit Sub
90 End If
91
92 'Correct capitalisation on first name and surname
93 NewCustomer.Fname = txtFname.Text.Substring(0, 1).ToUpper & txtFname.Text.Substring(1, txtFname.Text.Length - 1).ToLower
94 NewCustomer.Sname = txtSname.Text.Substring(0, 1).ToUpper & txtSname.Text.Substring(1, txtSname.Text.Length - 1).ToLower

```

Adding Customer

Customer ID

Title

First name

Surname

If a valid first name is entered, then the program continues as it's supposed to

16	Adding Customer	Function	Test "Surname" with valid and no values
----	-----------------	----------	---

The screenshot shows a yellow background with the title "Adding Customer". There are four input fields: "Customer ID" (empty), "Title" (containing "Mr"), "First name" (containing "David"), and "Surname" (empty). A "Generate ID" button is next to the Customer ID field. An error dialog box is overlaid on the form, titled "Handy Man Hiring" with a close button (X). The message inside the dialog says "First name and surname cannot be empty, please try again" and has an "OK" button at the bottom.

If no surname is entered then an error message is displayed to try again

The screenshot shows the same yellow background and "Adding Customer" title. The input fields are: "Customer ID" (empty), "Title" (containing "Mr"), "First name" (containing "David"), and "Surname" (containing "Celleman"). The "Generate ID" button is still present.

If a valid surname is entered then the program continues as it is supposed to

17	Adding Customer	Function	Test "1st Address Line" with valid and no values
----	-----------------	----------	--

Adding Customer

Customer ID

Title

First name

Surname

1st Address Line

If no 1st address line is entered, then the program continues running and saves this within the customer text file as a blank line

Adding Customer

Customer ID

Title

First name

Surname

1st Address Line

If a valid 1st address line is entered, then the program continues as its supposed to

18	Adding Customer	Function	Test "2nd Address Line" with valid and no values
----	-----------------	----------	--



Adding Customer

Customer ID

Title

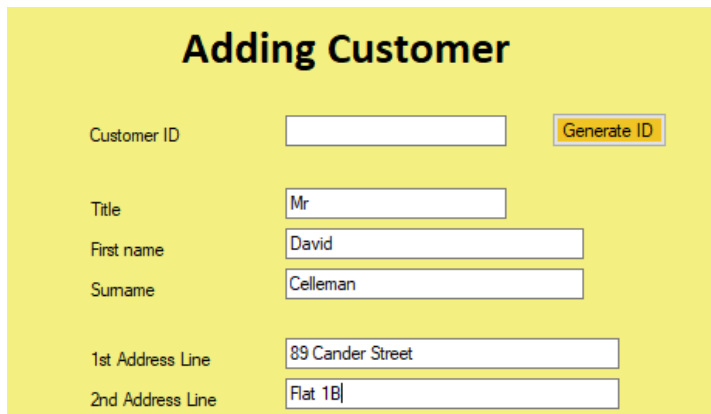
First name

Surname

1st Address Line

2nd Address Line

If no 2nd address line is entered, then the program continues running and saves this within the customer text file as a blank line



Adding Customer

Customer ID

Title

First name

Surname

1st Address Line

2nd Address Line

If a valid 2nd address line is entered, then the program continues as its supposed to

19	Adding Customer	Function	Test "Postcode" with valid and no values
----	-----------------	----------	--

1st Address Line	<input type="text" value="89 Cander Street"/>
2nd Address Line	<input type="text" value="Flat 1B"/>
Postcode	<input type="text"/>
Town/City	<input type="text"/>

If no postcode is entered, then the program continues running and saves this within the customer text file as a blank line

1st Address Line	<input type="text" value="89 Cander Street"/>
2nd Address Line	<input type="text" value="Flat 1B"/>
Postcode	<input type="text" value="SA11 6EP"/>
Town/City	<input type="text"/>

If a valid postcode is entered, then the program continues as its supposed to

20	Adding Customer	Function	Test "Town/City" with valid and no values
----	-----------------	----------	---

1st Address Line	<input type="text" value="89 Cander Street"/>
2nd Address Line	<input type="text" value="Flat 1B"/>
Postcode	<input type="text" value="SA11 6EP"/>
Town/City	<input type="text"/>

If no town/city is entered, then the program continues running and saves this within the customer text file as a blank line

1st Address Line	<input type="text" value="89 Cander Street"/>
2nd Address Line	<input type="text" value="Flat 1B"/>
Postcode	<input type="text" value="SA11 6EP"/>
Town/City	<input type="text" value="Britton Ferry"/>

If a valid town/city is entered then the program continues as its supposed to

21	Adding Customer	Function	Test "Phone Number" with no value, letters, string of length <11, string of length = 11, string of length > 11
----	-----------------	----------	--

Handy Man Hiring

Incorrect phone number entered, must be 11 characters long, please try again

OK

Postcode SA11 6EP

Town/City Britton Ferry

Phone Number

Email

If no phone number is entered, then the error message above it displayed and the data is not saved

Handy Man Hiring

Incorrect phone number entered, must be 11 characters long, please try again

OK

Postcode SA11 6EP

Town/City Britton Ferry

Phone Number Zero Seven

Email

If a non-integer phone number is entered, then the error message above it displayed and the data is not saved

Handy Man Hiring

Incorrect phone number entered, must be 11 characters long, please try again

OK

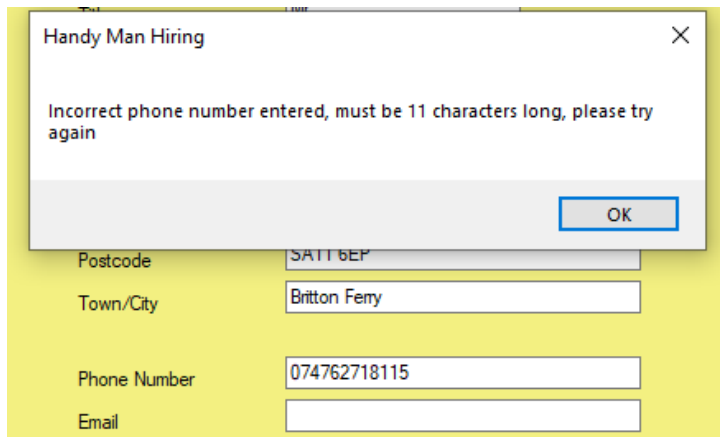
Postcode SA11 6EP

Town/City Britton Ferry

Phone Number 074762718

Email

If a phone number of length < 11 is entered, then the error message above it displayed and the data is not saved

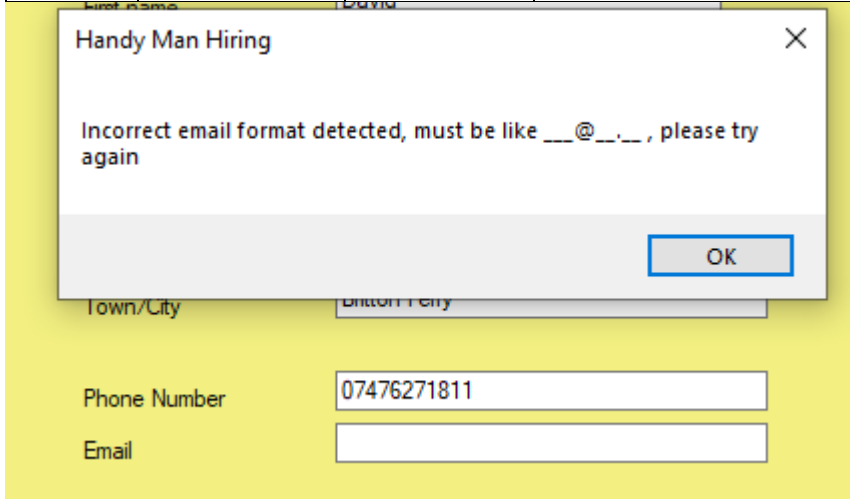


If a phone number of length > 11 is entered, then the error message above it displayed and the data is not saved

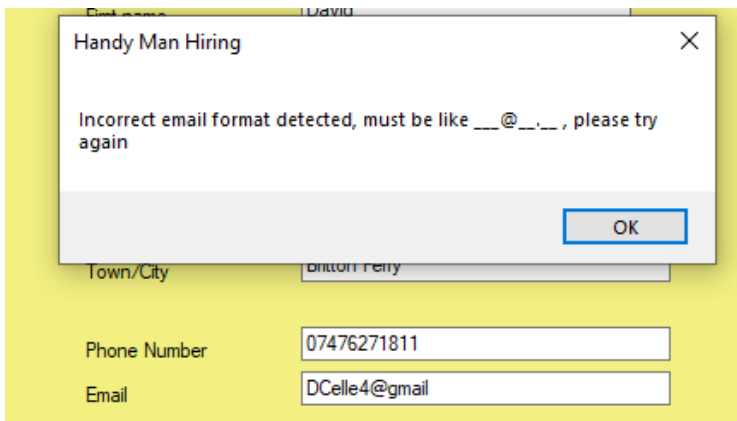
A screenshot of the "Handy Man Hiring" form. The "Postcode" field contains "SA11 6EP", the "Town/City" field contains "Britton Ferry", the "Phone Number" field contains "07476271811", and the "Email" field is empty. The form is displayed on a yellow background.

If a phone number of length 11 is entered, then the program continues as it is supposed to

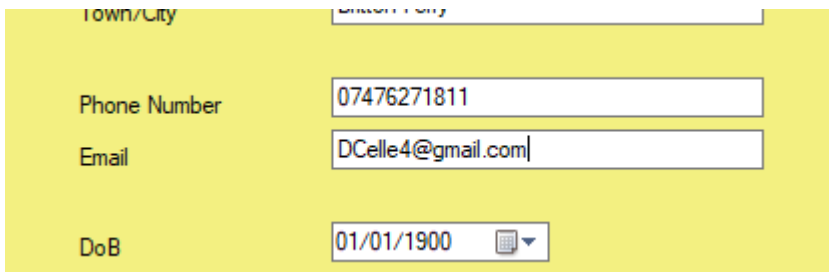
22	Adding Customer	Function	Test "Email" with valid format, invalid format, and no values
----	-----------------	----------	---



If no email is entered, then the error message above it displayed and the data is not saved



If an email in the wrong format is entered, then the error message above it displayed and the data is not saved




If an email with the correct format is entered, then the program continues as it is supposed to

23	Adding Customer	Function	Test "DoB" with valid, extreme, and invalid (I.e. unchanged and after today) values
----	-----------------	----------	---

If the date of birth is unchanged, then the error message above is displayed

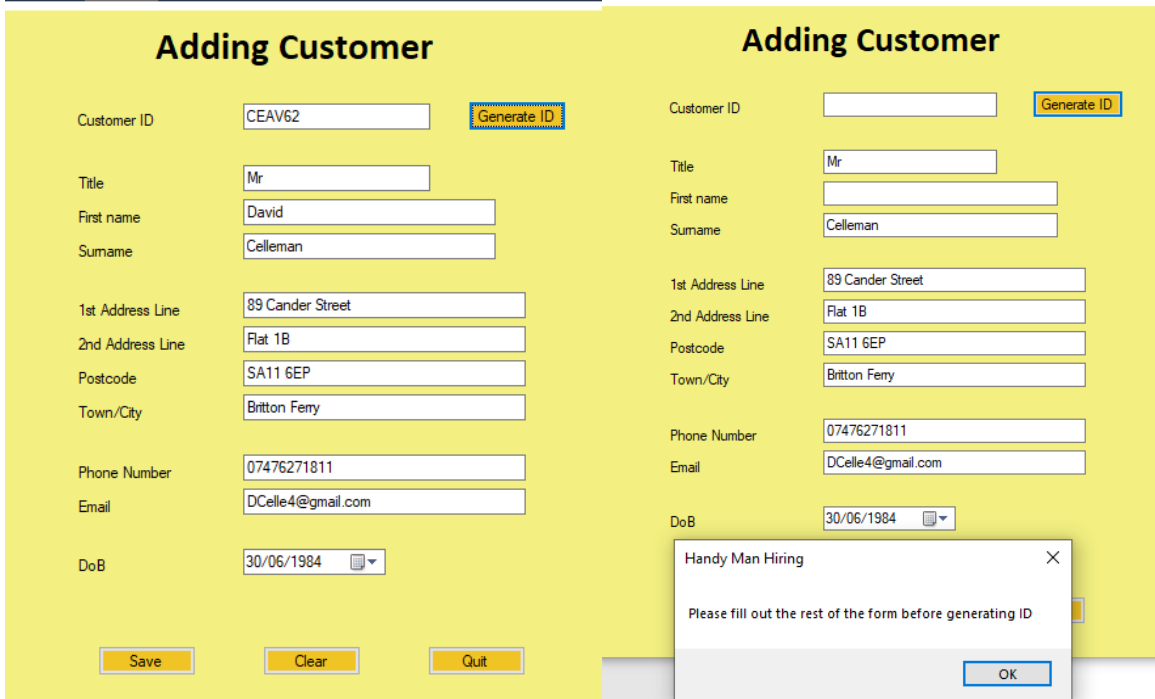
The above date of birth is the highest the date picker allows which is correct following the limits of the company

This date of birth is the second earliest date available (first example shows the earliest). This would make the user very old however it is possible that someone is still alive at this age so it is not irrational to allow this.

Phone Number	<input type="text" value="07476271811"/>
Email	<input type="text" value="DCelle4@gmail.com"/>
DoB	<input type="text" value="30/06/1984"/> 
<input type="button" value="Save"/> <input type="button" value="Clear"/> <input type="button" value="Quit"/>	

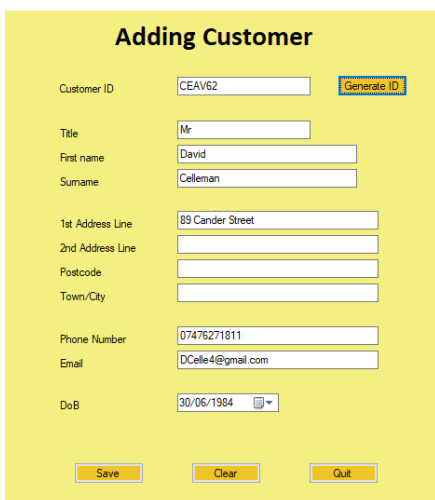
If a valid date of birth is entered, then the program continues as it is supposed to

24	Adding Customer	System	Test that "Generate ID" button works after some/all the appropriate textboxes have been filled
----	-----------------	--------	--



If all the textboxes are filled out (left), then the program generates an ID and places it within the customer ID textbox. If the textboxes required (i.e. first name, surname, and phone number) for the generation of an ID are empty (right) then the error message (right) is displayed.

If the textboxes required (i.e. first name, surname, and phone number) for the generation of an ID are filled then the program generates an ID and places it within the customer ID textbox (below).



25	Adding Customer	System	Test saving without a generated ID
----	-----------------	--------	------------------------------------

Adding Customer

Customer ID

Title

First name

Surname

1st Address Line

2nd Address Line

Postcode

Town/City

Phone Number

Email

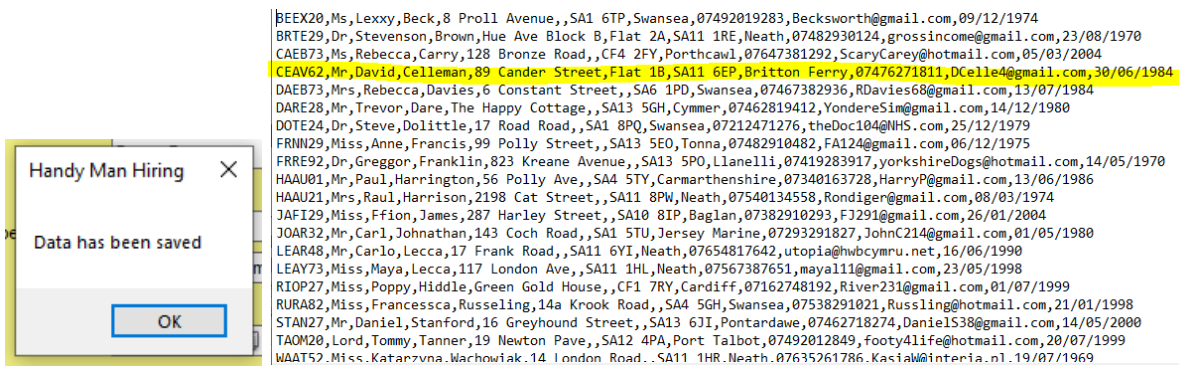
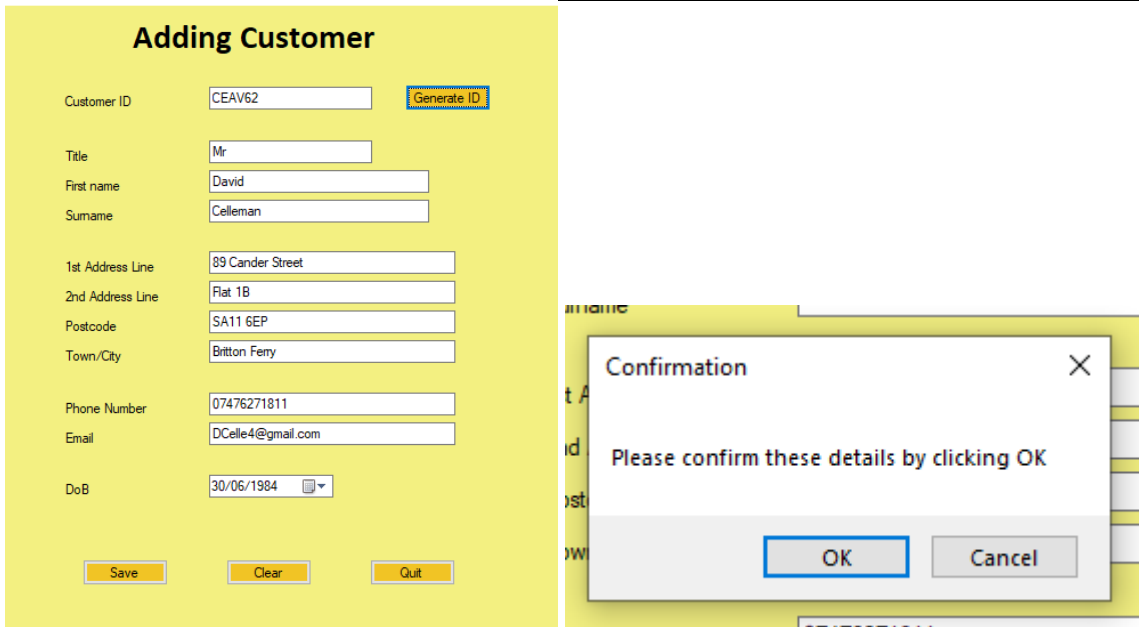
DoB

Handy Man Hiring

Please generate an ID before saving

If "Save" clicked without a generated ID then the following error message is displayed

26	Adding Customer	System	Test that "Save" shows a confirmation message and saves the data to the customer text file in the alphabetically correct position
----	-----------------	--------	---



If all the textboxes are correct and "Save" is clicked, then the confirmation messages (shown above) are displayed and the customer is saved within the customer text file alphabetically according to their surname

27	Adding Customer	System	Test that the first name and surname are saved with correct capitalisation
----	-----------------	--------	--

Adding Customer

Customer ID [Generate ID](#)

Title

First name

Surname

TAOM20, Lord, Tommy, Tanner, 19 N
Trex38, Mrs, Lexxie, Travelson, 7
WAAT52, Miss, Katarzyna, Wachowi

If first name and surname have been entered with the incorrect capitalisation, the program automatically corrects it when saving to the textfile

28	Adding Customer	Function	Test that "Clear" clears and resets all the values
----	-----------------	----------	--

The image displays two side-by-side screenshots of a web form titled "Adding Customer".

Left Screenshot (Initial State):

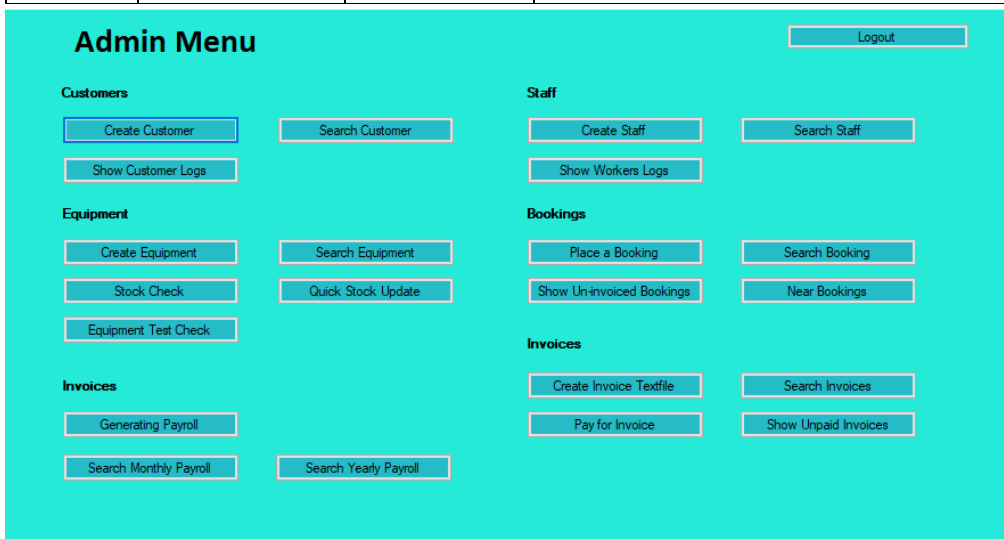
- Customer ID: CEAV62
- Title: Mr
- First name: David
- Surname: Celleman
- 1st Address Line: 89 Cander Street
- 2nd Address Line: Flat 1B
- Postcode: SA11 6EP
- Town/City: Britton Ferry
- Phone Number: 07476271811
- Email: DCelle4@gmail.com
- DoB: 30/06/1984

Right Screenshot (After Clicking Clear):

- Customer ID: (Empty)
- Title: (Empty)
- First name: (Empty)
- Surname: (Empty)
- 1st Address Line: (Empty)
- 2nd Address Line: (Empty)
- Postcode: (Empty)
- Town/City: (Empty)
- Phone Number: (Empty)
- Email: (Empty)
- DoB: 01/01/1900

If "Clear" clicked then all the textboxes and the calendar are cleared/reset

29	Adding Customer	Function	Test that "Quit" closes the form
----	-----------------	----------	----------------------------------



If "Quit" clicked then the form is closed and the admin menu remains open

30	Adding Equipment	Function	Test "Generate ID" button works appropriately
----	------------------	----------	---

Adding Equipment

Equipment ID:

Item Name:

Amount in stock:

Reorder stock level:

Reorder quantity:

Last test date:

Next test date:

Tested by:

An Equipment ID is generated based on the number of equipment within the textfile

31	Adding Equipment	Function	Test "Name" with none, valid, and invalid values
----	------------------	----------	--

