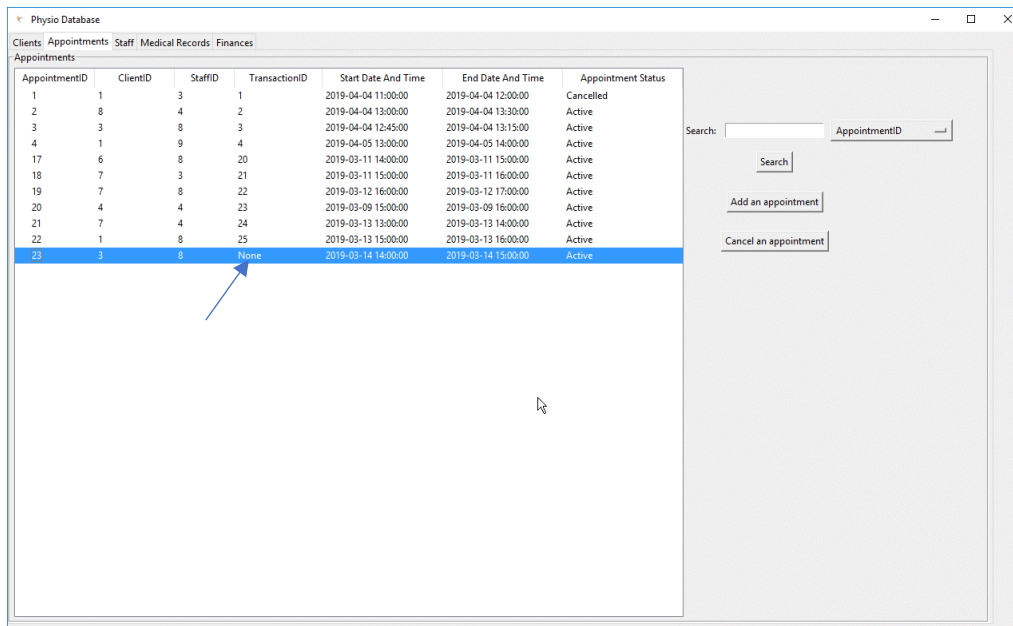


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# Developmental testing:

## 7.1: Appointment and finance foreign key link

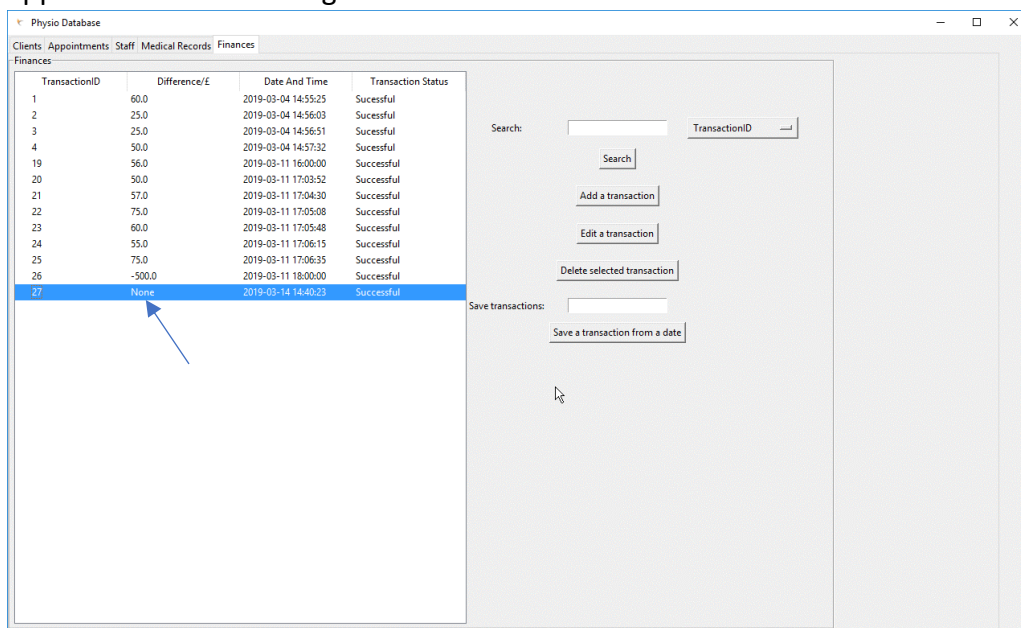
When adding a record into the appointments table, sometimes it would show 'None' under TransactionID, this shouldn't happen as the TransactionID should be created automatically when you make the program.



The screenshot shows the 'Physio Database' application with the 'Appointments' table selected. The table has columns: AppointmentID, ClientID, StaffID, TransactionID, Start Date And Time, End Date And Time, and Appointment Status. A blue arrow points to the row with AppointmentID 23, where TransactionID is 'None'.

AppointmentID	ClientID	StaffID	TransactionID	Start Date And Time	End Date And Time	Appointment Status
1	1	3	1	2019-04-04 11:00:00	2019-04-04 12:00:00	Cancelled
2	8	4	2	2019-04-04 13:00:00	2019-04-04 13:30:00	Active
3	3	8	3	2019-04-04 12:45:00	2019-04-04 13:15:00	Active
4	1	9	4	2019-04-05 13:00:00	2019-04-05 14:00:00	Active
17	6	8	20	2019-03-11 14:00:00	2019-03-11 15:00:00	Active
18	7	3	21	2019-03-11 15:00:00	2019-03-11 16:00:00	Active
19	7	8	22	2019-03-12 16:00:00	2019-03-12 17:00:00	Active
20	4	4	23	2019-03-09 15:00:00	2019-03-09 16:00:00	Active
21	7	4	24	2019-03-13 13:00:00	2019-03-13 14:00:00	Active
22	1	8	25	2019-03-13 15:00:00	2019-03-13 16:00:00	Active
23	3	8	None	2019-03-14 14:00:00	2019-03-14 15:00:00	Active

The first thing I did was to check if the data was within the finances table, which it was. This means that the issue isn't with creating the new transaction data, but it is with the appointment table taking it from the transaction table.



The screenshot shows the 'Physio Database' application with the 'Finances' table selected. The table has columns: TransactionID, Difference/E, Date And Time, and Transaction Status. A blue arrow points to the row with TransactionID 27, where TransactionID is 'None'.

TransactionID	Difference/E	Date And Time	Transaction Status
1	60.0	2019-03-04 14:55:25	Successful
2	25.0	2019-03-04 14:56:03	Successful
3	25.0	2019-03-04 14:56:51	Successful
4	50.0	2019-03-04 14:57:32	Successful
19	56.0	2019-03-11 16:00:00	Successful
20	50.0	2019-03-11 17:03:52	Successful
21	57.0	2019-03-11 17:04:30	Successful
22	75.0	2019-03-11 17:05:08	Successful
23	60.0	2019-03-11 17:05:48	Successful
24	55.0	2019-03-11 17:06:15	Successful
25	75.0	2019-03-11 17:06:35	Successful
26	-500.0	2019-03-14 18:00:00	Successful
27	None	2019-03-14 14:49:23	Successful