```

71 'Assign item name and change the first letter to a capital
72 NewEquipment.ItemName = txtName.Text.Substring(0, 1).ToUpper & txtName.Text.Substring(1, txtName.Text.Length - 1)
73
74
75 'Check if item exists in the Equipment textfile already
76 For x = 0 To NumEquipment - 1
77     If txtName.Text = AllEquipment(x).ItemName Then
78         MsgBox("This item already exists, please try again")
79         Exit Sub
80     End If
81 Next
82
83 'Check that amount in stock is an integer
Try

```



If no item name is entered, then the program stops running. To fix this I would add a presence check on line 73.

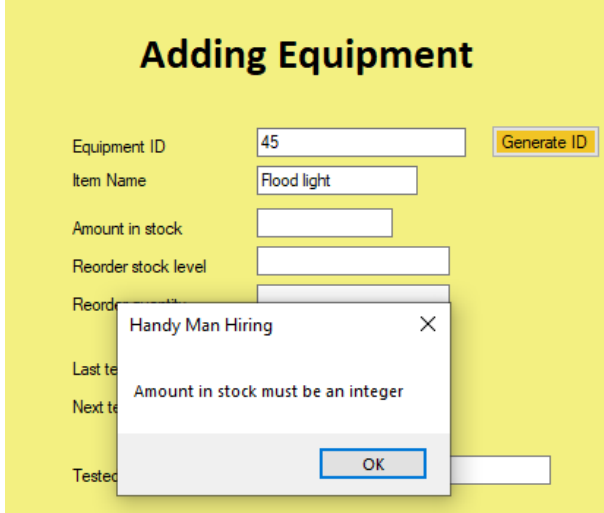
If an item name that already exists is entered, the above error message is displayed

Adding Equipment

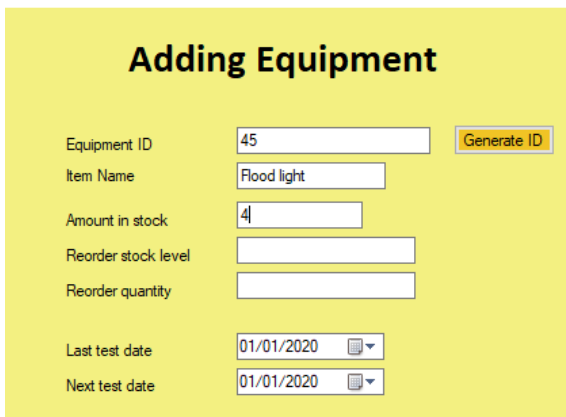
Equipment ID	<input type="text" value="45"/>	<input type="button" value="Generate ID"/>
Item Name	<input type="text" value="Flood light"/>	
Amount in stock	<input type="text"/>	
Reorder stock level	<input type="text"/>	
Reorder quantity	<input type="text"/>	
Last test date	<input type="text" value="01/01/2020"/>	<input type="button" value="Calendar"/>
Next test date	<input type="text" value="01/01/2020"/>	<input type="button" value="Calendar"/>
Tested by	<input type="text"/>	
<input type="button" value="Save"/> <input type="button" value="Clear"/> <input type="button" value="Quit"/>		

If a valid item name is entered, then the program continues as it is suppose to

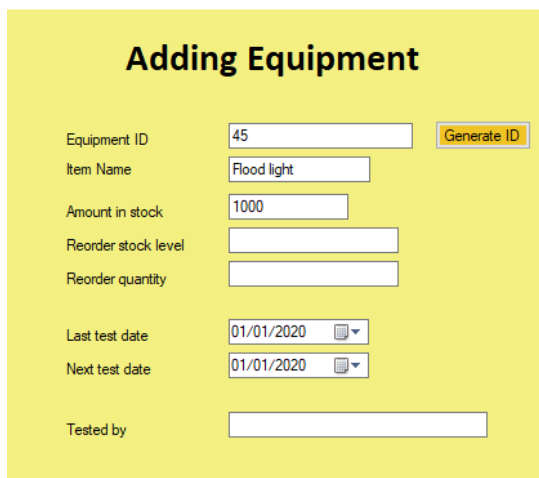
32	Adding Equipment	Function	Test "Amount in stock" with none, valid, extreme, and invalid (out of range or non-integer) values
----	------------------	----------	--



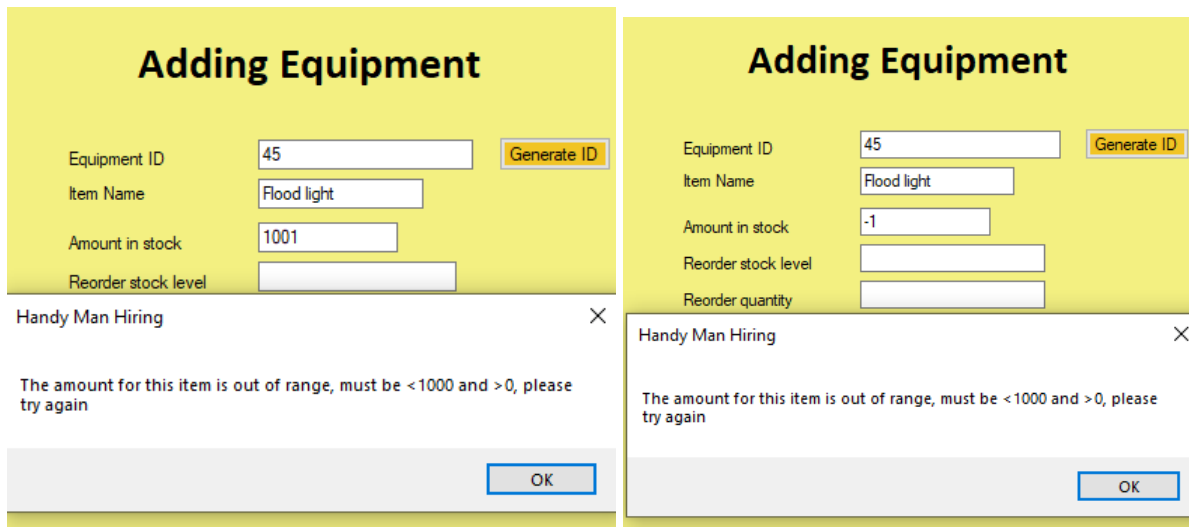
If no amount in stock is entered, then the above error message is displayed



If a valid amount in stock is entered, then the program continues as it is supposed to



If the extreme value of 1000 is entered, then the program continues as it is supposed to



If a value out of range is entered, then the above error message is shown

33	Adding Equipment	Function	Test "Reorder stock level" with none, valid, extreme, and invalid (out of range or non-integer) values
----	------------------	----------	--

The screenshot shows the 'Adding Equipment' form with the following fields: Equipment ID (45), Item Name (Flood light), Amount in stock (4), Reorder stock level (empty), and Reorder quantity (empty). A 'Generate ID' button is present. An error dialog box titled 'Handy Man Hiring' is displayed, containing the message 'Reorder level and quantity must be integer values' and an 'OK' button.

If no value is entered for reorder stock level, then the above error message is displayed

The screenshot shows the 'Adding Equipment' form with the following fields: Equipment ID (45), Item Name (Flood light), Amount in stock (4), Reorder stock level (3), and Reorder quantity (empty). A 'Generate ID' button is present. Below the form are fields for 'Last test date' (01/01/2020), 'Next test date' (01/01/2020), and 'Tested by' (empty). At the bottom are 'Save', 'Clear', and 'Quit' buttons.

If a valid reorder stock amount is entered, then the program continues as it is supposed to

Adding Equipment

Equipment ID

Item Name

Amount in stock

Reorder stock level

Reorder quantity

Handy Man Hiring ×

Reorder level and quantity must be integer values

If a value is entered out of the range, then the program continues running. This is not supposed to happen. I would solve this problem using a range check on “reorder stock level” so it is the same as the range check for “amount in stock”

34	Adding Equipment	Function	Test "Reorder quantity" with none, valid, extreme, and invalid (out of range or non-integer) values
----	------------------	----------	---

The screenshot shows the 'Adding Equipment' form with the following fields: Equipment ID (45), Item Name (Flood light), Amount in stock (4), Reorder stock level (3), and Reorder quantity (empty). A 'Generate ID' button is visible next to the Equipment ID field. An error message dialog box titled 'Handy Man Hiring' is displayed, containing the text 'Reorder level and quantity must be integer values' and an 'OK' button.

If no value is entered for reorder quantity, then the above error message is displayed

The screenshot shows the 'Adding Equipment' form with the following fields: Equipment ID (45), Item Name (Flood light), Amount in stock (4), Reorder stock level (3), and Reorder quantity (-1). A 'Generate ID' button is visible next to the Equipment ID field. A warning dialog box titled 'Handy Man Hiring' is displayed, containing the text 'Please select an appropriate last test date (i.e. not after today)' and an 'OK' button.

If a value is entered out of the range, then the program continues running. This is not supposed to happen. I would solve this problem using a range check on "reorder quantity" so it is the same as the range check for "amount in stock" but also incorporate the reorder stock level so that the reordered quantity doesn't exceed

the limit (i.e. if reorder stock level = 400, reorder quantity cannot be greater than 600)

Adding Equipment

Equipment ID	<input type="text" value="45"/>	<input type="button" value="Generate ID"/>
Item Name	<input type="text" value="Flood light"/>	
Amount in stock	<input type="text" value="4"/>	
Reorder stock level	<input type="text" value="3"/>	
Reorder quantity	<input type="text" value="1"/>	
Last test date	<input type="text" value="01/01/2020"/> <input type="button" value="Calendar"/>	
Next test date	<input type="text" value="01/01/2020"/> <input type="button" value="Calendar"/>	
Tested by	<input type="text"/>	

If a valid reorder stock amount is entered, then the program continues as it is supposed to

35	Adding Equipment	Function	Test "Last Test Date" with valid, extreme, and invalid (i.e. unchanged or after today) values
----	------------------	----------	---

Reorder stock level: 5
 Reorder quantity: 1
 Last test date: 03/03/2022
 Next test date: 03/03/2022

If a valid last test date is entered, then the program continues as it is supposed to

Last test date: 30/07/2022

Handy Man Hiring
 Please select an appropriate last test date (i.e. not after today)
 OK

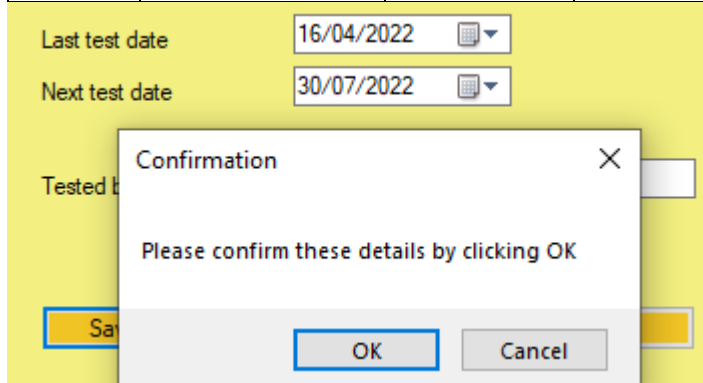
If the last test date is after today, then the error message above is displayed

Reorder quantity: 1
 Last test date: 25/04/2022

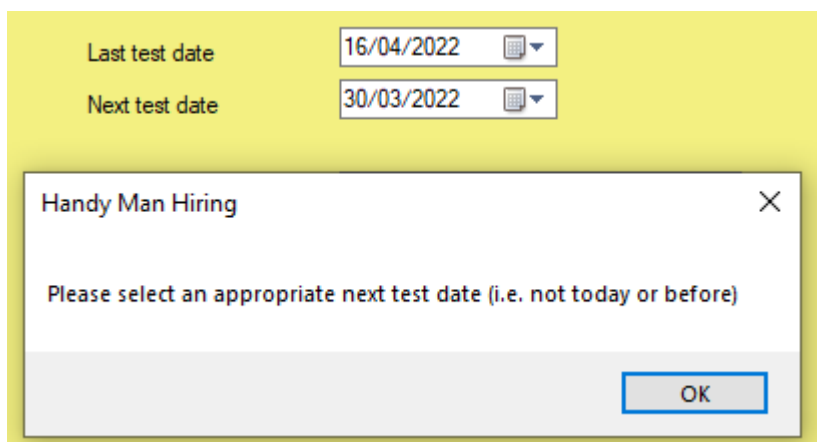
Confirmation
 Please confirm these details by clicking OK
 OK Cancel

If today's date (extreme value) is entered as the last test date, then the program continues as it is supposed to

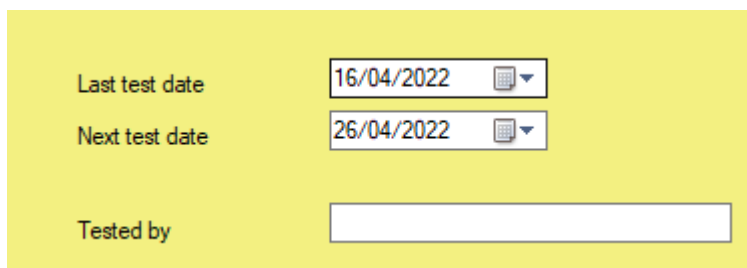
36	Adding Equipment	Function	Test "Next Test Date" with valid, extreme, and invalid (i.e. unchanged or before today) values
----	------------------	----------	--



If a valid next test date is entered, then the program continues as it is supposed to

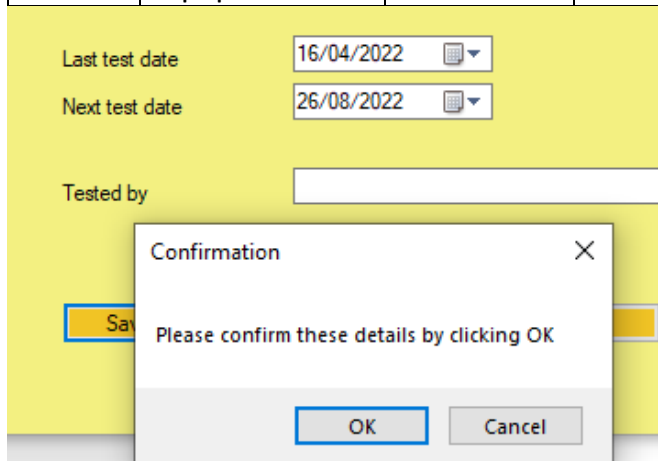


If the next test date is on or before today, then the error message above is displayed

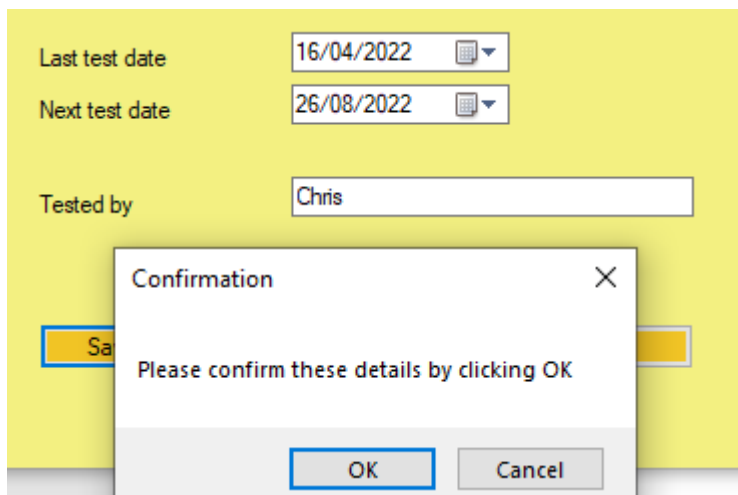


If tomorrow's date (extreme value) is entered as the next test date, then the program continues as it is supposed to

37	Adding Equipment	Function	Test "Tested By" with valid and no values
----	------------------	----------	---



If no value is entered for "Tested By" then the program continues running. This should not happen and I would solve this by adding a presence check on "Tested By"



If a valid "Tested By" value is entered, then the program continues as it is supposed to

38	Adding Equipment	System	Test saving without a generated ID
----	------------------	--------	------------------------------------



If no ID is generated, then the above error message is displayed

39	Adding Equipment	System	Test that "Save" shows a confirmation message and saves the data to the equipment text file in the alphabetically correct position
----	------------------	--------	--

The screenshot shows a web form titled "Adding Equipment" with the following fields: Equipment ID (45), Item Name (Flood light), Amount in stock (4), Reorder stock level (3), Reorder quantity (1), Last test date (18/03/2022), Next test date (18/10/2022), and Tested by (Chris). A "Generate ID" button is next to the Equipment ID field. A "Save" button is highlighted in blue. A modal dialog box titled "Handy Man Hiring" with the message "Data has been saved" and an "OK" button is overlaid on the form. To the right of the form is a list of equipment items, with the entry "45, Flood light, 4, 3, 1, 18/03/2022, 18/10/2022, Chris" highlighted in yellow.

Equipment List:

- 18, Axe, 3, 1, 1, 15/01/2022, 30/03/2022, Chris
- 40, Cement Mixer, 1, 0, 1, 15/03/2022, 15/03/2023, Chris
- 10, Chainsaw, 1, 0, 1, 26/03/2022, 10/06/2022, Chris
- 11, Chisel, 3, 3, 2, 27/03/2022, 21/05/2022, Chris
- 20, Crowbar, 1, 0, 1, 11/03/2022, 14/04/2022, Chris
- 28, Drain Lifter, 1, 0, 1, 01/01/2022, 06/09/2022, Chris
- 4, Duct Tape, 13, 10, 5, 21/02/2022, 21/06/2022, Chris
- 45, Flood light, 4, 3, 1, 18/03/2022, 18/10/2022, Chris
- 14, G-Clamp, 3, 2, 1, 25/01/2022, 25/05/2022, Chris
- 15, Hammer, 2, 2, 1, 18/03/2022, 18/06/2022, Chris
- 8, Heavy Duty Bag, 7, 6, 2, 12/12/2021, 12/05/2022, Chris
- 39, Heavy Duty Face Cover, 1, 0, 1, 01/03/2022, 01/03/2023, Chris
- 42, Heavy Duty Gloves (Pair), 3, 2, 1, 17/01/2022, 17/01/2023, Chris
- 24, Hose, 2, 1, 2, 01/01/2022, 01/04/2022, Chris
- 35, Kit - Carpentry, 2, 0, 2, 05/09/2021, 05/09/2022, Chris
- 36, Kit - Electrician, 2, 0, 2, 17/03/2021, 17/04/2022, Chris
- 37, Kit - Gardening, 2, 0, 2, 20/06/2021, 20/06/2022, Chris
- 34, Kit - Plumbing, 2, 0, 2, 20/10/2021, 20/10/2022, Chris

If "Save" is clicked and all the entered values are correct then a confirmation message is displayed and the data is saved alphabetically within the equipment text file according to the item's name

40	Adding Equipment	Function	Test that "Clear" clears and resets values
----	------------------	----------	--

Adding Equipment

Equipment ID:

Item Name:

Amount in stock:

Reorder stock level:

Reorder quantity:

Last test date:

Next test date:

Tested by:

Adding Equipment

Equipment ID:

Item Name:

Amount in stock:

Reorder stock level:

Reorder quantity:

Last test date:

Next test date:

Tested by:

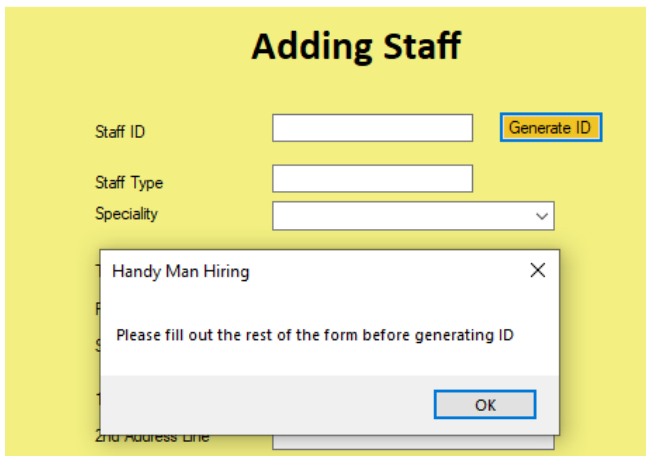
If "Clear" is clicked, then the values are cleared and reset

41	Adding Equipment	Function	Test that "Quit" closes the form
----	------------------	----------	----------------------------------



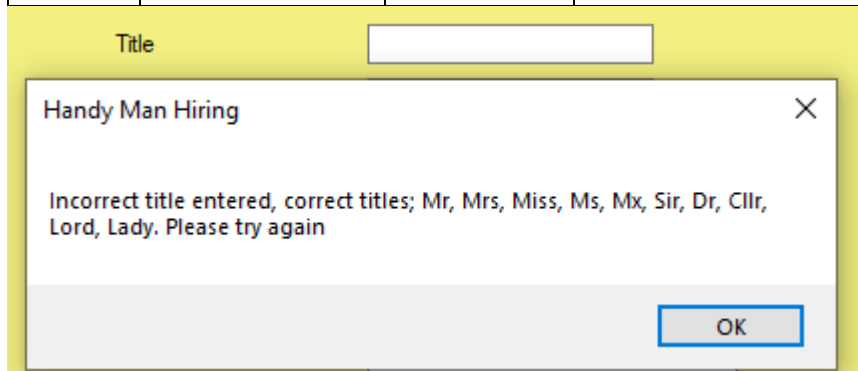
If "Quit" clicked then the form is closed and the admin menu remains open

42	Adding Staff	Function	Test "Generate ID" button with no entered values within the textboxes
----	--------------	----------	---

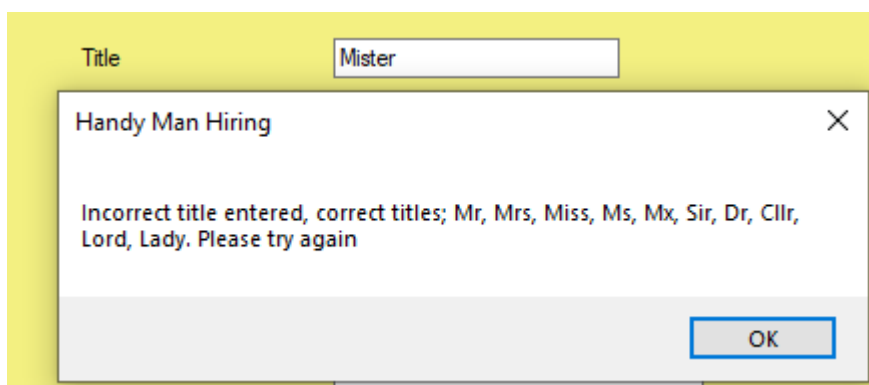


If "Generate ID" is clicked with the required textboxes being empty then the program displays the above error message

43	Adding Staff	Function	Test "Title" textbox with valid, invalid, and no values
----	--------------	----------	---



If no title entered then the above error message is displayed

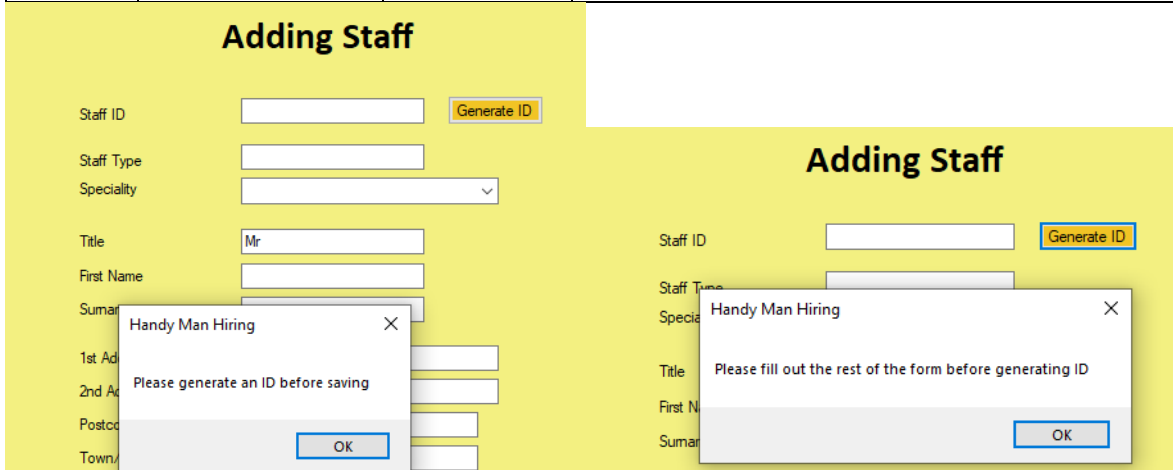


If an invalid title is entered then the above error message is displayed

The image shows the form with three fields: 'Staff Type' (empty text box), 'Speciality' (dropdown menu), and 'Title' (text box containing 'Mr').

If a valid title is entered then the program continues as it should

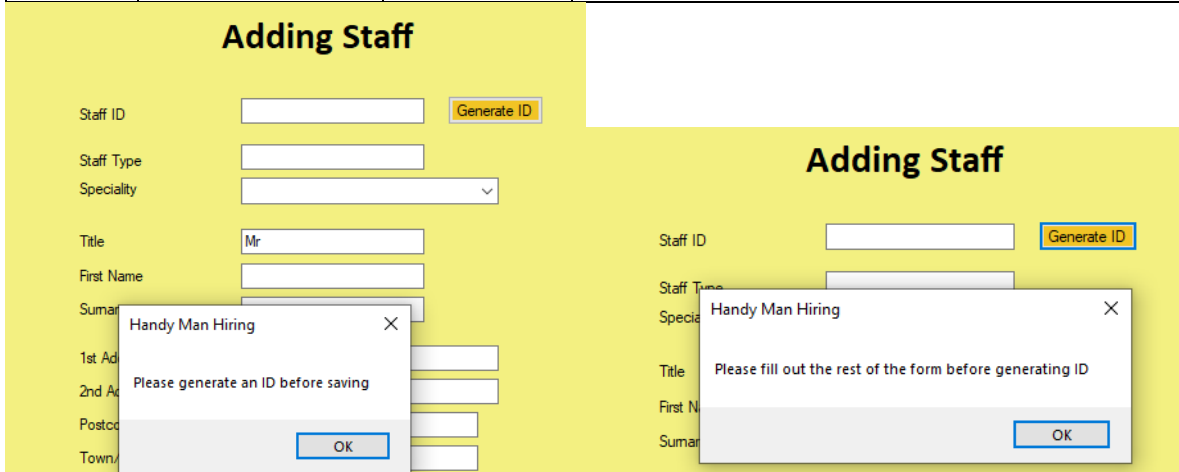
44	Adding Staff	Function	Test "First Name" with valid and no values
----	--------------	----------	--



If no first name is entered then the staff ID textbox will be clear, however the user won't be able to generate an ID without the required textboxes being filled, thus the user must enter a first name

If a valid first name is entered then the program continues as it should

45	Adding Staff	Function	Test "Surname" with valid and no values
----	--------------	----------	---



If no surname is entered then the staff ID textbox will be clear, however the user won't be able to generate an ID without the required textboxes being filled, thus the user must enter a surname

If a valid surname is entered then the program continues as it should

46	Adding Staff	Function	Test the address part with valid, none, and some missing values
----	--------------	----------	---

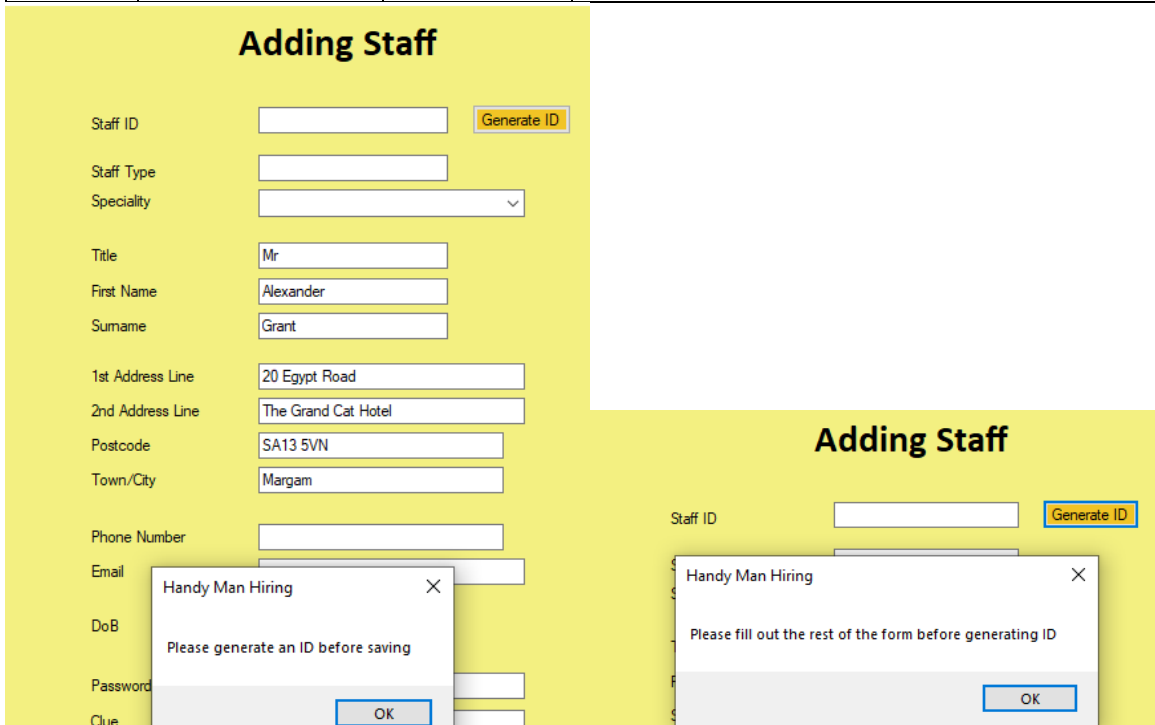
The screenshot shows a 'Confirmation' dialog box with a close button (X) in the top right corner. The dialog contains the text 'Please confirm these details by clicking OK'. On the left, there are four text input fields: '1st Address Line', '2nd Address Line', 'Postcode', and 'Town/City'. All four fields are currently empty. At the bottom right of the dialog, there are two buttons: 'OK' and 'Cancel'.

If no values are entered then the program continues. However, a confirmation message appears meaning that the user has a chance to check if all the entered values are correct. This is the same no matter how many of the address textboxes are empty.

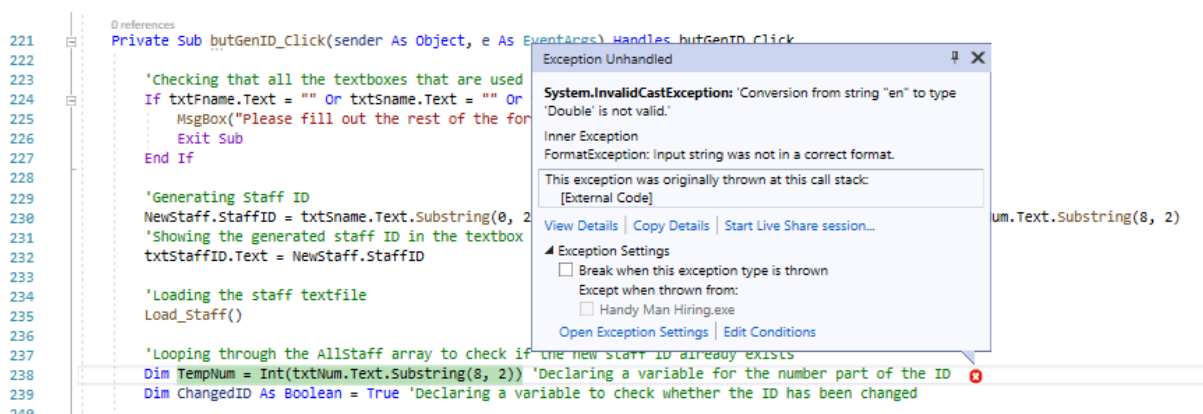
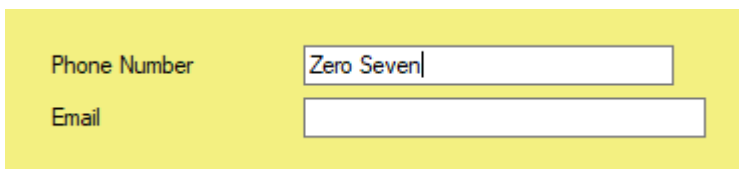
The screenshot shows a 'Confirmation' dialog box with a close button (X) in the top right corner. The dialog contains the text 'Please confirm these details by clicking OK'. On the left, there are four text input fields: '1st Address Line', '2nd Address Line', 'Postcode', and 'Town/City'. These fields are filled with the following text: '20 Egypt Road', 'The Grand Cat Hotel', 'SA13 5VN', and 'Margam'. At the bottom right of the dialog, there are two buttons: 'OK' and 'Cancel'.

If all the values are entered then the program continues. It still displays the confirmation message in case the user has entered something incorrectly.

47	Adding Staff	Function	Test "Phone Number" with letters, string of length <11, string of length = 11, string of length > 11
----	--------------	----------	--



If no phone number is entered, then there will be no value within the ID and since the form won't allow you to save without an ID, and you cannot generate an ID with empty textboxes, the form won't allow for an empty phone number.



If a non-integer phone number is entered, then the program stops running as the ID generator is not able to convert the value of the textbox into an integer. To solve this issue I would you a "Try-Catch" sequence within the ID generation to check that the textbox value is an integer.

Adding Staff

Staff ID

Staff Type

Speciality

Title

First Name

Surname

1st Address Line

2nd Address Line

Postcode

Town/City

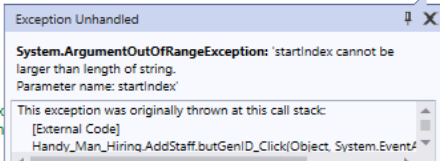
Phone Number

Email

```

229 'Generating Staff ID
230 NewStaff.StaffID = txtSname.Text.Substring(0, 2).ToUpper & txtFname.Text.Substring(1, 2).ToUpper & txtNum.Text.Substring(8, 2)
231 'Showing the generated staff ID in the textbox
232 txtStaffID.Text = NewStaff.StaffID
233
234 'Loading the staff textfile
235 Load_staff()
236
237 'Looping through the AllStaff array to check if the new staff ID already exists
238 Dim TempNum = Int(txtNum.Text.Substring(8, 2)) 'Declaring a variable for the phone number
239 Dim ChangedID As Boolean = True 'Declaring a variable to check whether the ID has been changed

```



If a phone number of length < 11 is entered, then the program stops running because the ID generator handles the 8th and 9th digit of the phone number for the ID and there is none. To solve this I would include a length check for phone number within the ID generation subroutine rather than within the “Save” subroutine

Adding Staff

Staff ID

Staff Type

Speciality

Title

First Name

Surname

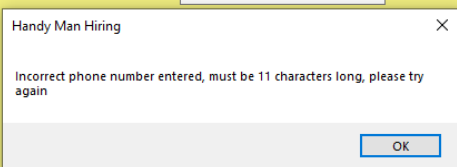
1st Address Line

2nd Address Line

Postcode

Town/City

Phone Number



If a phone number of length > 11 is entered, then the ID can be generated however the program won't allow this number to be saved as it shows the error message above

Adding Staff

Staff ID	<input type="text" value="GRLE82"/>	<input type="button" value="Generate ID"/>
Staff Type	<input type="text"/>	
Speciality	<input type="text" value=""/>	
Title	<input type="text" value="Mr"/>	
First Name	<input type="text" value="Alexander"/>	
Surname	<input type="text" value="Grant"/>	
1st Address Line	<input type="text" value="20 Egypt Road"/>	
2nd Address Line	<input type="text" value="The Grand Cat Hotel"/>	
Postcode	<input type="text" value="SA13 5VN"/>	
Town/City	<input type="text" value="Margam"/>	
Phone Number	<input type="text" value="07462371824"/>	
Email	<input type="text"/>	
DoB	<input type="text" value="01/01/1900"/>	<input type="button" value=""/>

If a phone number of length 11 is entered, then the program continues as it is supposed to

48	Adding Staff	Function	Test "Email" with valid format, invalid format, and no values
----	--------------	----------	---

The screenshot shows a form with the following fields: Town/City (Margam), Phone Number (07462371824), and Email (empty). An error dialog box titled "Handy Man Hiring" is displayed, containing the message: "Incorrect email format detected, must be like ___@___. , please try again". An "OK" button is visible at the bottom of the dialog box.

If no email is entered, then the error message above it displayed and the data is not saved

The screenshot shows a form with the following fields: Town/City (Margam), Phone Number (07462371824), and Email (AlexTheGreat@hotmail). An error dialog box titled "Handy Man Hiring" is displayed, containing the message: "Incorrect email format detected, must be like ___@___. , please try again". An "OK" button is visible at the bottom of the dialog box.

If an email in the wrong format is entered, then the error message above it displayed and the data is not saved

The screenshot shows a form with the following fields: Postcode (SA13 5VN), Town/City (Margam), Phone Number (07462371824), Email (AlexTheGreat@hotmail.co.uk), and DoB (01/01/1900). The form is complete and no error messages are present.

If an email with the correct format is entered, then the program continues as it is supposed to

49	Adding Staff	Function	Test "Speciality" with none and valid values
----	--------------	----------	--

Confirmation ×

Please confirm these details by clicking OK

OKCancel

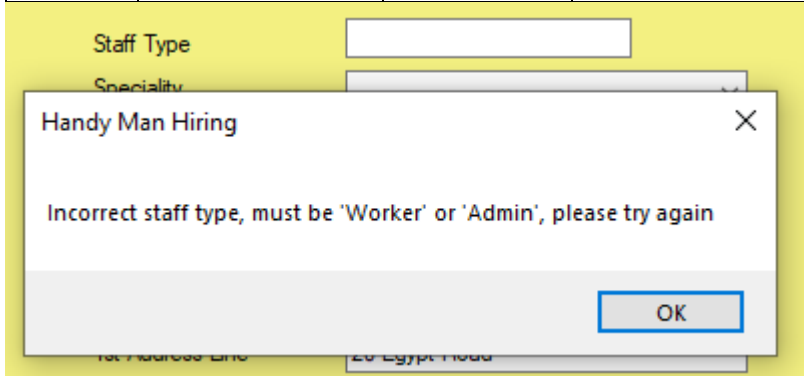
If no speciality is entered, the program keeps on running however the confirmation message above appears before saving so this is a chance for the user to check their textboxes

Adding Staff

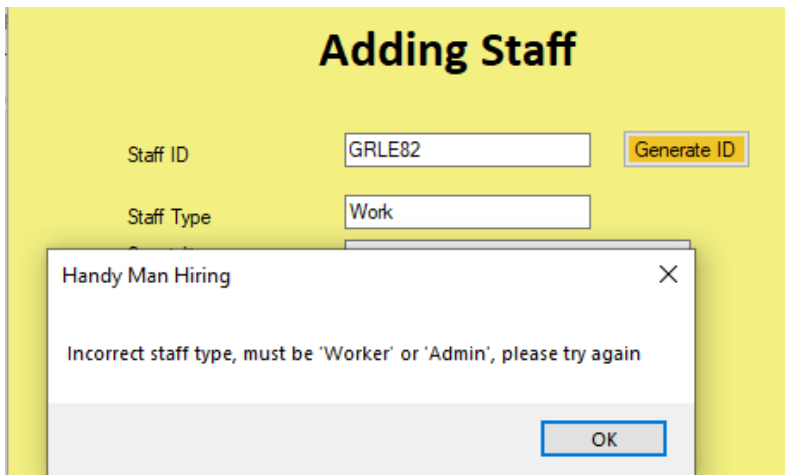
Staff ID	<input type="text" value="GRLE82"/>	<input type="button" value="Generate ID"/>
Staff Type	<input type="text" value="Admin"/>	
Speciality	<input type="text" value="Plumbing"/>	
Title	<input type="text" value="Mr"/>	
First Name	<input type="text" value="Alexander"/>	

If a valid speciality is selected then the program continues as it should

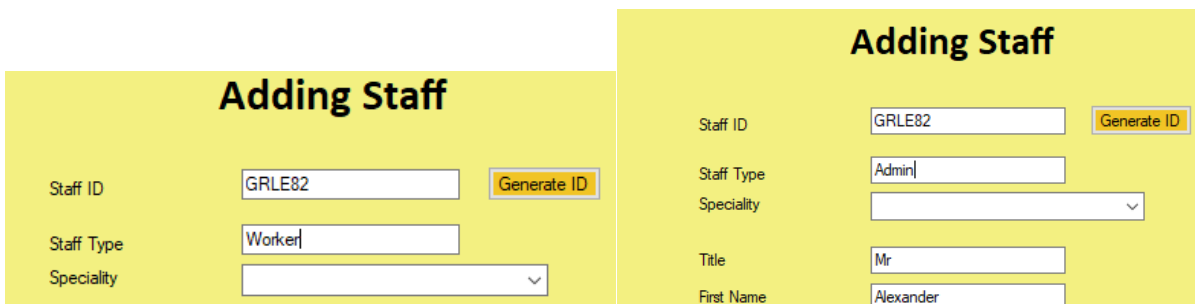
50	Adding Staff	Function	Test "Staff Type" with none, valid, and invalid values
----	--------------	----------	--



If no value is entered then the error message above appears

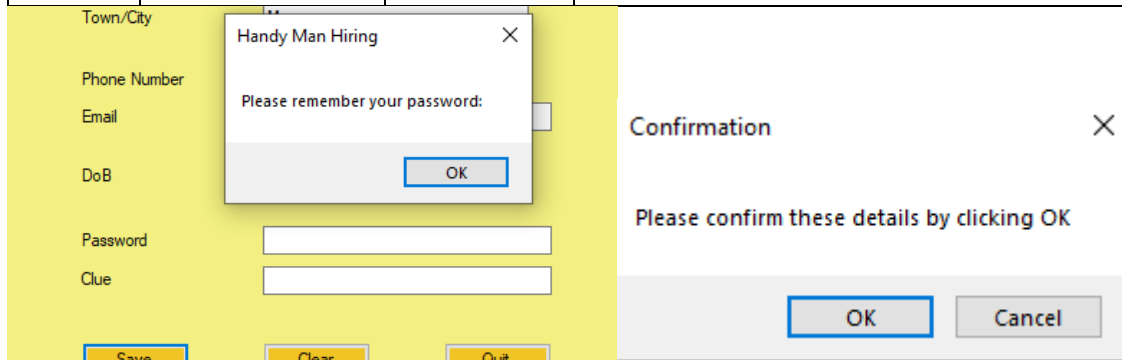


If an invalid value is entered then the error message above appears

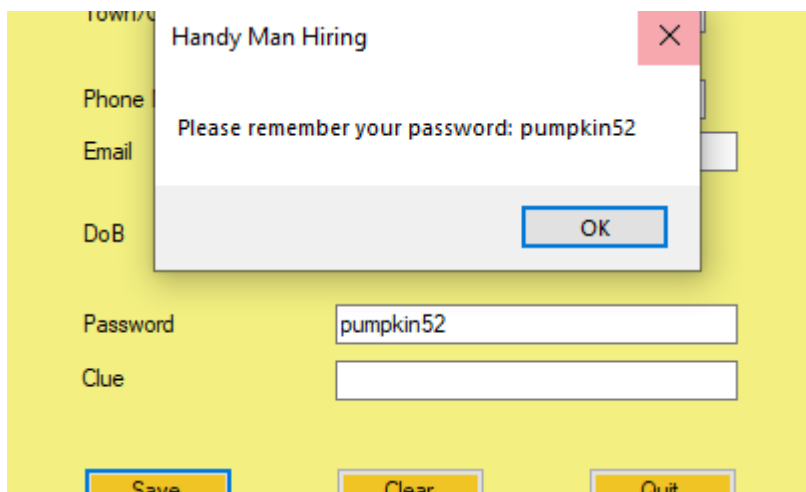


If one of the two valid staff types is entered then the program continues as it should

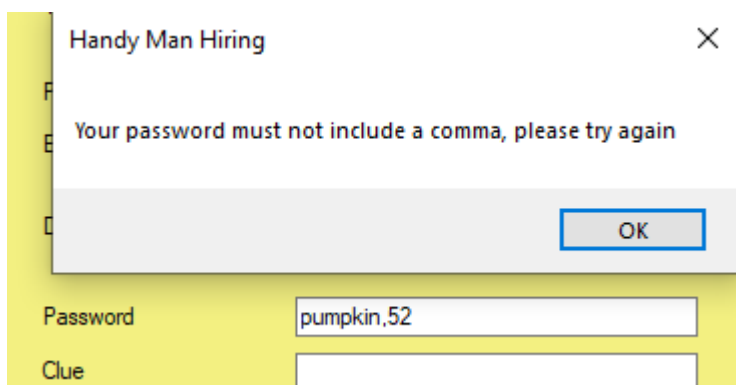
51	Adding Staff	Function	Test "Password" with none, valid, and invalid values
----	--------------	----------	--



If no password is entered then the program continues however the confirmation message above appears before saving so this is a chance for the user to check their textboxes

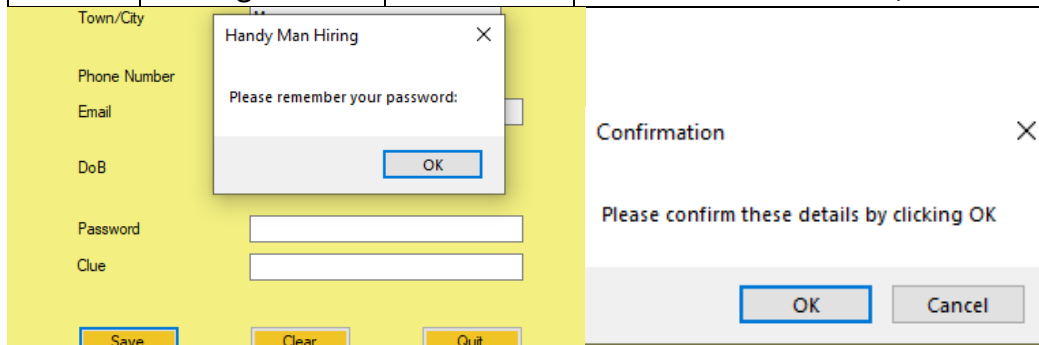


If a valid password is entered then the program continues as it should and also displays a reminder of the users password before clearing after saving

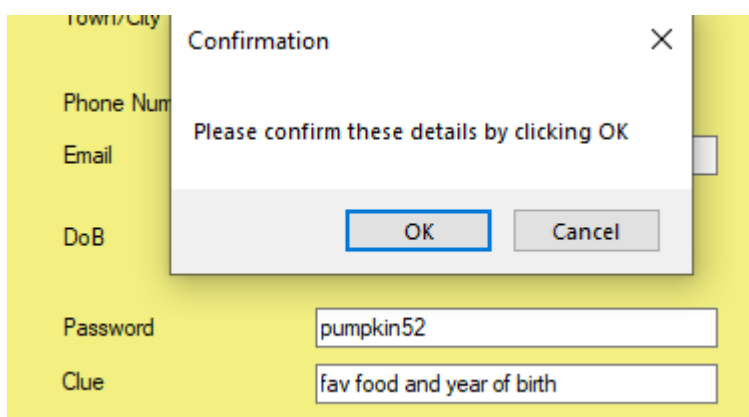


If an invalid password with a comma is entered then the error message above is displayed

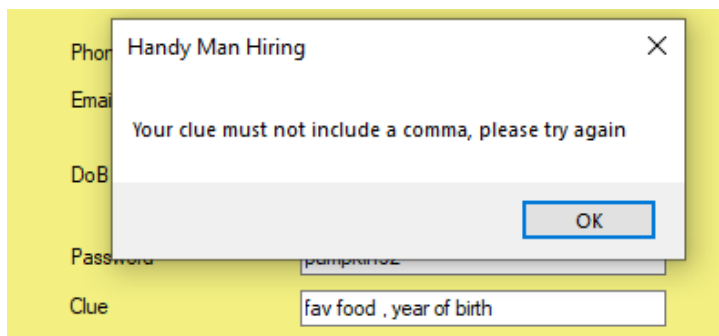
52	Adding Staff	Function	Test "Clue" with none, valid and invalid values
----	--------------	----------	---



If no clue is entered then the program continues however the confirmation message above appears before saving so this is a chance for the user to check their textboxes



If a valid password is entered then the program continues as it should



If an invalid clue with a comma is entered then the error message above is displayed

53	Adding Staff	System	Test saving without a generated ID
----	--------------	--------	------------------------------------

The screenshot shows a web form titled "Adding Staff" on a yellow background. The form contains the following fields and values:

- Staff ID: (empty) with a "Generate ID" button to its right.
- Staff Type:
- Speciality: - Title:
- First Name:
- Surname:
- 1st Address Line:
- 2nd Address Line:
- Postcode:
- Town/City:
- Phone Number:
- Email:
- DoB: - Password:
- Clue:

At the bottom of the form are three buttons: "Save", "Clear", and "Quit".

An error message dialog box is overlaid on the form. The dialog box has a title bar that says "Handy Man Hiring" and a close button (X). The message inside the dialog box reads: "Please generate an ID before saving". There is an "OK" button at the bottom of the dialog box.

If user tries to save without a generated ID then the program displays the above error message

54	Adding Staff	System	Test that "Save" shows a confirmation message and saves the staff data to the staff text file in the alphabetically correct position
----	--------------	--------	--