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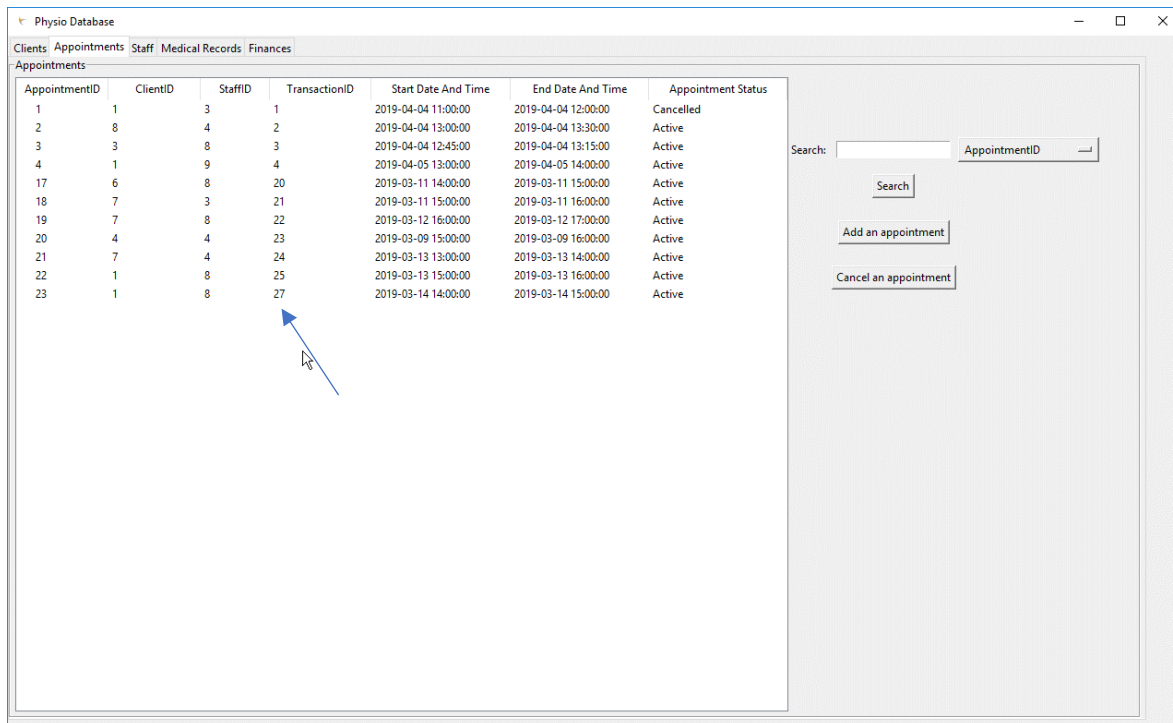
I then decided to look at the code and noticed that the AppointmentID and TransactionID were in the wrong order:

```
self.cursor.execute("""UPDATE appointments SET TransactionID = ? WHERE AppointmentID = ?""",
                    (appointmentid, transactionid,))
```

Which I fixed by swapping them around:

```
self.cursor.execute("""UPDATE appointments SET TransactionID = ? WHERE AppointmentID = ?""",
                    (transactionid, appointmentid,))
```

I then again, tried to run the program and this time it worked:



AppointmentID	ClientID	StaffID	TransactionID	Start Date And Time	End Date And Time	Appointment Status
1	1	3	1	2019-04-04 11:00:00	2019-04-04 12:00:00	Cancelled
2	8	4	2	2019-04-04 13:00:00	2019-04-04 13:30:00	Active
3	3	8	3	2019-04-04 12:45:00	2019-04-04 13:15:00	Active
4	1	9	4	2019-04-05 13:00:00	2019-04-05 14:00:00	Active
17	6	8	20	2019-03-11 14:00:00	2019-03-11 15:00:00	Active
18	7	3	21	2019-03-11 15:00:00	2019-03-11 16:00:00	Active
19	7	8	22	2019-03-12 16:00:00	2019-03-12 17:00:00	Active
20	4	4	23	2019-03-09 15:00:00	2019-03-09 16:00:00	Active
21	7	4	24	2019-03-13 13:00:00	2019-03-13 14:00:00	Active
22	1	8	25	2019-03-13 15:00:00	2019-03-13 16:00:00	Active
23	1	8	27	2019-03-14 14:00:00	2019-03-14 15:00:00	Active

## 7.2: Finances output

When making my finances output to my text file I got an error, the error came up after I wrote in the date of the transaction and it told me that the columns I'm trying to write in a text file could not be printed as they weren't a string.

```
Exception in Tkinter callback
Traceback (most recent call last):
  File "C:\Program Files\Python37\lib\tkinter\__init__.py", line 1702, in __call__
    return self.func(*args)
  File "C:\Users\dayya\Downloads\Code - Copy (2)\FinancesTab.py", line 97, in save_transaction
    f.write('\n' + " " + (row[0]) + " " + (row[1]) + " " + row[3])
TypeError: can only concatenate str (not "int") to str
```