```

AARR24,Mr,Aron,Aarinson,12 Alexander Street,,SA10 6HQ,Abberdine,07458312243,JeepDriver
BAL019,Mr,Steven,Barington,312 Downing Lane,,SA12 5HF,Swansea,07462382192,BloodyLovely
CER047,Mrs,Polly,Celestia,18 Paris Street,,SA13 1HL,Margam,07573829472,Ceclius9123@gma
CRHR49,Mr,Chris,Crowley,12 Frontend Street,Flat A,SA12 4RE,Port Talbot,07463728491,CC4
CROW16,Mr,Peter,Craig,43 Greta Street,,SA14 5TO,Tonna,07473829160,PowellCraig@gmail.cc
GRLE82,Mr,Alexander,Grant,20 Egypt Road,The Grand Cat Hotel,SA13 5VN,Margam,0746237182
KEAV92,Mrs,Lucy,Keave,23 Brook Avenue,,CF9 6FH,Cardiff,07467230911,KDavid@hotmail.com,
KERI19,Mr,Chris,Keave,127 Prince Road,,SA6 T65,Cymmer,07238948192,princeKel@hotmail.cc
MARO29,Miss,Margret,Mapp,12 Hades Street,,SA11 1HL,Neath,07463819293,chessPLAYER@gmail
TYAK19,Mr,Cody,Tylinski,1 Addison Lane,,SA12 6HJ,Port Talbot,07592130481,JamesJamensor

```

If all the textboxes are correct and "Save" is clicked, then the confirmation messages (shown above) are displayed and the staff is saved within the staff text file alphabetically according to their surname

55	Adding Staff	System	Test that "Save" saves the password data to the password text file and creates an appropriate password ID
----	--------------	--------	---

```

File Edit Format View Help
1, MAR029, Worker, Chess, Board Game
2, CER047, Worker, HarryPotter, Favourite film character no spaces
3, TYAK19, Worker, Cody, First Name
5, AARR24, Admin, ILoveJeeps, Jeep
7, KEAV92, Worker, Maddison, Mother
9, KERI19, Admin, Cycling80, Fav hobby + fav number
4, CROW16, Worker, Running007, Fav hobby + reference to fav film
6, BAL019, Worker, Vampire, Mystical creature
8, CRHR49, Worker, duckhunting, Activity with dad - no caps or spaces
10, GRLE82, Admin, pumpkin52, fav food + year of birth

```

If "Save" is clicked then the password data is saved to the password text file along with a generated password ID according to the number of other data lines within the file

56	Adding Staff	Function	Test that "Clear" clears and resets the values
----	--------------	----------	--

Adding Staff

Staff ID

Staff Type

Speciality

Title

First Name

Surname

1st Address Line

2nd Address Line

Postcode

Town/City

Phone Number

Email

DoB

Password

Ciue

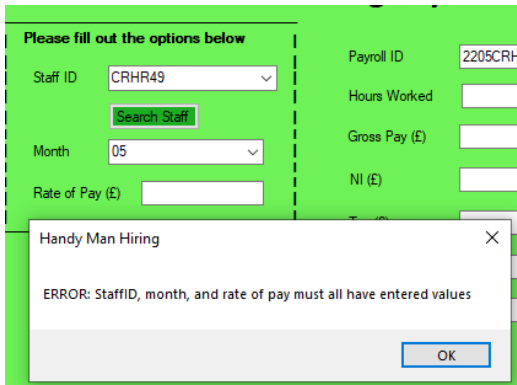
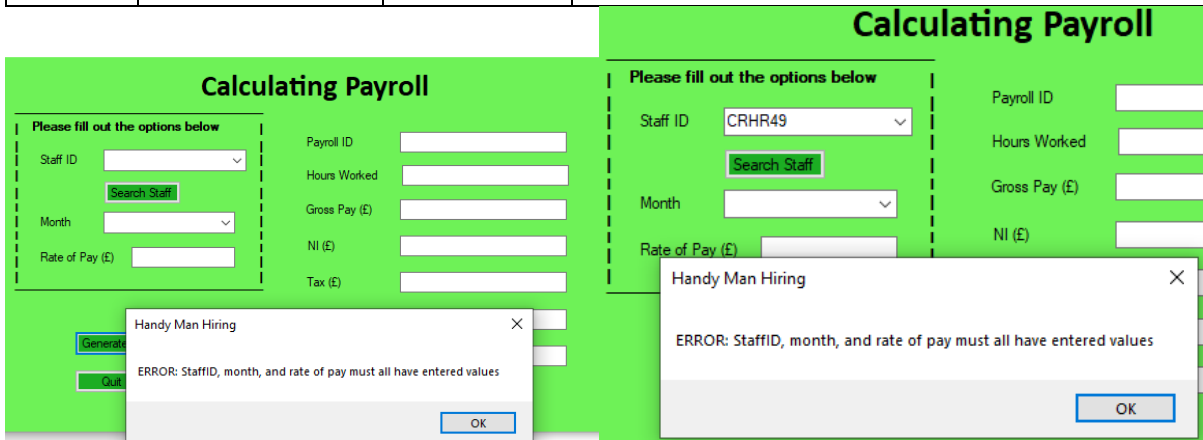
If "Clear" clicked then all the textboxes are cleared/reset

57	Calculating Payroll	Function	Test that once drop down list values are selected then the staff members data for that month is loaded
----	---------------------	----------	--

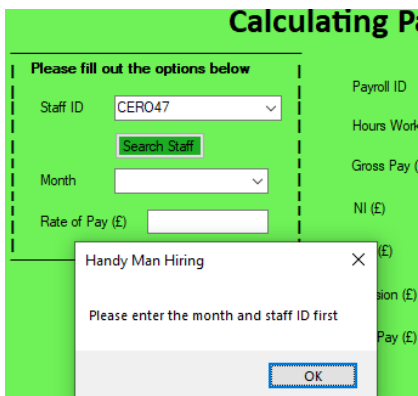
Once a staff ID and month are selected, the program asks for the rate of pay to be entered

After the rate of pay is entered then the staff member's data for that month is loaded

58	Calculating Payroll	System	Test "Generate Payroll Slip" with no entered values, only no month selected, and only no pay rate selected
----	---------------------	--------	--

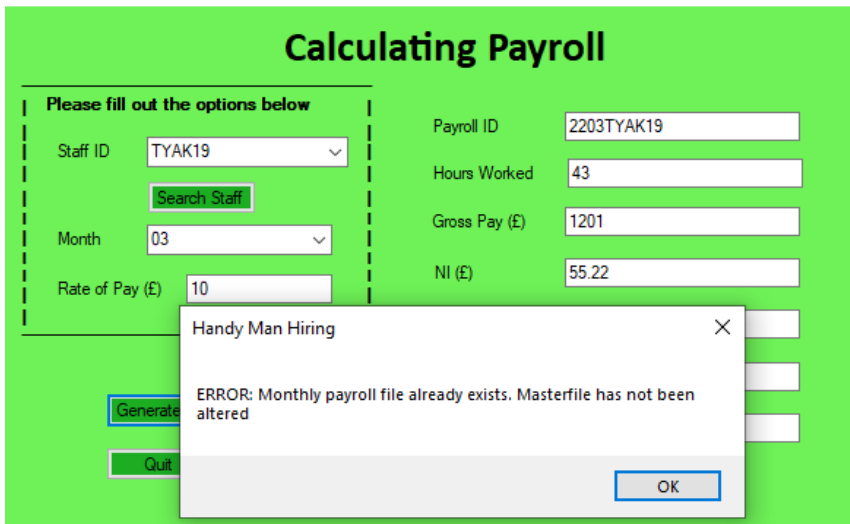


If "Generate Payroll Slip" is clicked with any of the drop down lists being empty, the error message shown above appears each time



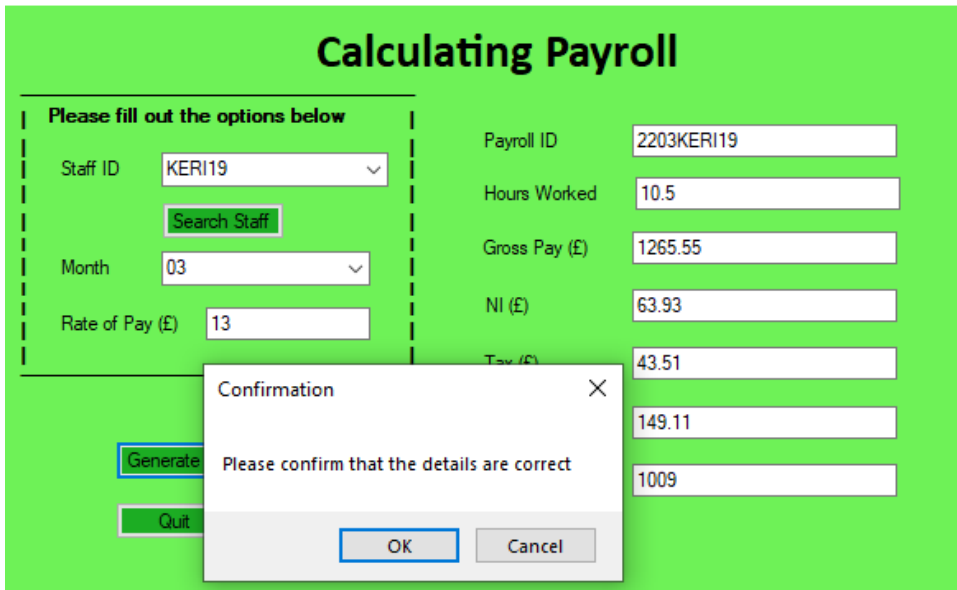
If rate of pay is attempted to be entered with the month and/or staff ID being empty, then the error message shown above appears

59	Calculating Payroll	System	Test "Generate Payroll Slip" with invalid values where the payroll slip already exists
----	---------------------	--------	--

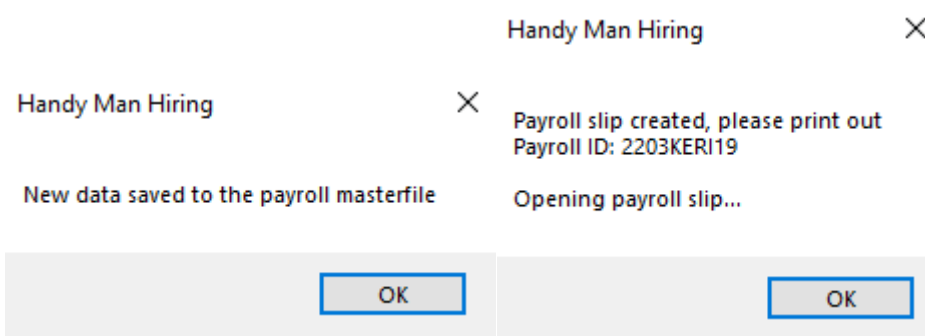


If an already existing payroll slip is attempted to be generated, then the error message above appears

60	Calculating Payroll	System	Test "Generate Payroll Slip" with valid values and that it amends the Masterfile and also creates and opens a new text file for the individual payroll slip
----	---------------------	--------	---



If valid values entered then confirmation message appears



If confirmation message is "OK" then the two message boxes above appear

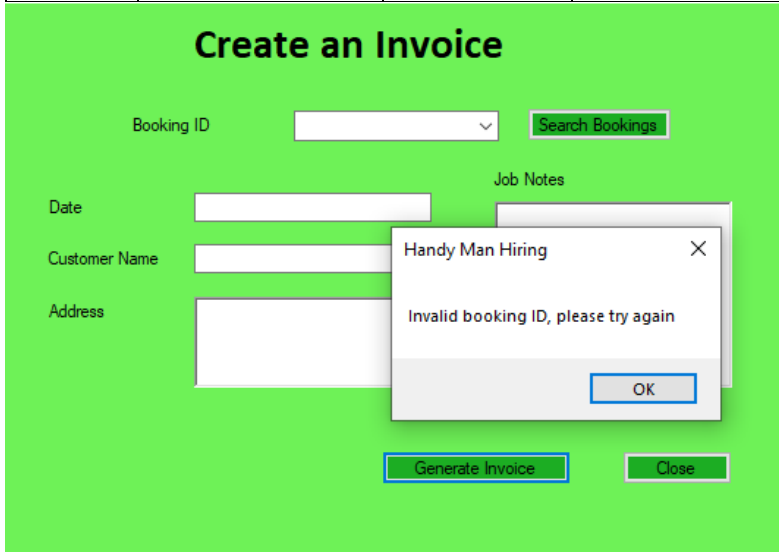
```
***** HANDY MAN HIRING *****
Month:           03
Payroll ID:      2203KERI19
Staff ID:        KERI19

Rate of pay (£): 13
Hours worked:    10.5

Gross Income:    1265.55
National Insurance: 63.93
Income Tax:      43.51
Pension:         149.11
Net Income:      1009
```

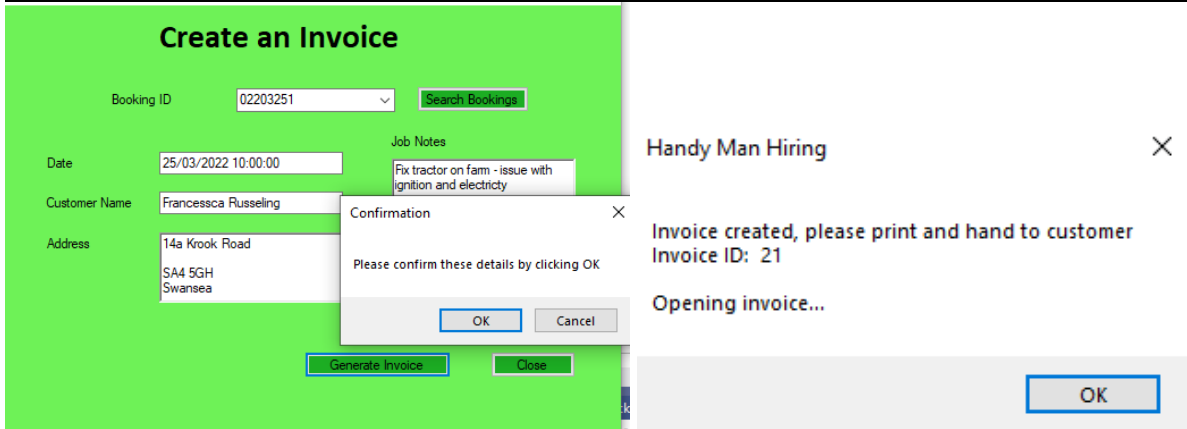
Finally the individual payroll text file is opened (as shown above) and this is to be printed out and given to the staff member

61	Creating Invoice	Function	Test "Generate Invoice" with no value
----	------------------	----------	---------------------------------------



If no booking ID is selected, then the above error message is displayed

62	Creating Invoice	System	Test "Generate Invoice" with valid booking ID, that a confirmation message appears and that the data is saved to the invoice Masterfile and an individual invoice is created and displayed
----	------------------	--------	--



If a valid booking ID is selected then a confirmation message appears and, once OK is clicked, the next message appears (right) and the invoice is created and opened (below)

```

***** HANDY MAN HIRING *****
                          Bryncoch, Neath, SA10 7PD
                                          25/04/2022 18:08:29

Customer:
Francesca Russeling
14a Krook Road

SA4 5GH
Swansea

Invoice ID      Booking ID
21              02203251

Booking Date    Job Type      Staff ID      Staff Name
25/03/2022 10:00:00  Other        CRHR49       Chris Crowley

Job Notes:
Fix tractor on farm - issue with ignitricty

                                          Price: 100

                          Thank you for you Order
Website: HandyManHiringBryncoch.co.uk  email: info@HMHBryn.co.uk  Phone:01790 182934

```

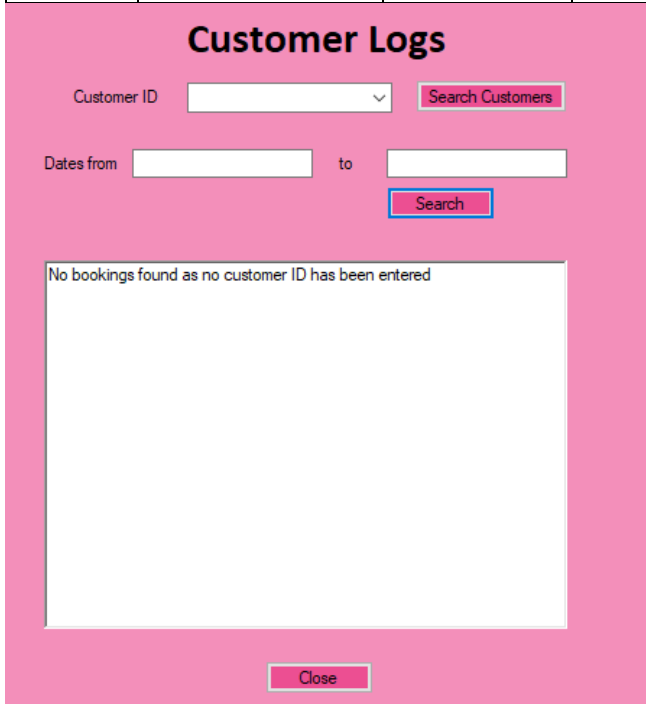
The data is also added to the invoice Masterfile as shown below