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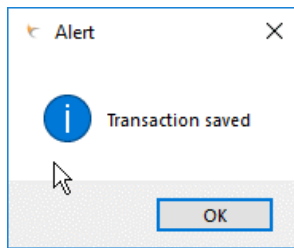
When I checked my code, I found the following:

```
for row in rows:
    f.write('\n' + "          " + (row[0]) + "          " + (row[1]) + "          " + row[3])
    f.write('\n' + '\n' + "Overall difference: £" + (sum[0]))
```

So, to fix it I wrote str() in front of each of the rows which made:

```
for row in rows:
    f.write('\n' + "          " + str(row[0]) + "          " + str(row[1]) + "          " + str(row[3]))
    f.write('\n' + '\n' + "Overall difference: £" + str(sum[0]))
```

So now when I tried to output the finances I got:



-----2019-03-11-----		
TransactionID	Difference	TransactionStatus
19	56.0	Successful
20	50.0	Successful
21	57.0	Successful
22	75.0	Successful
23	60.0	Successful
24	55.0	Successful
25	75.0	Successful
26	-500.0	Successful

Overall difference: £-72.0

### 7.3: Table columns matched wrongly

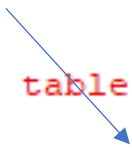
When creating my clients table, it would not match wrongly on the table (see address as a telephone number):

ClientID	MedicalRecordID	Prefix	First Name	Surname	DOB	Telephone	Address	Postcode
1	1	1	Mr	Kai	Holloway	1934-07-11	07863701077	23 Ermin Stre
2	2	2	Mr	Andrew	Rove	1938-04-12	07920991649	19 Middlewic
3	3	3	Mrs	Aaliyah	Price	1978-04-30	07935747494	34 Bishopthc
4	4	4	Ms	Paisley	Russel	2002-08-26	07830280919	12 Sutton Wi
5	5	5	Mr	Barack	Obama	1997-10-12	07702989653	98 Newport f
6	6	6	Mr	Cathal	Gorman	1954-09-01	07038789458	49 Ash Lane
7	7	7	Dr	Abigail	Dunn	1977-08-31	07777827240	5 Manor Clo:
8	8	8	Mr	Leo	Barker	1999-03-16	07956646717	69 Cefn Roac
9	9	9	Mrs	Jasmine	Powell	1941-01-04	07728974291	72 South Cre
10	10	10	Mr	Dayyan	OBrien	2001-01-31	07767862981	10 Windsor f
12	12	12	Dr	Steve	Jobs	1980-01-02	07605407812	5 Apple Lane

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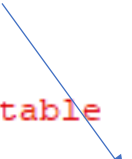
So, I decided to check update\_table which is where the tables are outputted:

```
def update_table(self):  
    """  
    updates the treeview and fills it with all records  
    in the ClientID table  
    """  
    self.cursor.execute("""SELECT * FROM clients""")  
    result = self.cursor.fetchall()  
    self.tree.delete(*self.tree.get_children()) #clears table  
    for item in result:  
        self.tree.insert('', 'end', text=item[0], values=item[0:])
```



I noticed that the values were [0:] which is where the columns are set, so I changed it to 1:

```
def update_table(self):  
    """  
    updates the treeview and fills it with all records  
    in the ClientID table  
    """  
    self.cursor.execute("""SELECT * FROM clients""")  
    result = self.cursor.fetchall()  
    self.tree.delete(*self.tree.get_children()) #clears table  
    for item in result:  
        self.tree.insert('', 'end', text=item[0], values=item[1:])
```