```

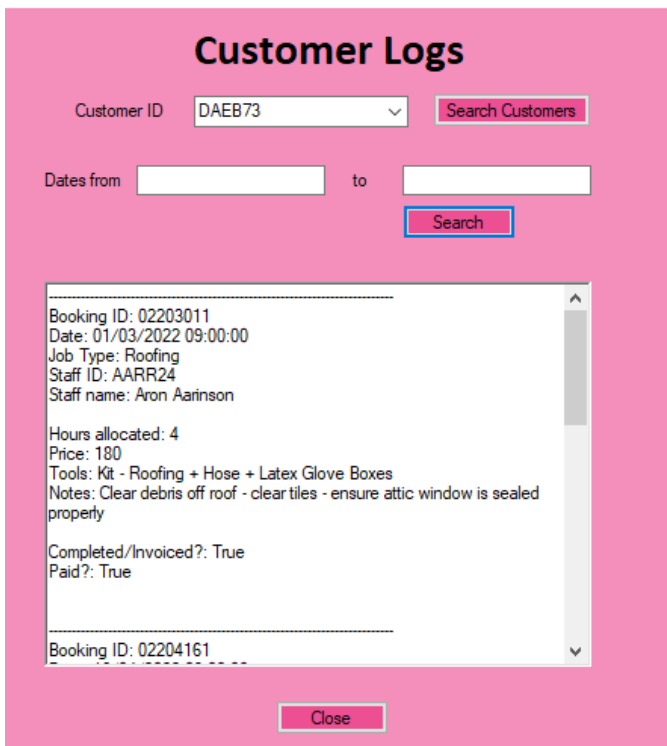
18,02203152,15/03/2022 08:00:00,300,False
19,02203151,15/03/2022 13:20:00,60,True
20,02203161,16/03/2022 13:20:55,180,False
21,02203251,25/03/2022 10:00:00,100,False

```


63	Customer Logs	Function	Test "Search" with no entered customer ID, no selected dates, only the min date, only the max date, and both dates
----	---------------	----------	--



If no customer ID entered then no data will be displayed and an error message shown



If customer ID has been entered but no dates have, then all of that customer's booking data will be loaded

Customer Logs

Customer ID:

Dates from: to:

Booking ID: 02204161
 Date: 16/04/2022 09:00:00
 Job Type: Carpentry
 Staff ID: MARO29
 Staff name: Margret Mapp

Hours allocated: 7
 Price: £600
 Tools: Kit - Carpentry + Screws + Workshop Vice + Saw + Chisel + Nail Gun + Nails
 Notes: Build the chicken coop in the back + materials are in the shed + may need to book a second day

Completed/Invoiced?: False
 Paid?: False (Booking has not been completed/invoiced yet)

If customer ID has been entered but only the min date has, then all of that customer's booking data will be loaded for bookings after that date

Customer Logs

Customer ID:

Dates from: to:

Booking ID: 02203011
 Date: 01/03/2022 09:00:00
 Job Type: Roofing
 Staff ID: AARR24
 Staff name: Aron Arinson

Hours allocated: 4
 Price: 180
 Tools: Kit - Roofing + Hose + Latex Glove Boxes
 Notes: Clear debris off roof - clear tiles - ensure attic window is sealed properly

Completed/Invoiced?: True
 Paid?: True

If customer ID has been entered but only the max date has, then all of that customer's booking data will be loaded for bookings before that date

Customer Logs

Customer ID

Dates from to

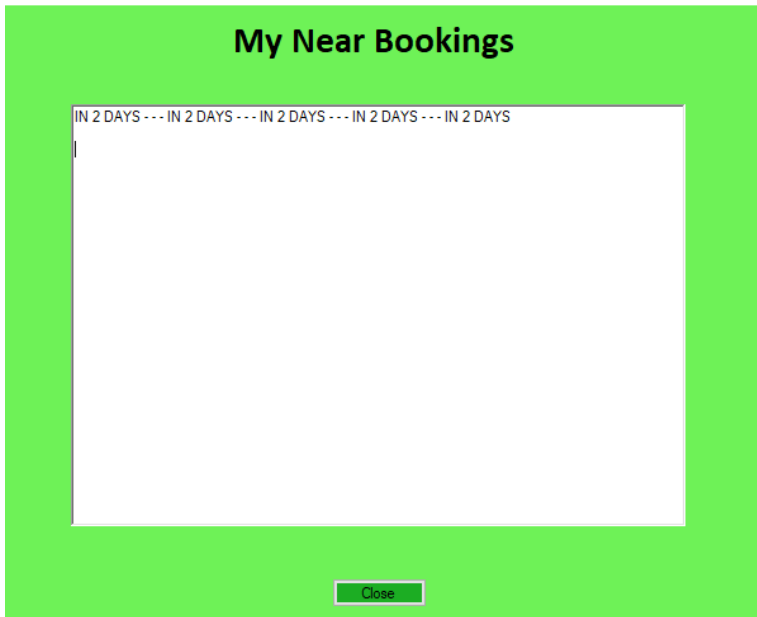
Booking ID: 02204161
Date: 16/04/2022 09:00:00
Job Type: Carpentry
Staff ID: MARO29
Staff name: Margret Mapp

Hours allocated: 7
Price: £600
Tools: Kit - Carpentry + Screws + Workshop Vice + Saw + Chisel + Nail Gun + Nails
Notes: Build the chicken coop in the back + materials are in the shed + may need to book a second day

Completed/Invoiced?: False
Paid?: False (Booking has not been completed/invoiced yet)

If customer ID has been entered and also both dates, then all of that customer's booking data will be loaded for bookings between those two dates

64	My Bookings Today	Function	Test that when the form is loaded, the bookings of the logged-on worker are displayed or a message is showed if there are no bookings
----	-------------------	----------	---



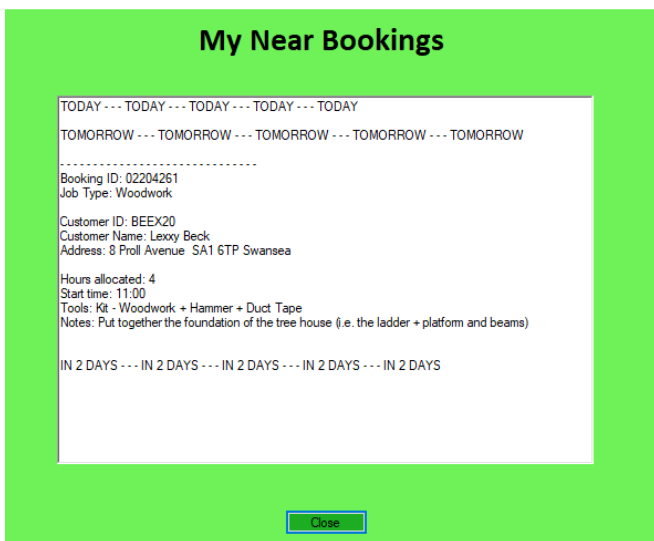
This is the logon of staff member with ID CROW16. As you can see they have a booking within 3 days, however it has not been displayed.

```

47 | .....*TOMORROW*.....
48 | 'Displays "Tomorrow" text
49 | rtxtBookingDetails.Text = rtxtBookingDetails.Text + "TOMORROW - - - TOMORROW - - - TOMORROW - - - TOMORROW - - - TOMORROW" + vbCrLf + vbCrLf
50 |
51 | 'Goer through bookings textfile
52 |
53 |
54 |
55 | .....*IN 2 DAYS*.....
56 | 'Displays "Tomorrow" text
57 | rtxtBookingDetails.Text = rtxtBookingDetails.Text + "IN 2 DAYS - - - IN 2 DAYS - - - IN 2 DAYS - - - IN 2 DAYS - - - IN 2 DAYS" + vl
58 |
59 |
60 |
61 |
62 |

```

I then add the following highlighted bit of code within the “MyBookingsToday” form. This allowed text generated to be added onto the previously existing text, rather than replacing it. Below you can see this coming into to plan within the rich text box:



65	Pay For Invoice	Function	Test that selecting an item into the drop down list loads all the invoices data
----	-----------------	----------	---

Paying for a Booking

Please enter Invoice ID

Invoice ID:

Booking ID:

Customer Name:

Date:

Job Notes:

Price (£):

VAT (£):

Gross Price (£):

Once an invoice ID is selected, all the invoices (and the booking associated with it) data is loaded into the textboxes

66	Pay For Invoice	Function	Test "Search Invoices" opens the searching invoices form
----	-----------------	----------	--

Searching an Invoice

Please fill these options to load the corresponding data

Invoice ID

Booking ID

Customer Data

Customer Name

Customer Address

Invoice Data

Invoice ID

Booking ID

Booking Date

Price

Paid

Booking Data

Job Notes

The "Search Invoices" opens the searching invoices form as shown above

67	Pay For Invoice	System	Test "Confirm Payment" with no selected invoice ID
----	-----------------	--------	--

Paying for a Booking

Please enter Invoice ID

Invoice ID

Booking ID

Customer Name

Date

Job Notes

Price (£)

VAT (£)

Gross Price (£)

Handy Man Hiring [X]

No invoice ID selected, please try again

The screenshot shows a web form titled "Paying for a Booking" on a green background. The form includes fields for Invoice ID, Booking ID, Customer Name, Date, Job Notes, Price (£), VAT (£), and Gross Price (£). A "Search Invoices" button is next to the Invoice ID field. At the bottom are "Confirm Payment" and "Cancel Payment" buttons. An error dialog box is overlaid on the form, titled "Handy Man Hiring" with a close button (X). The message in the dialog reads "No invoice ID selected, please try again" and has an "OK" button.

If no invoice ID has been selected, then the error message shown above is displayed

68	Pay For Invoice	System	Test "Confirm Payment" with a valid invoice ID displays a confirmation message and alters the invoice text file
----	-----------------	--------	---

Paying for a Booking

Please enter Invoice ID

Invoice ID: 11

Booking ID: 02202221

Customer: Handy Man Hiring

Date:

Job:

Price: N

VAT (£): 40

Gross Price (£): 240

Handy Man Hiring

Please tell the customer to provide payment

After clicking confirm payment, if N is entered then the message (right) appears

Handy Man Hiring

Please confirm, has customer provided payment? (Y/N)

Y

Gross Price (£): 240

Handy Man Hiring

Thank you for your payment, data saved

```

9,02203072,07/03/2022 09:00:00,300,True
10,02203041,04/03/2022 10:00:00,230,True
11,02202221,22/02/2022 10:15:40,200,True
12,02202141,14/02/2022 09:00:00,275,False
13,02203011,01/03/2022 09:00:00,180,True
14,02103051,05/03/2021 11:00:00,360,True
15,02203101,10/03/2022 11:00:00,160,True

```

If Y is entered then the invoice is set as "Paid = True" within the invoice Masterfile as shown above

69	Place a Booking	Function	Test "Generate ID" with no altered textbox values
----	-----------------	----------	---

Placing a Booking

Booking ID: 02204251 Generate ID

Job Type:

Date: 25/04/2022 - 12:00 AM

Customer ID: Search Customers

Staff ID:

Allocated Time (hrs):

Price (£):
(This does not including VAT)

Even if no textboxes are altered, the ID will be generated as the date textbox is automatically set as today's date and nothing else is required to generate the booking ID

70	Place a Booking	Function	Test that altering the "Job Type" displays the staff with that speciality within the staff ID drop down list, and if those staff members are not available then it displays all the available staff members
----	-----------------	----------	---

Placing a Booking

Booking ID:

Job Type:

Date:

Customer ID:

Staff ID:

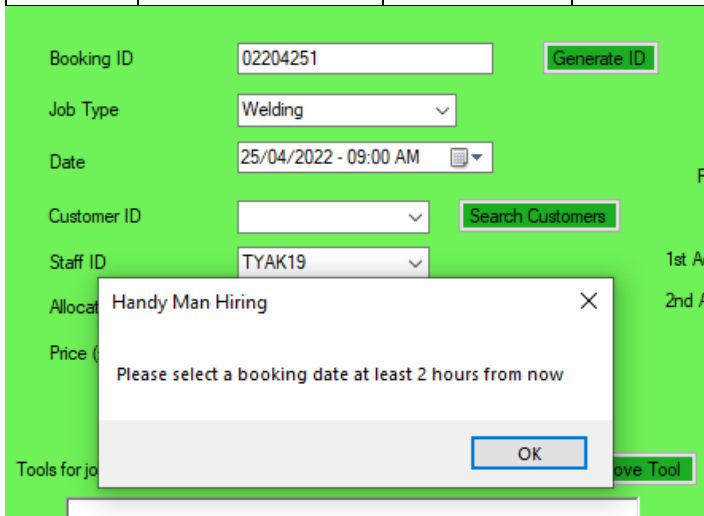
Allocated Time (hrs):

Price (£):

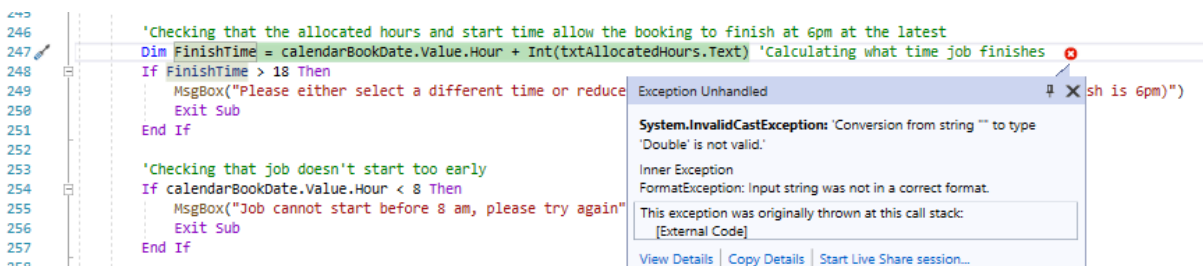
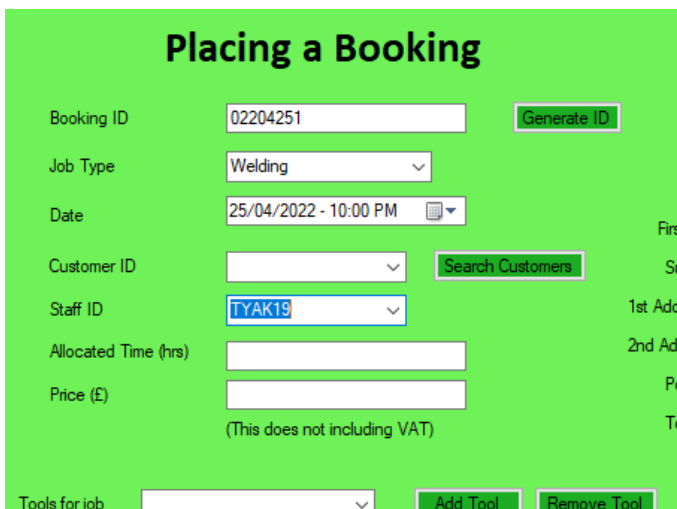
(This does not including VAT)

Once a job type is selected, the corresponding staff IDs are loaded with the same speciality. If no staff members with that speciality are available, then the available staff members are loaded.

71	Place a Booking	Function	Test "Booking Date" with valid, invalid, and extreme data values (for both date and time) in association to "Allocated Time"
----	-----------------	----------	--



If an invalid date that is not at least 2 hours from now is selected, the above error message appears



If a booking time 2 hours from now is selected, but no allocated time, the program stops running. This is because it cannot convert nothing to an integer. To fix this problem I would add a presence check to allocated hours before trying to convert it to an integer (i.e. before line 247).

Placing a Booking

Booking ID: 02204251 Generate ID

Job Type: Welding

Date: 25/04/2022 - 10:00 PM

Customer ID: Search Customers

Staff ID: TYAK19

Allocated Time (hrs): 8

Handy Man Hiring

Please either select a different time or reduce the amount of hours allocated (latest a worker will finish is 6pm)

OK

If a valid booking date and time is selected, along with allocated time, but the finish time is after 6pm then the error message shown above is displayed

Placing a Booking

Booking ID: 02204271 Generate ID

Job Type: Welding

Date: 27/04/2022 - 11:00 AM

Customer ID: Search Customers

Staff ID: TYAK19

Allocated Time (hrs): 7

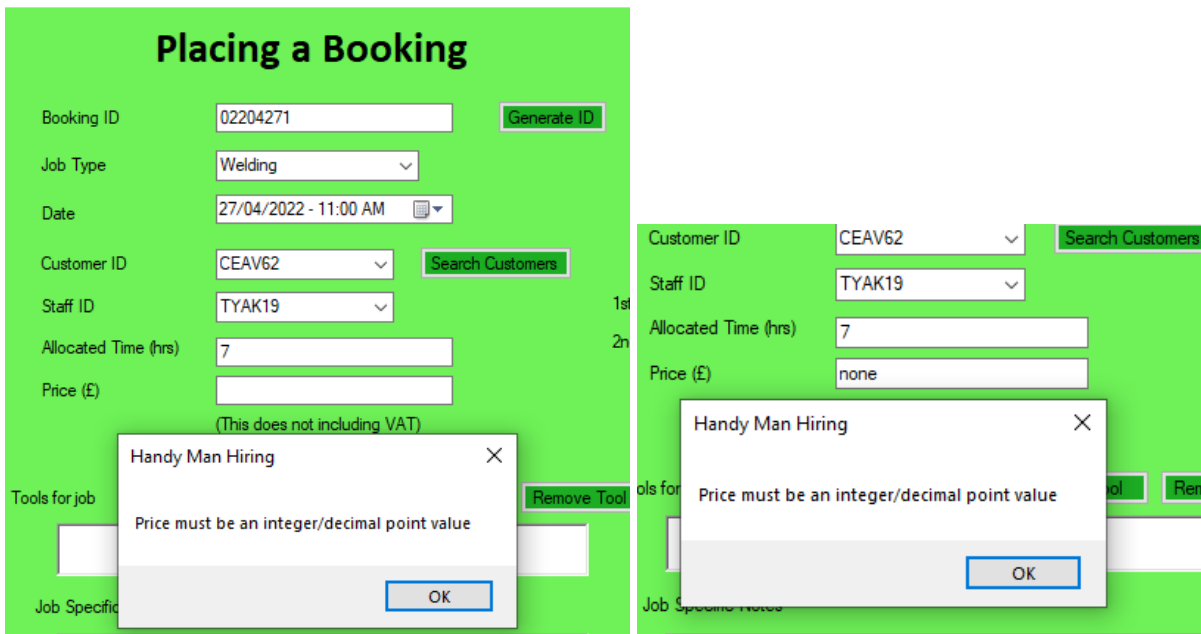
Price (£):

(This does not including VAT)

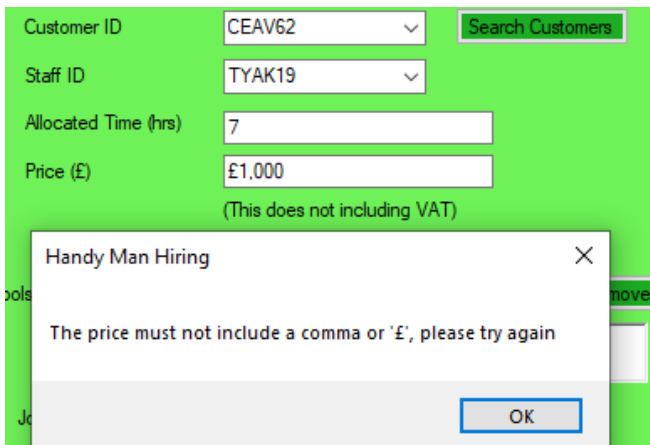
Tools for job: Add Tool Remove Tool

If a valid booking date, time, and allocated time is selected, with a finish time on or before 6pm, the program continues as it should

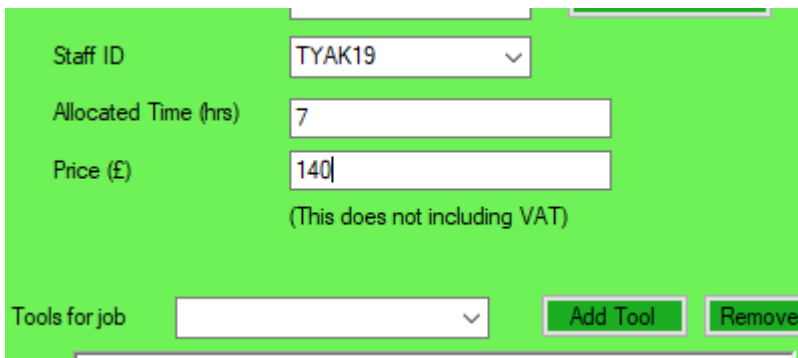
72	Place a Booking	Function	Test "Price" with no, valid, and invalid values
----	-----------------	----------	---



If no value is entered into price, or a non-integer value, then the error message above is displayed

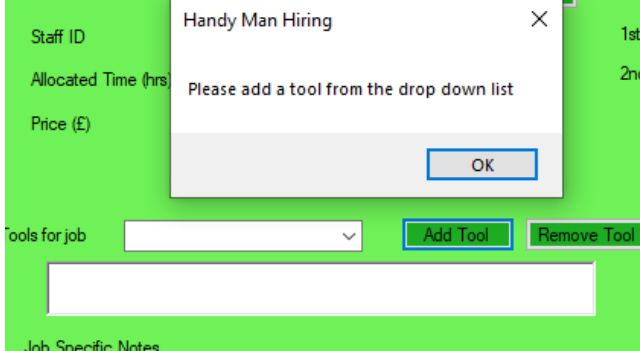


If invalid price is entered with a comma or "£", the above error message is displayed

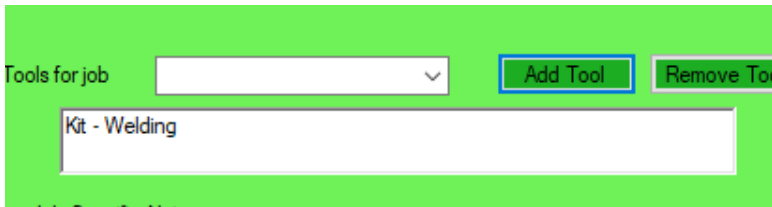


If a valid price is entered, the program continues as it should

73	Place a Booking	Function	Test "Add Tool" with no item in the tool drop down list and also with a tool selected
----	-----------------	----------	---



If no tool is selected within the drop down list, then the error message shown above is displayed

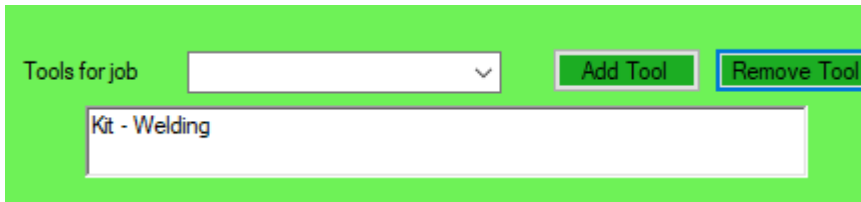
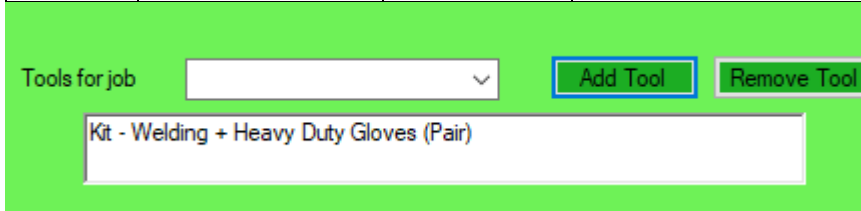


If a tool is selected and "Add Tool" is clicked, the tool is added to the rich text box

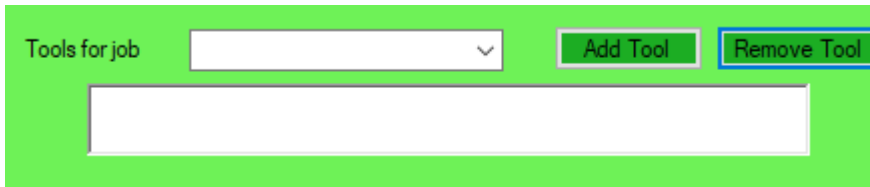


If another tool is selected and "Add Tool" is clicked, the tool is added to the rich text box along with a "+" in between the new and previous tools

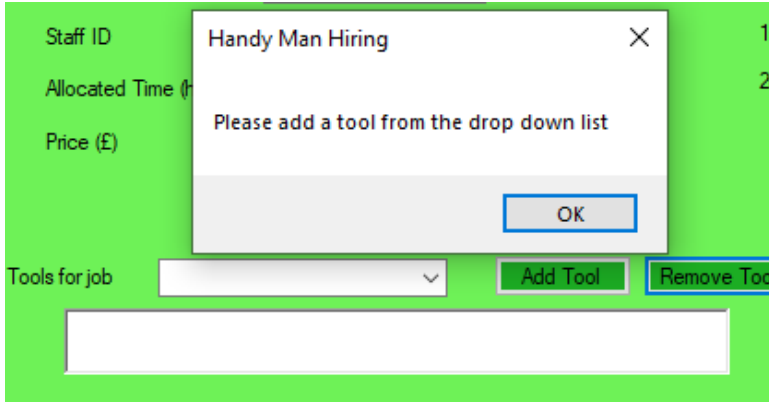
74	Place a Booking	Function	Test "Remove Tool" with no items in the rich textbox, one item, and multiple items
----	-----------------	----------	--



The first image above is the original, the second is when "Remove Tool" is clicked which removes the last tool and the "+" alongside it

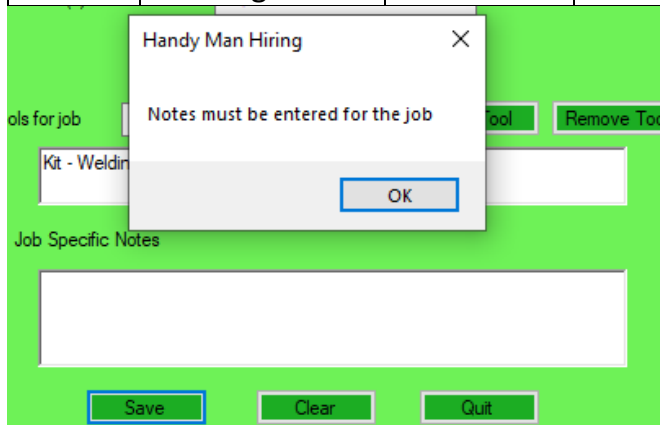


If "Remove Tool" is clicked again then the tool is removed from the rich textbox

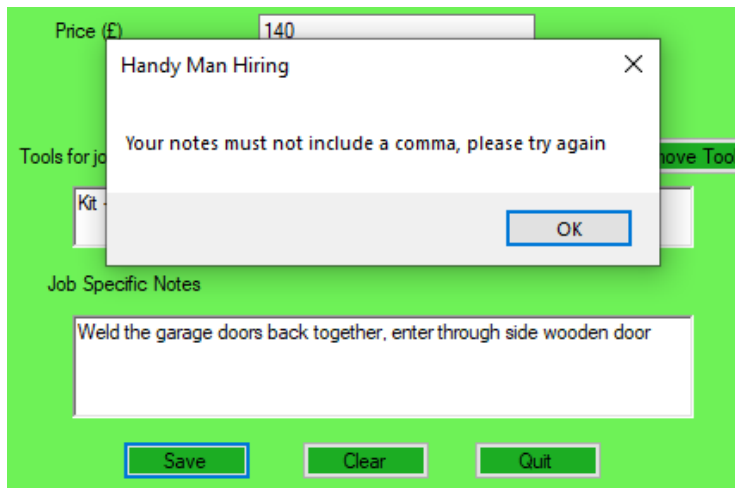


If "Remove Tool" is clicked when there is nothing within the textbox, the error message shown above is displayed

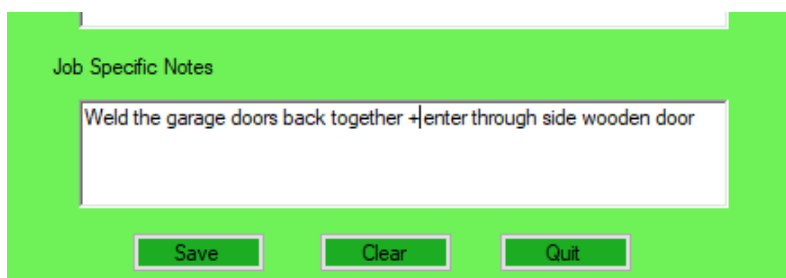
75	Place a Booking	Function	Test "Job Notes" with no, valid, and invalid values
----	-----------------	----------	---



If no notes are entered, the above error message is displayed



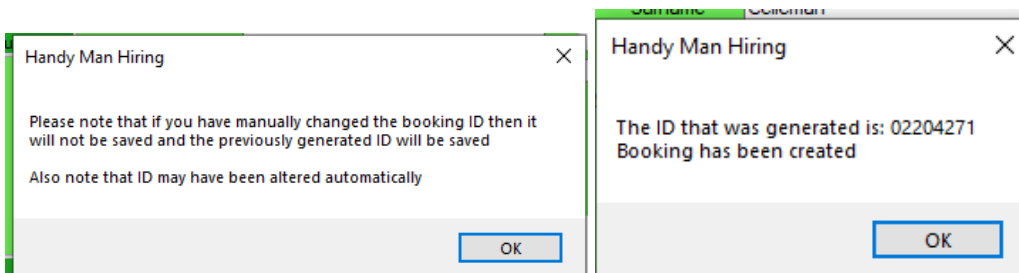
If invalid notes are entered (ones with a comma), then the error message above is displayed



If valid notes are entered then the program continues running as it should

76	Place a Booking	System	Test "Save" displays confirmation message and saves the bookings data within the booking file in the correct order according to its date
----	-----------------	--------	--

Once "Save" is clicked, the user is prompted with a confirmation message



If they click "OK" then the messages above are displayed