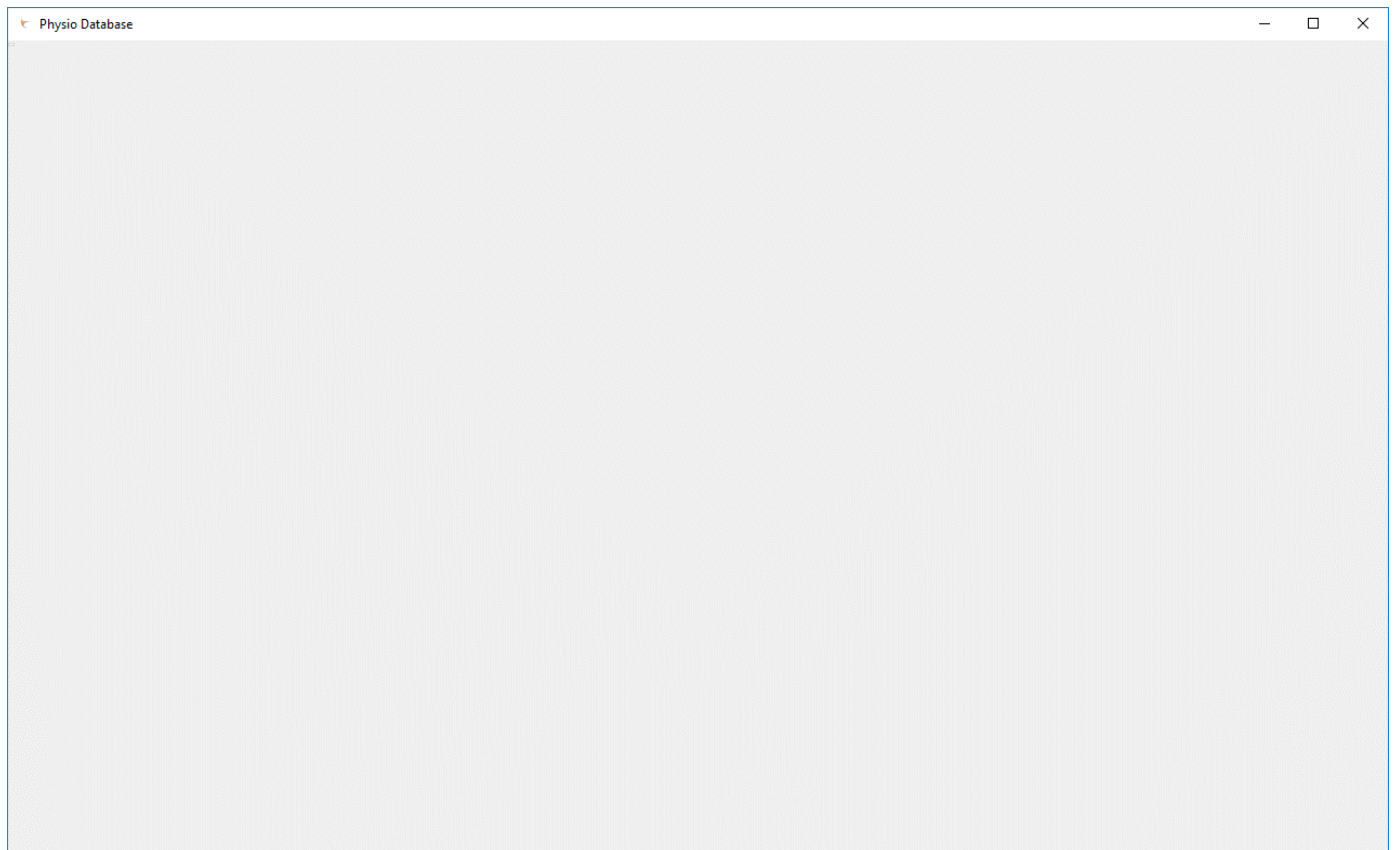
So now, when I opened the clients page it showed the following which fixed the table:

ClientID	MedicalRecordID	Prefix	First Name	Surname	DOB	Telephone	Address	PostCode
1	1	Mr	Kai	Holloway	1934-07-11	07863701077	23 Ermin Street	RH18 9WX
2	2	Mr	Andrew	Rove	1938-04-12	07920991649	19 Middlewich Road	TN5 9IE
3	3	Mrs	Aaliyah	Price	1978-04-30	07935747494	34 Bishopthorpe Road	SA44 7LU
4	4	Ms	Paisley	Russel	2002-08-26	07830280919	12 Sutton Wick Lane	CA14 1DQ
5	5	Mr	Barack	Obama	1997-10-12	07702989653	98 Newport Road	IV12 5WH
6	6	Mr	Cathal	Gorman	1954-09-01	07038789458	49 Ash Lane	EX23 7WL
7	7	Dr	Abigail	Dunn	1977-08-31	07777827240	5 Manor Close	LL54 0UD
8	8	Mr	Leo	Barker	1999-03-16	07956646717	69 Cefn Road	RG7 4FJ
9	9	Mrs	Jasmine	Powell	1941-01-04	07728974291	72 South Crescent	DY9 9XX
10	10	Mr	Dayyan	O'Brien	2001-01-31	07767862981	10 Windsor Hill	BT34 1ER
12	12	Dr	Steve	Jobs	1980-01-02	07605407812	5 Apple Lane	RZ7 2GS