```

02204081,Electrician,08/04/2022 12:00:00,WIHR:
02204101,Plumbing,10/04/2022 10:00:00,WEIN92,I
02204152,Plumbing,15/04/2022 11:00:00,WIHR36,I
02204151,Plumbing,15/04/2022 15:00:00,WEIN92,I
02204141,Gardening,14/04/2022 13:00:00,DOTE24,
02204161,Carpentry,16/04/2022 09:00:00,DAEB73,
02204162,Carpentry,16/04/2022 12:00:00,STAN27,
02204261,Woodwork,26/04/2022 11:00:00,BEEX20,(
02204271,Welding,27/04/2022 11:00:00,CEAV62,T
02205211,Other,21/05/2022 16:00:00,DAEB73,CER(

```

The booking data is saved into the bookings text file according to the booking's date using an insertion sort

77	Quick Stock Update	System	Test "Save All" with no entered tools
----	--------------------	--------	---------------------------------------

The screenshot shows a web form titled "Quick Stock Update" with a light blue background. The form has five columns: "Item Name", "Equipment ID", "Amount in stock", "Last Test Date", and "Next Test Date". Each column has a corresponding input field. The "Last Test Date" and "Next Test Date" fields are date pickers showing "25 April 2022". A "Save All" button is located at the bottom center of the form. A white dialog box with a close button (X) is overlaid on the form. The dialog box contains the text: "Handy Man Hiring", "All amounts and test dates saved (Please note that any changes to the ID will not be saved)", and an "OK" button at the bottom right.

When no items are selected and "Save All" is clicked, the user is informed that all the amount and test dates have been updated. This is not necessarily an error as nothing is affected, however it is not ideal. To fix this I would create a new variable called "ItemFound as Boolean = False" and set it to true when an item is selected within the drop down lists, but also display an error message if the variable is False when "Save All" is clicked.

78	Quick Stock Update	Function	Test loading the equipment data into the textboxes for each drop down list and check that tools are removed from the other drop down lists when selected in one (and vice versa for reappearing)
----	--------------------	----------	--

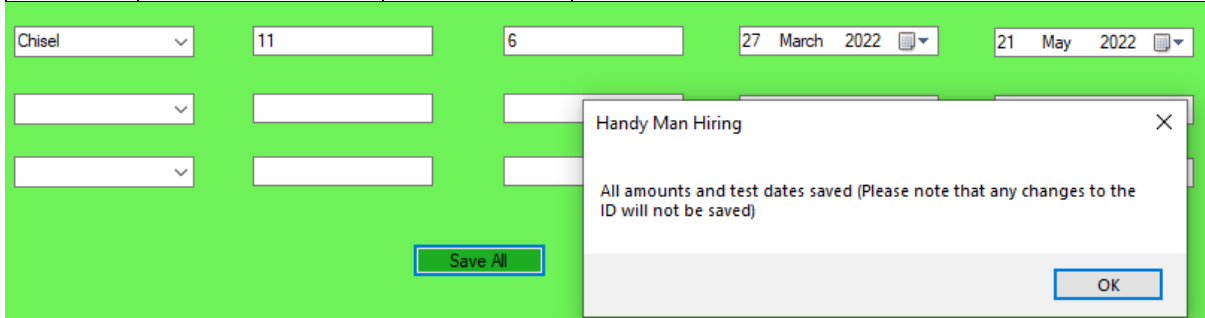
Quick Stock Update

Item Name	Equipment ID	Amount in stock	Last Test Date	Next Test Date
Chisel	11	3	27 March 2022	21 May 2022
Axe	18	3	15 January 2022	30 March 2022
Chainsaw	10	1	26 March 2022	10 June 2022

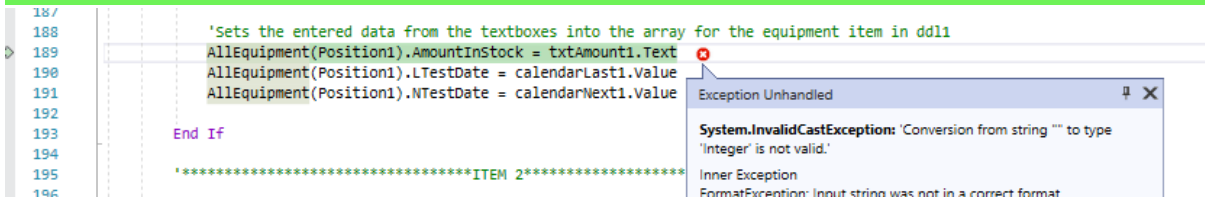
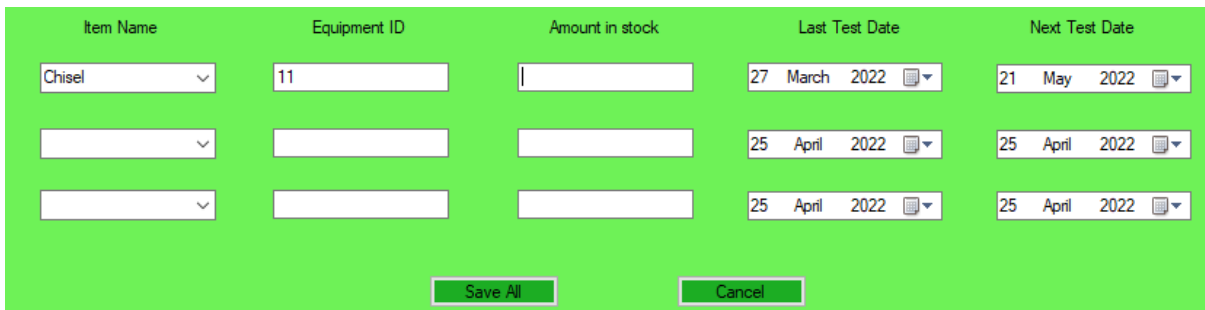
Save All Cancel

The data of each item is loaded into the corresponding textboxes whenever they are selected. The items are also removed from corresponding drop down lists when they are selected in one of them already. It is difficult to show this as the drop down list options disappear when trying to take a screen clip. If an item is changed, for example item 1 is changed from “Chisel” to “Nails”, then “Chisel” reappears back into drop down lists 2 and 3.

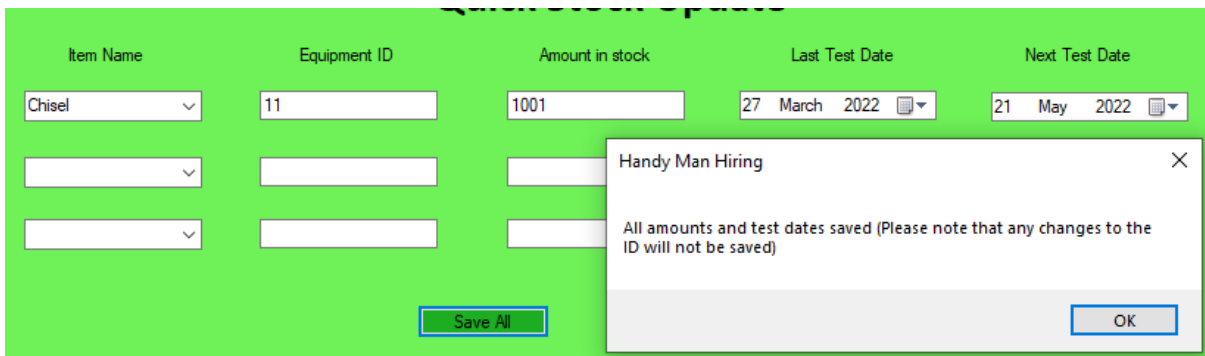
79	Quick Stock Update	Function	Test amount in stock for no, valid, invalid and extreme values
----	--------------------	----------	--



If a valid “Amount in Stock” is entered, then the program continues as it should and allows the user to save the data



If no amount in stock is entered, then the program stops running as it tries to assign “nothing” to an integer value. To fix this I would use a “Try-Catch” method to check if the entered value is an integer before assigning it to a variable. I would do this for each amount in stock (i.e. amount in stock 1, 2, and 3).



If an amount in stock is selected that is outside of the original range, then no error message appears. I would fix this by introducing a range check of between 1000 and

0; I would do this for all 3 amounts in stock before they are assigned to their corresponding variables.

80	Quick Stock Update	Function	Test "Save All" amends the values of all the selected equipment within the equipment text file
----	--------------------	----------	--

Item Name	Equipment ID	Amount in stock
Chisel	11	6

The amount of chisels in stock is originally 6

Item Name	Equipment ID	Amount in stock	Last Test Date	Next Test Date
Chisel	11	5	27 March 2022	21 May 2022

Handy Man Hiring

All amounts and test dates saved (Please note that any changes to the ID will not be saved)

OK

Save All

```
10, Chainsaw, 1, 0, 1, 20/03/2022, 10/00/2022, Chris
11, Chisel, 5, 3, 2, 27/03/2022, 21/05/2022, Chris
20, Crowbar, 1, 0, 1, 11/03/2022, 14/04/2022, Chris
```

Once changed to 5 and "Save All" is clicked, the amount of chisels within the equipment text file is also changed to 5

81	Search Booking	Function	Test that all relevant data is loaded when booking ID is selected
----	----------------	----------	---

Searching a Booking

Please fill these options to load the corresponding data

Booking ID:

Customer ID:

Booking Date:

Customer Details (cannot edit these here)

First Name:

Surname:

Address:

Staff Details (cannot edit these here)

First Name:

Surname:

Booking Details (editable)

Job Type:

Date:

Staff ID:

Allocated Time (hrs):

Price (£):

Invoiced?: (This cannot be edited)

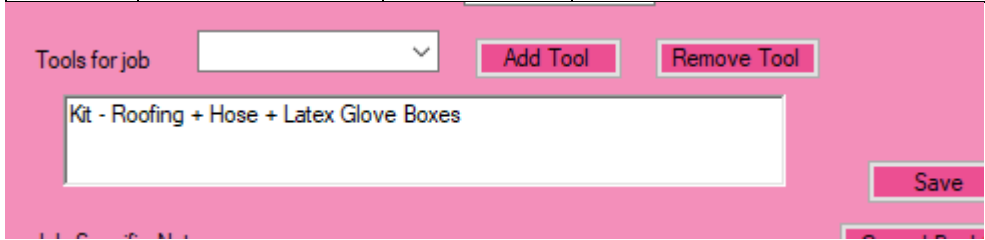
Tools for job:

Kit - Roofing + Hose + Latex Glove Boxes

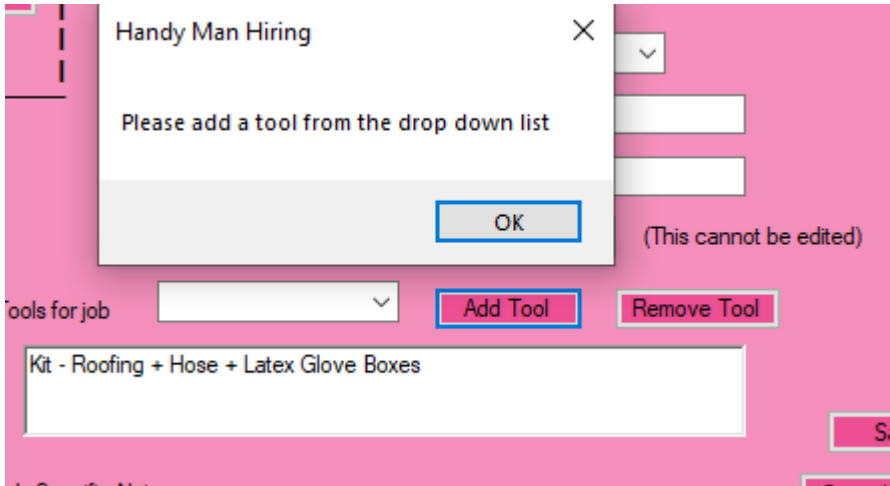
Job Specific Notes:

When a booking ID is selected, all the booking's data is loaded appropriately into the textboxes

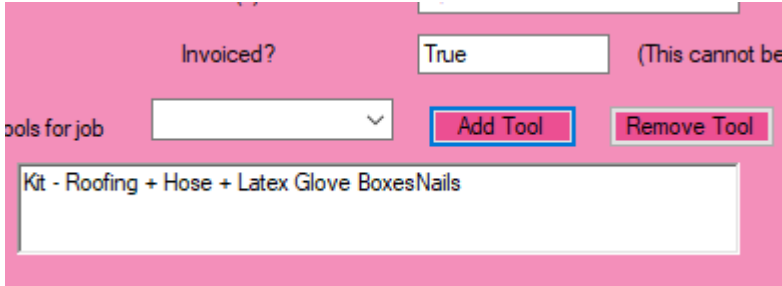
82	Search Booking	Function	Test "Add Tool" with no item in the tool drop down list, with a tool selected, and with adding 2 tools
----	----------------	----------	--



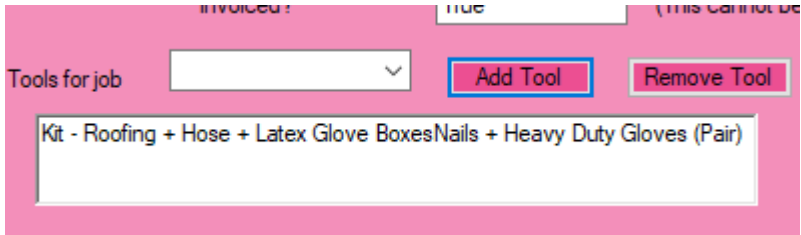
Above is the original value of the tools rich text box



If no tool is selected within the tool drop down list, then the error message above is displayed



Once a tool is added, it is added onto the end of the previous text. However there is no " + " in between it and the original text which is not ideal. The user could either change it manually or the code could be altered so that the original tools from the booking are loaded into a local array so that if there are items within the array then a " + " will appear whenever another tool is added.



If another tool is added then the “ + “ does appear and this is because the newly added tools are within an array so they are “aware” of each other

83	Search Booking	Function	Test "Remove Tool" with the loaded tools, one new tool, and multiple new tools
----	----------------	----------	--

The screenshot shows a form with a dropdown menu labeled 'Tools for job'. Below it is a list of tools. One tool is listed: 'Kit - Welding + Heavy Duty Face Cover'. To the right of the list are two buttons: 'Add Tool' and 'Remove Tool'. The 'Remove Tool' button is highlighted with a red box.

The tools above are the original data

The screenshot shows the same form as above, but the tool list is now empty. The 'Remove Tool' button is highlighted with a red box.

If "Remove Tool" is clicked without any new tools being added then the whole text is removed. This is because the tool array is empty so when a tool is removed there is nothing loaded in. As mentioned in test 82, this can be fixed by loading the booking's original tools into a local array so then the form is aware of how many tools there are within the textbox

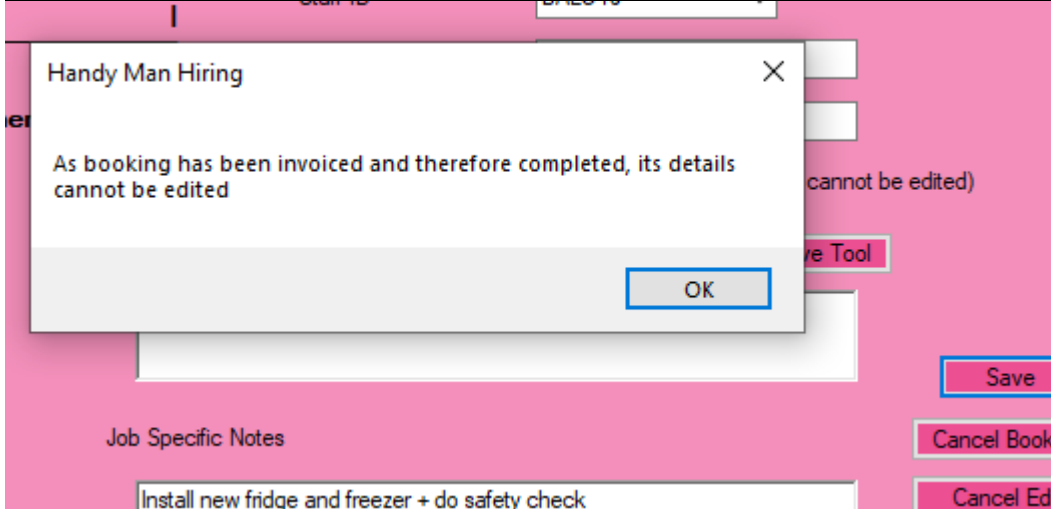
Two side-by-side screenshots of the web form. The left screenshot shows the tool list with the text 'Kit - Welding + Heavy Duty Face CoverAxe'. The 'Remove Tool' button is highlighted with a red box. The right screenshot shows the tool list empty. The 'Remove Tool' button is highlighted with a red box.

Once a new item has been added, when it is removed the whole text is removed where there once was only "Axe" within the tool array, now there is nothing so a blank text is loaded into the textbox. As mentioned before, loading the original tools into a local array would fix this.

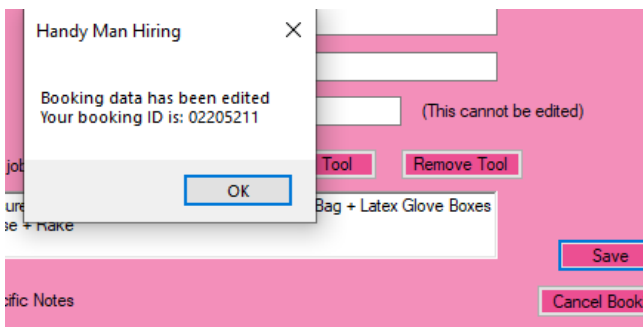
Two side-by-side screenshots of the web form. The left screenshot shows the tool list with the text 'Kit - Welding + Heavy Duty Face CoverAxe + Hose'. The 'Remove Tool' button is highlighted with a red box. The right screenshot shows the tool list with the text 'Axe'. The 'Remove Tool' button is highlighted with a red box.

If two new items are added, when one is removed then only the first added tool remains (not the original tools). Once again, loading the original tools into a local array would fix this.

84	Search Booking	System	Test "Save" displays confirmation message and saves the bookings data within the booking file in the correct order according to its date
----	----------------	--------	--



The booking that was edited had already been invoiced so the user was unable to alter the details



The booking date of the booking had been altered, when "Save" was clicked a confirmation message appeared informing the user the data had been saved. We can see that the booking was placed into order of booking date (below); it was originally below 02204271.

```
02204161, Carpentry, 16/04/2022 09:00:00, DAEB73, MAR029, 1
02204162, Carpentry, 16/04/2022 12:00:00, STAN27, CROW16, 2
02204261, Woodwork, 26/04/2022 11:00:00, BEEX20, CROW16, 4,
02205211, Other, 26/04/2022 14:00:00, DAEB73, CER047, 3, £15
02204271, Welding, 27/04/2022 11:00:00, CEAV62, TYAK19, 2, 1
```



85	Search Booking	System	Test "Cancel Edit" resets all the textboxes
----	----------------	--------	---

Booking Details (editable)

Job Type: Plumbing

Date: 04/03/2022 - 10:00 AM

Staff ID: KEAV92

Allocated Time (hrs): 5

Price (£): 30

Invoiced?: True (This cannot be edited)

Buttons: Add Tool, Remove Tool

Edited Price (£): 280

The image (left) is the original values and the image (right) contains the edited price

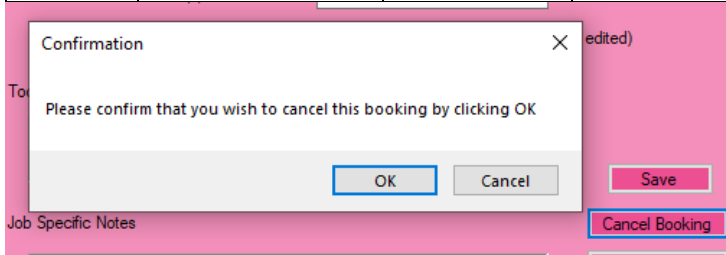
Handy Man Hiring X

Changes have been reset

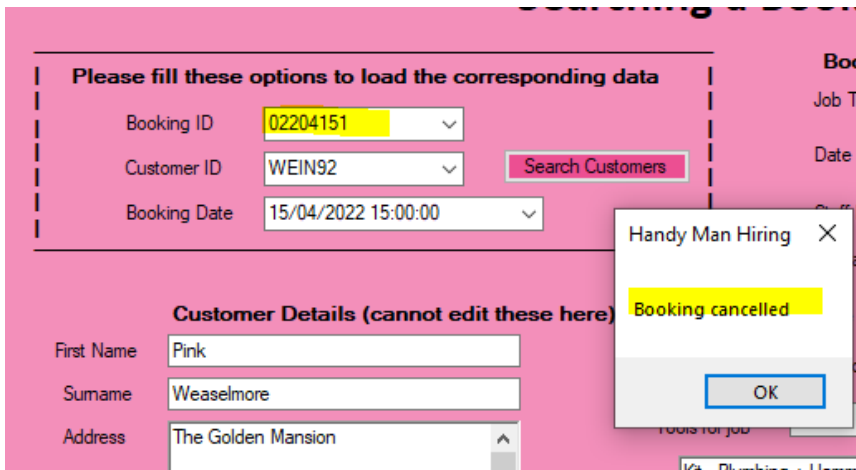
OK

When "Cancel Edit" is clicked then the message above appears and the form closes. The data is not altered within the text file.

86	Search Booking	System	Test "Cancel Booking" deletes the booking from the bookings text file
----	----------------	--------	---



Once "Cancel Booking" is clicked the user is prompted with a confirmation message



If OK is clicked then a booking cancelled message appears and the booking is removed from the text file

```

02204101,Plumbing,10/04/2022 10:00:00,
02204141,Gardening,14/04/2022 13:00:00,
02204151,Plumbing,15/04/2022 11:00:00,WIHR36,
02204152,Plumbing,15/04/2022 11:00:00,
02204161,Carpentry,16/04/2022 09:00:00,
02204162.Carpentry.16/04/2022 12:00:00

```

The image (left) shows the booking within the booking file before it has been removed. The image (right) shows the booking file after booking 02204151 has been removed; the 2 highlighted bookings are the ones which the original booking was previously in between.

87	Search Customers	Function	Test that selecting a unique surname automatically loads the customer data
----	------------------	----------	--

Searching a Customer

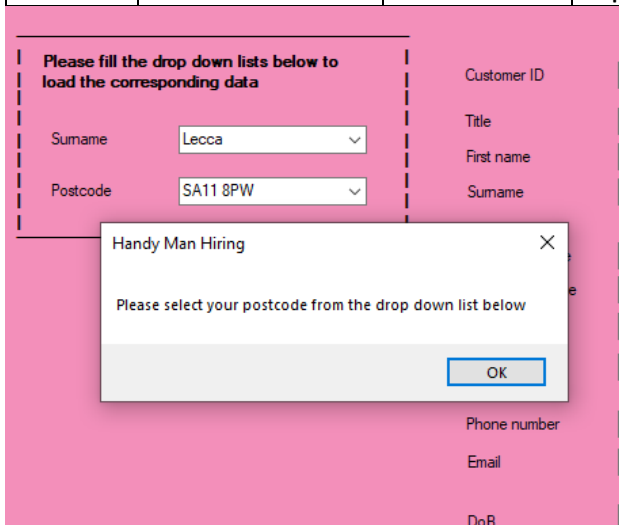
Please fill the drop down lists below to load the corresponding data

Surname	<input type="text" value="Hamson"/>
Postcode	<input type="text" value="SA11 8PW"/>

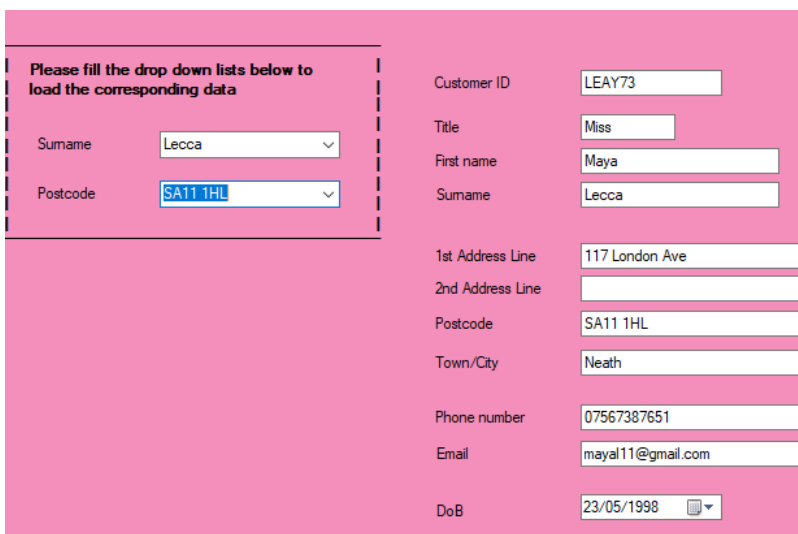
Customer ID	<input type="text" value="HAAU21"/>
Title	<input type="text" value="Mrs"/>
First name	<input type="text" value="Raul"/>
Surname	<input type="text" value="Hamson"/>
1st Address Line	<input type="text" value="2198 Cat Street"/>
2nd Address Line	<input type="text"/>
Postcode	<input type="text" value="SA11 8PW"/>
Town/City	<input type="text" value="Neath"/>
Phone number	<input type="text" value="07540134558"/>
Email	<input type="text" value="Rondiger@gmail.com"/>
DoB	<input type="text" value="08/03/1974"/> <input type="button" value="📅"/>

If a customer with a unique surname is selected, their data is automatically loaded into the textboxes and the postcode drop down list

88	Search Customers	Function	Test that if a surname that is identical to another is selected, then a prompt appears for user to select a postcode and thus load the customer data
----	------------------	----------	--



If a surname that belongs to more than one customer is entered, the user is prompted with a message to select a postcode for that customer. As shown above, unfortunately the postcode was not cleared from the previous search; however, I can fix this by clearing the postcode textbox whenever the surname drop down list is altered.



Once a postcode is selected, the data for that customer is loaded into the textboxes

89	Search Customers	System	Test that "Save" shows a confirmation message and saves the data to the customer text file in the alphabetically correct position
----	------------------	--------	---

The data on the left is the original data, the data on the right is the edited data

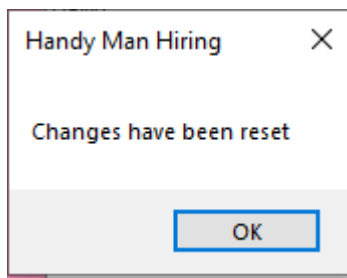
Once "Save Edit" is clicked we are prompted with a message to select a postcode as though we are to pick another customer. However, this is only because the customer ID has been cleared (and therefore changed) so the form thinks the user has selected the surname again. This can be fixed by clearing the textboxes after the "Edit has been saved" message (shown below)

The user is prompted with a confirmation message (left) and we can see that the data has been altered (right).

90	Search Customers	System	Test that "Cancel" loads the customer's unedited data
----	------------------	--------	---

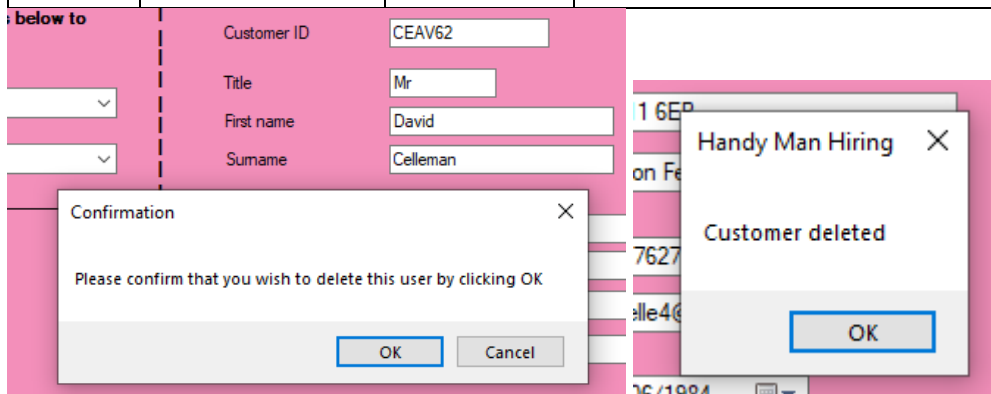
The image (left) is the original data and the image (right) is the edited data

The image (left) is the original data and the image (right) is the edited data

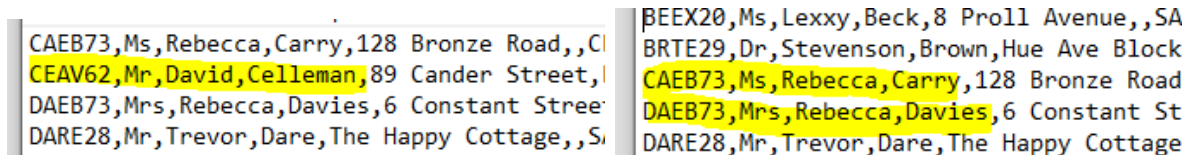


Once "Cancel Edit" has been clicked then the message above is displayed and the form closes

91	Search Customers	System	Test that "Delete User" deletes the customer's data from the customer text file
----	------------------	--------	---



Once "Delete" is clicked then the user is prompted with a confirmation message. Once they click OK, they are informed that the customer has been deleted and the form closes.



The image on the left is the customer file originally. The image on the right is the customer file after deletion, where Mr David Celleman should be in between the two highlighted customers

92	Search Equipment	Function	Test that the equipment data is loaded into the textboxes if an item name is selected
----	------------------	----------	---

Searching Equipment

Item Name

Equipment ID

Amount in stock

Reorder stock level

Reorder quantity

Last test date

Next test date

Tested by

Once an item is selected within the drop down list, it's data is loaded into the textboxes

93	Search Equipment	System	Test that "Save Edit" shows a confirmation message and amends the data within the equipment text file
----	------------------	--------	---

Equipment ID	27	Equipment ID	27
Amount in stock	2	Amount in stock	1
Reorder stock level	0	Reorder stock level	0

The image on the left is the original data, the image on the right has the amount in stock altered

The screenshot shows a form with three input fields: Equipment ID (27), Amount in stock (1), and Reorder stock level (0). A dialog box titled "Handy Man Hiring" is overlaid on the form, containing the message "Edited data has been saved (Please note you cannot edit the ID)" and an "OK" button. To the right of the dialog box, a list of equipment data is visible, with the entry "27,Plunger,1,0,1,08/06/2021,12/05," highlighted in yellow.

A confirmation message is displayed and, once OK is clicked, another message (left) is displayed. The image (right) shows the edited data

94	Search Equipment	Function	Test that "Cancel" loads the equipment's unedited data
----	------------------	----------	--

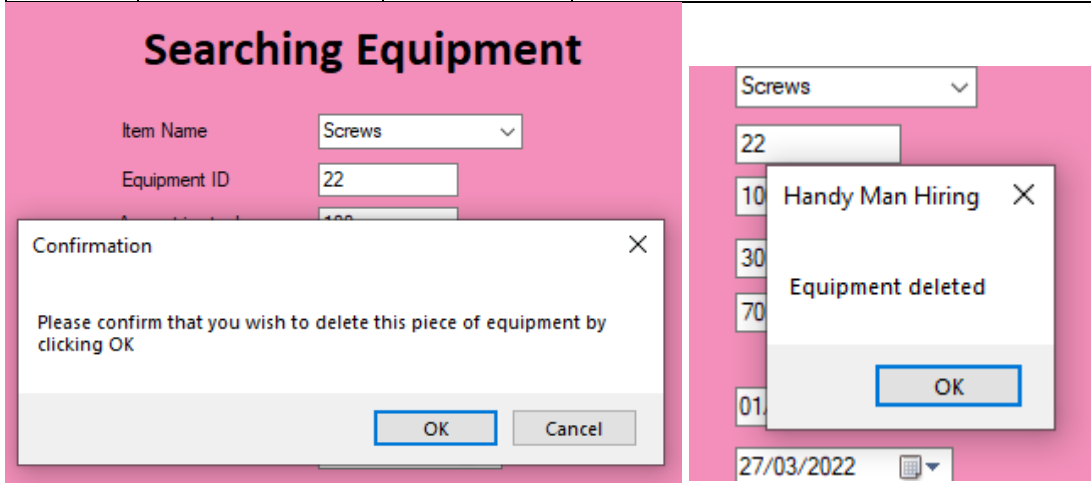
The image on the left is the original data, the image on the right has the amount in stock changed

The image on the left is the original data, the image on the right has the amount in stock changed

Once "Cancel" is clicked, a confirmation message is displayed and the data is reset (right image)

Once "Cancel" is clicked, a confirmation message is displayed and the data is reset (right image)

95	Search Equipment	System	Test that "Delete" deletes the equipment data from the equipment text file
----	------------------	--------	--



When "Delete" is clicked, a confirmation message is displayed and, when OK is clicked, a message to say the equipment has been deleted is displayed

```

/,Scissors,5,3,3,14/03/2022,14/06/2022,Chris
44,Screwdriver,6,4,2,05/09/2021,05/09/2022,Chris
22,Screws,100,30,70,01/03/2022,27/03/2022,Chris
43,Sealant Gun,2,1,1,26/03/2022,26/03/2023,Chris
1,Shovel,3,1,1,13/11/2021,13/06/2022,Chris
16,Sledgehammer,1,0,1,17/02/2022,17/02/2022,Chris
9,Saw,0,1,1,25/03/2022,25/06/2022,Chris
7,Scissors,5,3,3,14/03/2022,14/06/2022,Chris
44,Screwdriver,6,4,2,05/09/2021,05/09/2022,Chris
43,Sealant Gun,2,1,1,26/03/2022,26/03/2023,Chris
1,Shovel,3,1,1,13/11/2021,13/06/2022,Chris
16,Sledgehammer,1,0,1,17/02/2022,17/02/2022,Chris
2,Strimmer,4,2,1,12/02/2022,12/06/2022,Chris

```

The image on the left is the original data, the image on the right is after "Screws" is deleted. "Screws" was originally in between the two highlighted items

96	Search Invoice	Function	Test that once a booking ID or invoice ID is selected, the appropriate booking and invoice data is loaded into the textboxes and drop down lists
----	----------------	----------	--

Searching an Invoice

Please fill these options to load the corresponding data

Invoice ID:

Booking ID:

Customer Data

Customer Name:

Customer Address:
SA11 1HL
Neath

Invoice Data

Invoice ID:

Booking ID:

Booking Date:

Price:

Paid:

Booking Data

Job Notes:

Once invoice ID is selected, the corresponding booking ID and invoice data is loaded into the textboxes

Searching an Invoice

Please fill these options to load the corresponding data

Invoice ID:

Booking ID:

Customer Data

Customer Name:

Customer Address:
SA13 5EO
Tonna

Invoice Data

Invoice ID:

Booking ID:

Booking Date:

Price:

Paid:

Booking Data

Job Notes:

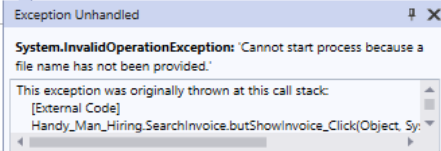
Once booking ID is selected, the corresponding invoice ID and invoice data is loaded into the textboxes

97	Search Invoice	Function	Test that “Show Full Invoice” (with no and valid values) shows the appropriate individual invoice text file
----	----------------	----------	---

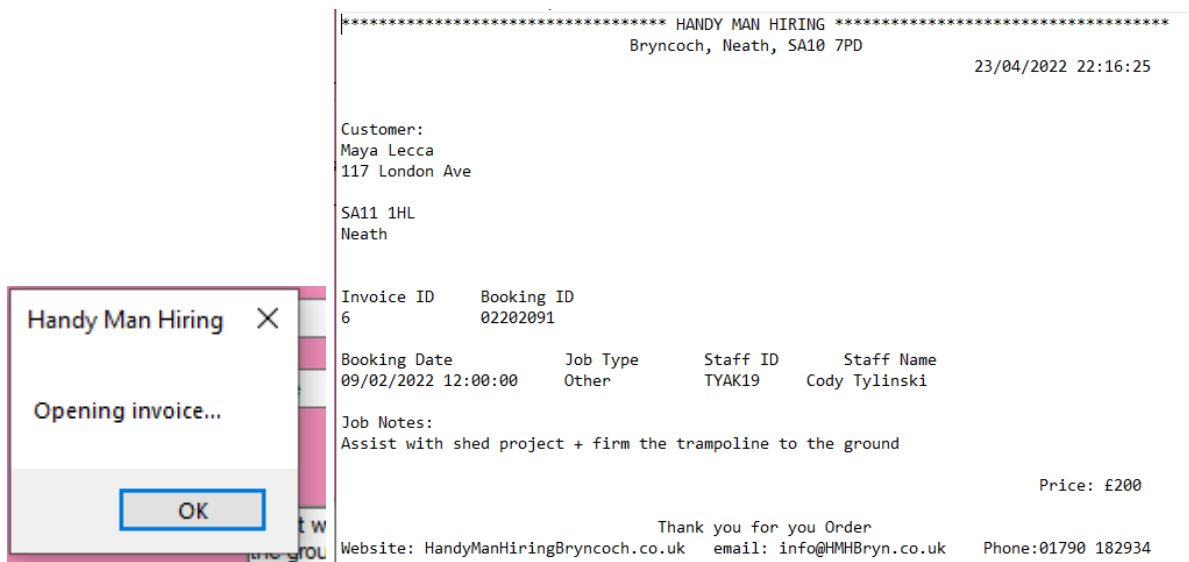
```

110 Private Sub butShowInvoice_Click(sender As Object, e As EventArgs) Handles butShowInvoice.Click
111     MsgBox("Opening invoice...")
112     Process.Start(Dir(txtInvoiceID.Text & ".txt")) 'Opening the printable invoice
113 End Sub
114
115
116
117 Private Sub butQuit_Click(sender As Object, e As EventArgs) Handles butQuit.Click
118     Me.Close()
119 End Sub
120
121

```



If no invoice ID and booking ID is selected, and the “Show Full Invoice” button is clicked. The program stops running as the program cannot handle opening a text file with nothing as the search term. To solve this issue I would add a presence check before attempting to open the printable invoice.



If an invoice ID or booking ID is selected, a message box is displayed and then the printable invoice is displayed (as shown on the right).

98	Search Monthly Payroll	Function	Test that data is loaded into textboxes once staff ID entered
----	------------------------	----------	---

Please fill these options then click OPEN

Staff ID

Month

Year

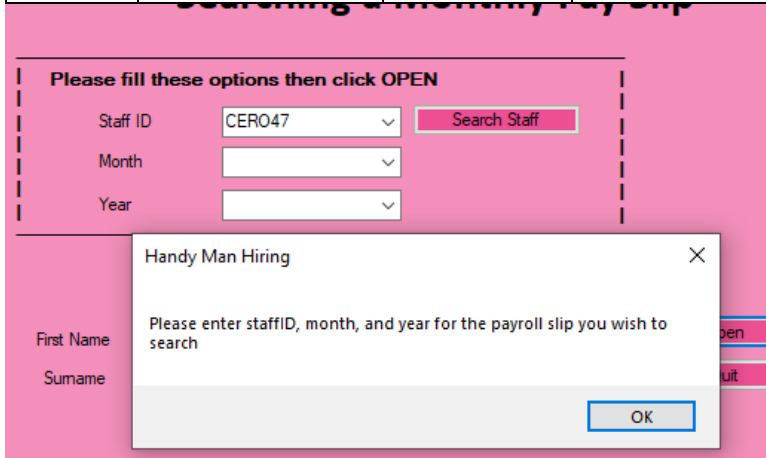
Staff Details (cannot edit these here)

First Name

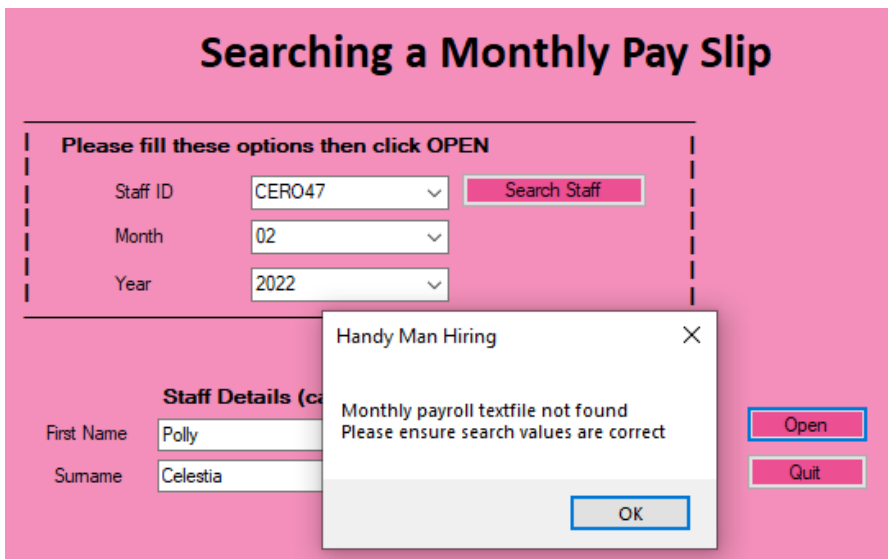
Surname

Once a staff ID is selected, the staff members data is loaded into the textboxes

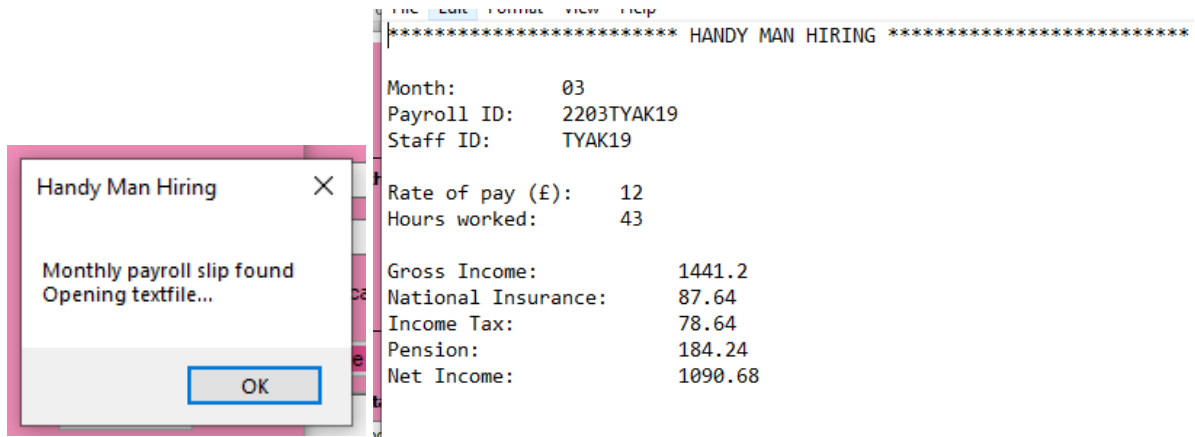
99	Search Monthly Payroll	System	Test "Open" with no drop down list values, a missing drop down list value, two missing drop down list values, an invalid payroll slip, and a valid payroll slip
----	------------------------	--------	---



If staff ID, month, or year has not been selected, the error message above is displayed



If an invalid payroll slip is searched for (i.e. one that does not exist), the above error message is displayed



If an existing payroll slip is selected, the payroll slip is displayed

100	Search Staff	Function	Test that selecting a unique surname automatically loads the staff and password data
-----	--------------	----------	--

Searching a Staff Member

Please fill the drop down lists below to load the corresponding data

Surname: ▼

Postcode: ▼

Staff ID:

Staff Type:

Specialty: ▼

Title:

First name:

Surname:

Password:

Clue:

1st Address Line:

2nd Address Line:

Postcode:

Town/city:

Phone number:

Email:

DoB: ▼

If a unique surname is entered, then the corresponding staff data is loaded into the textboxes

101	Search Staff	Function	Test that if a surname that is identical to another is selected, then a prompt appears for user to select a postcode and thus load the staff and password data
-----	--------------	----------	--

The screenshot shows a web form titled "Searching a Staff Member". On the left, there is a section with a dashed border containing two dropdown menus: "Surname" with "Keave" selected and "Postcode" which is empty. Below this are several text input fields for "Staff ID", "Staff Type", "Speciality", "Title", and "First name". On the right, there are text input fields for "1st Address Line", "2nd Address Line", "Postcode", "Town/city", "Phone number", "Email", and "DoB". A modal dialog box is open in the center, titled "Handy Man Hiring", with the message "Please select your postcode from the drop down list below" and an "OK" button.

If a surname that belongs to more than one staff member is selected, the user is prompted to select a postcode

The screenshot shows the same "Searching a Staff Member" form, but now with data populated. The "Surname" dropdown still shows "Keave", but the "Postcode" dropdown now shows "SA6 6T5" selected. The "1st Address Line" field contains "127 Prince Road", "Postcode" contains "SA6 6T5", and "Town/city" contains "Cymmer". Other fields like "Staff ID" (KERI19), "Staff Type" (Admin), "Speciality" (Carpentry), "Title" (Mr), "First name" (Chris), "Surname" (Keave), "Password" (Cycling80), and "Clue" (Fav hobby + fav number) are also filled. At the bottom right, there are four buttons: "Save Edit", "Cancel", "Delete Member", and "Quit".

Once a postcode is selected, the data for that staff member is loaded into the textboxes accordingly

102	Search Staff	System	Test that "Save Edit" shows a confirmation message and amends the staff data within the staff text file
-----	--------------	--------	---

Phone number

Email

DoB

KEAV92,Mrs, Lucy,Keave,23 Brook Avenue,,CF9 6FH,Cardiff,07467230911,KDavid@hotmail.com,17
 KERI19,Mr,Chris,Keave,127 Prince Road,,SA6 T65,Cymmer,07238948192,princeKel@hotmail.com,
 MAR029, Miss,Margret,Mapp,12 Hades Street,,SA11 1HL,Neath,07463819293,chessPLAYER@gmail.c

The data above is the original data. The data below is after the email has been altered, the confirmation message has been displayed, and the changes have been made to the staff textfile

Phone number

Email

DoB

Handy Man Hiring

Edited data has been saved (Please note you cannot edit the ID)

KEAV92,Mrs, Lucy,Keave,23 Brook Avenue,,CF9 6FH,Cardiff,07467230911,KDavid@hotmail.com,17/02/19
 KERI19,Mr,Chris,Keave,127 Prince Road,,SA6 T65,Cymmer,07238948192,princeKel@gmail.com,02/03/19
 MAR029, Miss,Margret,Mapp,12 Hades Street,,SA11 1HL,Neath,07463819293,chessPLAYER@email.com.16/

103	Search Staff	System	Test that "Cancel" loads the staff member's unedited data
-----	--------------	--------	---

Title	Mr	Title	Mrs
First name	Chris	First name	Chris
Surname	Keave	Surname	Keave

The image on the left is the original data, the image on the right is with the title being altered

Handy Man Hiring X

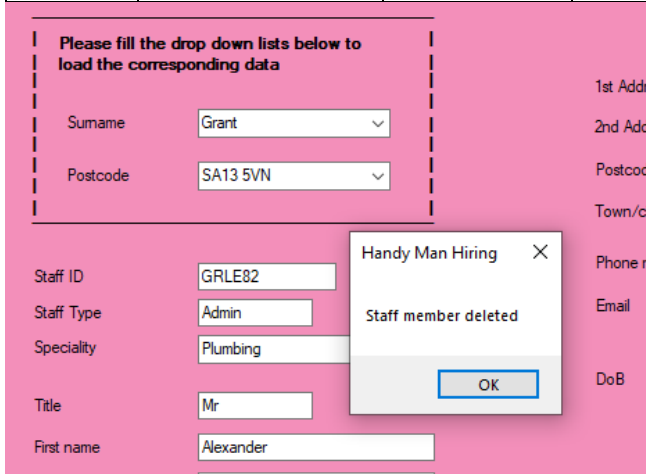
Changes have been reset

OK

Title	Mr
First name	Chris
Surname	Keave

Once "Cancel" is clicked, the confirmation message appears and the textbox and variable values are reset to the original data

104	Search Staff	System	Test that "Delete Member" deletes the staff member's data from the staff text file
-----	--------------	--------	--



Once "Delete" is clicked, the confirmation message appears and, as shown below, the staff member is deleted from the staff text file (the member was originally in between the two highlighted members shown on the right). Ideally, there would also be an input box to check if the user is sure they want to delete the member and this can be done by using an input box and "If inputbox = vbCancel".

```

CROW16,Mr,Peter,Craig,43 Greta Street,,SA14 5
GRLE82,Mr,Alexander,Grant,20 Egypt Road,The G
KEAV92,Mrs, Lucy,Keave,23 Brook Avenue,,CF9 6F
KERT19 Mr Chris Keave 127 Prince Road SA6 16
CRHR49,Mr,Chris,Crowley,12 Frontend St
CROW16,Mr,Peter,Craig,43 Greta Street,
KEAV92,Mrs, Lucy,Keave,23 Brook Avenue,
KERI19,Mr,Chris,Keave,127 Prince Road,

```

The data is also removed from the password textfile (as shown below). The data original data is displayed on the left and the edited data is displayed on the right; the member was originally underneath the highlighted member on the left

```

9,KERI19,Admin,Cycling80,Fav hobby + fav number
4,CROW16,Worker,Running007,Fav hobby + referenc
6,BALO19,Worker,Vampire,Mystical creature
8,CRHR49,Worker,duckhunting,Activity with dad -
10,GRLE82,Admin,pumpkin52,fav food + year of bi
9,KERI19,Admin,Cycling80,Fav hobby + fav number
4,CROW16,Worker,Running007,Fav hobby + referenc
6,BALO19,Worker,Vampire,Mystical creature
8,CRHR49,Worker,duckhunting,Activity with dad -

```

105	Searching Yearly Payroll	System	Test selecting staff ID with and without the year and whether it loads the staff data into the staff data textboxes
-----	--------------------------	--------	---

Please fill these options to load corresponding data

Staff ID:

Year:

Staff Details (cannot edit these here)

First Name:

Surname:

When staff ID is entered, their data is loaded into the textboxes underneath

Please fill these options to load corresponding data

Staff ID:

Year:

Staff Details (cannot edit these here)

First Name:

Surname:

Hours Worked:

Gross Pay (£):

NI (£):

Tax (£):

Pension (£):

Net Pay (£):

If no year is selected then the staff member's data is not loaded

Searching a Yearly Pay Slip

Please fill these options to load corresponding data

Staff ID:

Year:

Staff Details (cannot edit these here)

First Name:

Surname:

Hours Worked:

Gross Pay (£):

NI (£):

Tax (£):

Pension (£):

Net Pay (£):

Handy Man Hiring

Masterfile for 2025 doesn't exist

If an invalid year has been selected (one where the Masterfile doesn't exist), then the error message above is displayed

Searching a Yearly Pay Slip

Please fill these options to load corresponding data

Staff ID

Year

Staff Details (cannot edit these here)

First Name

Surname

Hours Worked

Gross Pay (£)

NI (£)

Tax (£)

Pension (£)

Net Pay (£)

If a valid year and staff ID has been selected, their payroll data for that year is loaded into the textboxes

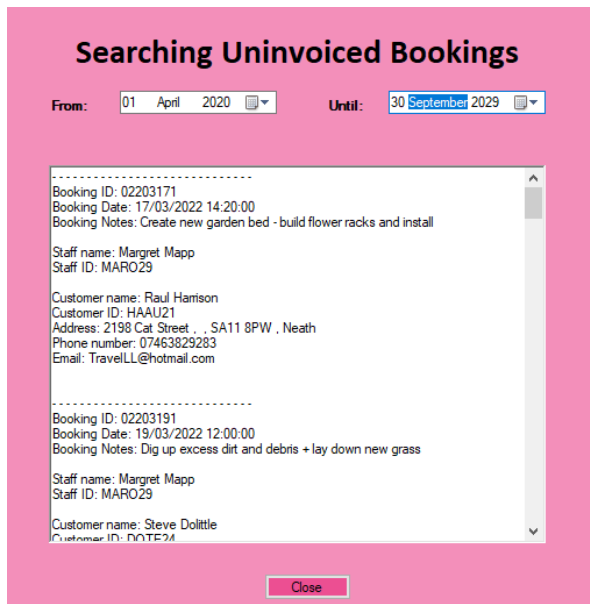
106	Searching Uninvoiced Bookings	Function	Test searching with valid and invalid dates
-----	-------------------------------	----------	---

When the form was loaded in, the full names and IDs of all the staff were being loaded in which was not supposed to happen. To fix this, I looked at my loading code and it turned out that I was not comparing whether the staff ID from the booking is equal to the ones within the staff text file and instead I was just loading all the staff members. I fixed this by adding a comparison (I altered this for both when the form is loaded and when the search dates are changed).

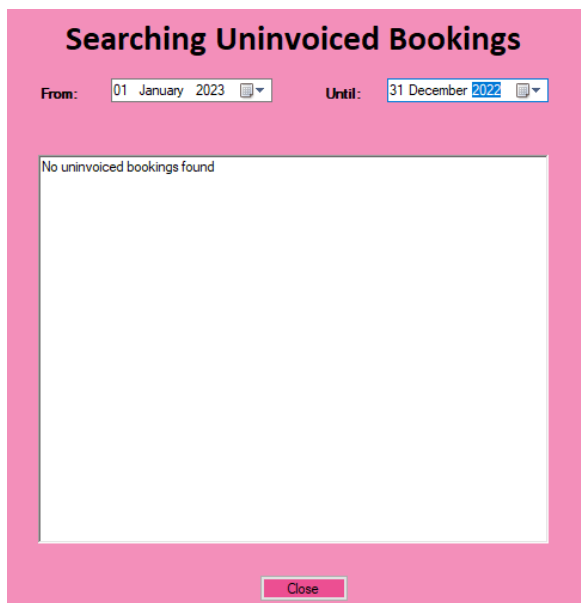
```

27 'Load staff details
28 For y = 0 To NumStaff - 1
29     rtxtUninvoicedBookings.Text = rtxtUninvoicedBookings.Text + "Staff |
30     rtxtUninvoicedBookings.Text = rtxtUninvoicedBookings.Text + "Staff |
31 Next
32
33
34
35
36
37
38
39
40
41 'Load staff details
42 For y = 0 To NumStaff - 1
43     If AllBookings(x).StaffID = AllStaff(y).StaffID Then
44         rtxtUninvoicedBookings.Text = rtxtUninvoicedBookings.Text + '
45         rtxtUninvoicedBookings.Text = rtxtUninvoicedBookings.Text + '
46     End If
47 Next
48
49
50

```



When valid dates are selected, the bookings that are not invoiced and are within those dates are displayed



If invalid dates are selected (i.e. the ranges are not in accordance to each other), then the error message above is loaded into the textbox

107	Searching Unpaid Invoices	Function	Test searching with valid and invalid dates
-----	---------------------------	----------	---

Searching Unpaid Invoices

From: 01 January 2020 Until: 31 December 2029

Invoice ID: 3
Booking ID: 02203201
Booking Date: 20/03/2022 08:30:33
Booking Notes: Put together the metal shed for the garden - metal sheets and nails etc. provided in the garden - lunch will be provided by the owner

Customer name: Raul Hamison
Customer ID: HAAU21
Address: 2198 Cat Street , , SA11 8PW , Neath
Phone number: 07647381292
Email: ScaryCarey@hotmail.com

Invoice ID: 4
Booking ID: 02202281
Booking Date: 28/02/2022 10:50:00
Booking Notes: Fix leaks + clear overflowed water + unclog drains + check electric socket safety/electric box /boiler

Customer name: Francessca Russeling
Customer ID: RURA82
Address: 14a Krook Road , , SA4 5GH , Swansea
Phone number: 07467382936

Close

When the form is loaded, all the invoices which have not been paid for are loaded into the textbox

Searching Unpaid Invoices

From: 01 January 2022 Until: 31 December 2029

Invoice ID: 3
Booking ID: 02203201
Booking Date: 20/03/2022 08:30:33
Booking Notes: Put together the metal shed for the garden - metal sheets and nails etc. provided in the garden - lunch will be provided by the owner

Customer name: Raul Hamison
Customer ID: HAAU21
Address: 2198 Cat Street , , SA11 8PW , Neath
Phone number: 07540134558
Email: Rondiger@gmail.com

Invoice ID: 4
Booking ID: 02202281
Booking Date: 28/02/2022 10:50:00
Booking Notes: Fix leaks + clear overflowed water + unclog drains + check electric socket safety/electric box /boiler

Customer name: Francessca Russeling
Customer ID: RURA82
Address: 14a Krook Road , , SA4 5GH , Swansea
Phone number: 07538291021

Close

When valid dates are selected, the invoices that are not paid for and are within those dates are displayed

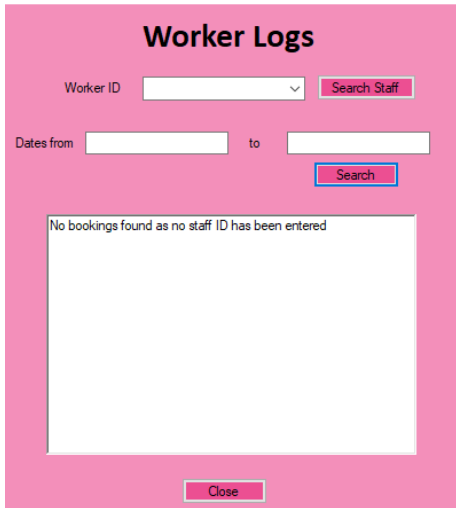
Searching Unpaid Invoices

From: 01 January 2023
Until: 31 December 2022

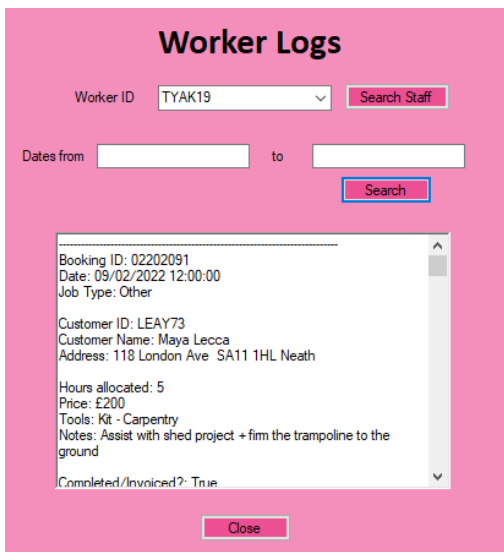
No unpaid invoices found

If invalid dates are selected (i.e. the ranges are not in accordance to each other), then the error message above is loaded into the textbox

108	Worker Logs	Function	Test "Search" with no entered staff ID, no selected dates, only the min date, only the max date, and both dates
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If no staff ID entered then no data will be displayed and an error message shown



If staff ID has been entered but no dates have, then all of that staff member's booking data will be loaded

Worker Logs

Worker ID

Dates from to

Booking ID: 02202281
 Date: 28/02/2022 10:50:00
 Job Type: Other

Customer ID: RURA82
 Customer Name: Francesca Russeling
 Address: 14a Krook Road SA4 5GH Swansea

Hours allocated: 7
 Price: £250
 Tools: Kit - Plumbing + Kit - Electrician
 Notes: Fix leaks + clear overflowed water + unclog drains +
 check electric socket safety/electric box /boiler

Completed/Invoiced?: True

If staff ID has been entered but only the min date has, then all of that staff member's booking data should be loaded for bookings after that date. However, this did not occur as the textbox was not cleared beforehand so all the data was just added on top of it. I fixed this by clearing the textbox at the start of running the search subroutine

Worker Logs

Worker ID

Dates from to

Booking ID: 02202091
 Date: 09/02/2022 12:00:00
 Job Type: Other

Customer ID: LEAY73
 Customer Name: Maya Lecca
 Address: 118 London Ave SA11 1HL Neath

Hours allocated: 5
 Price: £200
 Tools: Kit - Carpentry
 Notes: Assist with shed project + firm the trampoline to the
 ground

Completed/Invoiced?: True

If staff ID has been entered but only the max date has, then all of that staff member's booking data will be loaded for bookings before that date

Worker Logs

Worker ID

Dates from to

Booking ID: 02202091
Date: 09/02/2022 12:00:00
Job Type: Other

Customer ID: LEAY73
Customer Name: Maya Lecca
Address: 118 London Ave SA11 1HL Neath

Hours allocated: 5
Price: £200
Tools: Kt - Carpentry
Notes: Assist with shed project + firm the trampoline to the ground
Completed/Invoiced?: True

If staff ID has been entered and also both dates, then all of that staff member's booking data will be loaded for bookings between those two dates