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## 7.4: Logging in going blank

When logging in, the frame would switch to something blank:



So, I checked the code that created tabs:

```
class TabFrame(tk.Frame):
    """
    this is the frame which holds all the tabs, this allows users
    to select which tab they want to use
    """

    def __init__(self, parent, *args, **kwargs):
        tk.Frame.__init__(self, parent, *args, **kwargs)

        notebook = ttk.Notebook(parent)

        cursor.execute("""SELECT Position FROM staff WHERE LoggedIn = ?""", (True,))
        pos = cursor.fetchone()[0] #does views to see which tabs to show
        if pos == 'IT' or pos == 'Owner' or pos == 'Nurse' or pos == 'Physiotherapist' or pos == 'Receptionist':
            notebook.add(ClientsFrame(notebook), text='Clients') #shows client tab
        if pos == 'Owner' or pos == 'Nurse' or pos == 'Physiotherapist' or pos == 'Receptionist':
            notebook.add(AppointmentsFrame(notebook), text='Appointments')
        if pos == 'IT' or pos == 'Owner':
            notebook.add(StaffFrame(notebook), text='Staff')
        if pos == 'Owner' or pos == 'Nurse' or pos == 'Physiotherapist':
            notebook.add(MedicalRecordsFrame(notebook), text='Medical Records')
        if pos == 'Owner':
            notebook.add(FinancesFrame(notebook), text='Finances')

        notebook.grid(row=0, column=0)
```

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As you can see the pos doesn't contain spaces, the actual positions have lots of spaces, so I decided to add spaces to each of the positions:

```
class TabFrame(tk.Frame):
    """
    this is the frame which holds all the tabs, this allows users
    to select which tab they want to use
    """

    def __init__(self, parent, *args, **kwargs):
        tk.Frame.__init__(self, parent, *args, **kwargs)

        notebook = ttk.Notebook(parent)

        cursor.execute("""SELECT Position FROM staff WHERE LoggedIn = ?""", (True,))
        pos = cursor.fetchone()[0] #does views to see which tabs to show
        if pos == 'IT' or pos == 'Owner' or pos == 'Nurse' or pos == 'Physiotherapist' or pos == 'Receptionist':
            notebook.add(ClientsFrame(notebook), text='Clients') #shows client tab
        if pos == 'Owner' or pos == 'Nurse' or pos == 'Physiotherapist' or pos == 'Receptionist':
            notebook.add(AppointmentsFrame(notebook), text='Appointments')
        if pos == 'IT' or pos == 'Owner':
            notebook.add(StaffFrame(notebook), text='Staff')
        if pos == 'Owner' or pos == 'Nurse' or pos == 'Physiotherapist':
            notebook.add(MedicalRecordsFrame(notebook), text='Medical Records')
        if pos == 'Owner':
            notebook.add(FinancesFrame(notebook), text='Finances')

        notebook.grid(row=0, column=0)
```

I then tried logging in and the tables now showed:

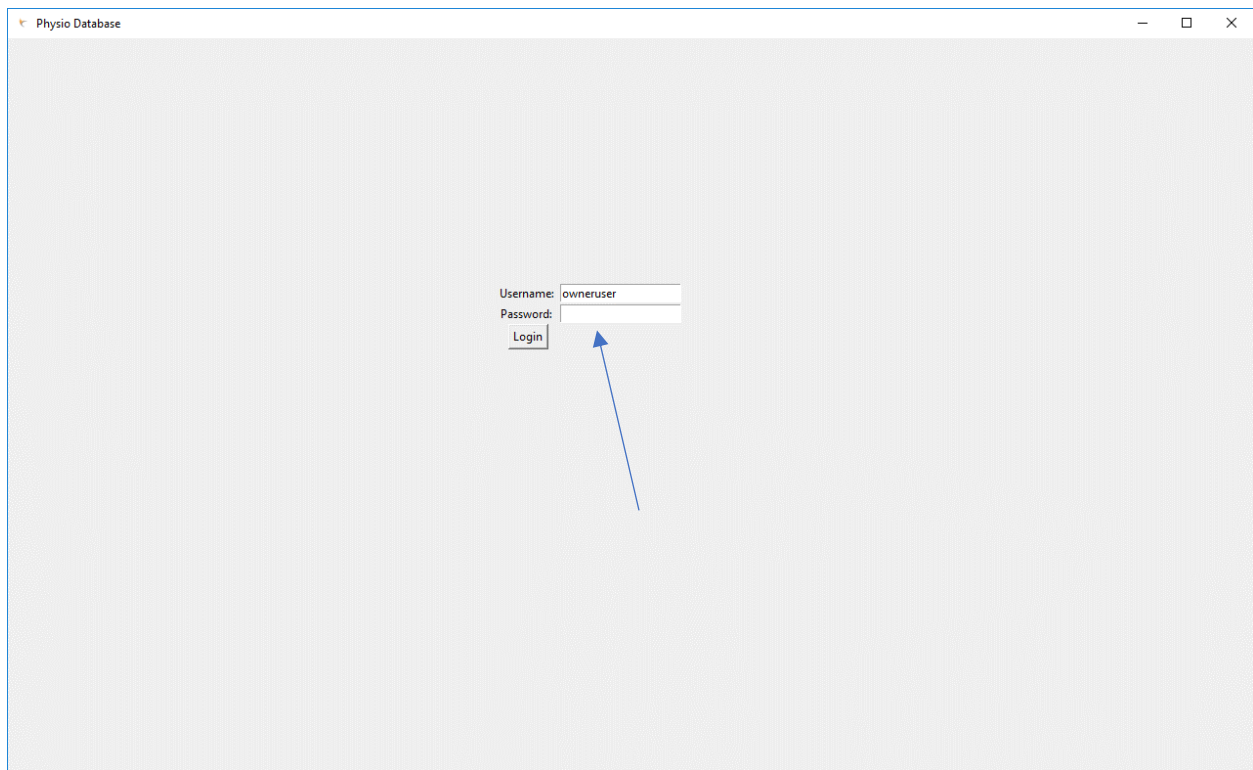
ClientID	MedicalRecordID	Prefix	First Name	Surname	DOB	Telephone	Address	Postcode
1	1	Mr	Kai	Holloway	1934-07-11	07863701077	23 Ermin Street	RH18 9WX
2	2	Mr	Andrew	Rove	1938-04-12	07920991649	19 Middlewich Road	TN5 9JE
3	3	Mrs	Aaliyah	Price	1978-04-30	07935747494	34 Bishopthorpe Road	SA44 7LU
4	4	Ms	Paisley	Russel	2002-08-26	07830280919	12 Sutton Wick Lane	CA14 1DQ
5	5	Mr	Barack	Obama	1997-10-12	07702989653	98 Newport Road	IV12 5WH
6	6	Mr	Cathal	Gorman	1954-09-01	07038789458	49 Ash Lane	EX23 7WL
7	7	Dr	Abigail	Dunn	1977-08-31	07777827240	5 Manor Close	LL54 0UD
8	8	Mr	Leo	Barker	1999-03-16	07956646717	69 Cefn Road	RG7 4FJ
9	9	Mrs	Jasmine	Powell	1941-01-04	07728974291	72 South Crescent	DY9 9XX
10	10	Mr	Dayyan	OBrien	2001-01-31	07767862981	10 Windsor Hill	BT34 1ER
12	12	Dr	Steve	Jobs	1980-01-02	07605407812	5 Apple Lane	RZ7 2GS



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## 7.5: Password box being blank

When writing my password into the search box is showed blank instead of \*



So, I decided to look at the code:

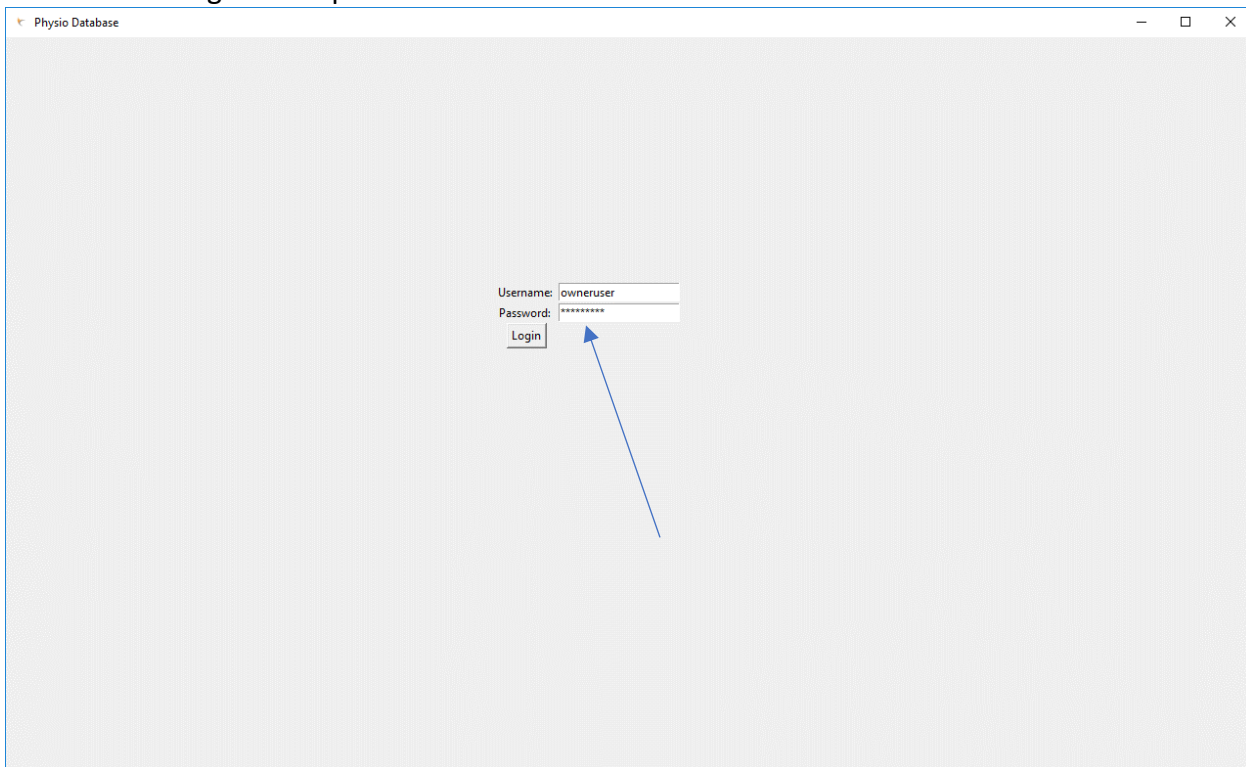
```
def __init__(self, master):  
    tk.Frame.__init__(self, master)  
    self.master = master  
    tk.Label(self, text="Username: ").grid(row=0, column=0, padx = (500,0),  
    tk.Label(self, text="Password: ").grid(row=1, column=0, padx = (500,0))  
    self.un_entry = tk.Entry(self)  
    self.un_entry.grid(row=0, column=1, padx = (0,500), pady = (250,0))  
    self.pw_entry = tk.Entry(self, show = ' * ') #use stars for password  
    self.pw_entry.grid(row=1, column=1, padx = (0,500))
```

And I noticed that there were spaces around the \*, so I changed it to:

```
def __init__(self, master):  
    tk.Frame.__init__(self, master)  
    self.master = master  
    tk.Label(self, text="Username: ").grid(row=0, column=0, padx = (500,0),  
    tk.Label(self, text="Password: ").grid(row=1, column=0, padx = (500,0))  
    self.un_entry = tk.Entry(self)  
    self.un_entry.grid(row=0, column=1, padx = (0,500), pady = (250,0))  
    self.pw_entry = tk.Entry(self, show = '*') #use stars for password  
    self.pw_entry.grid(row=1, column=1, padx = (0,500))
```

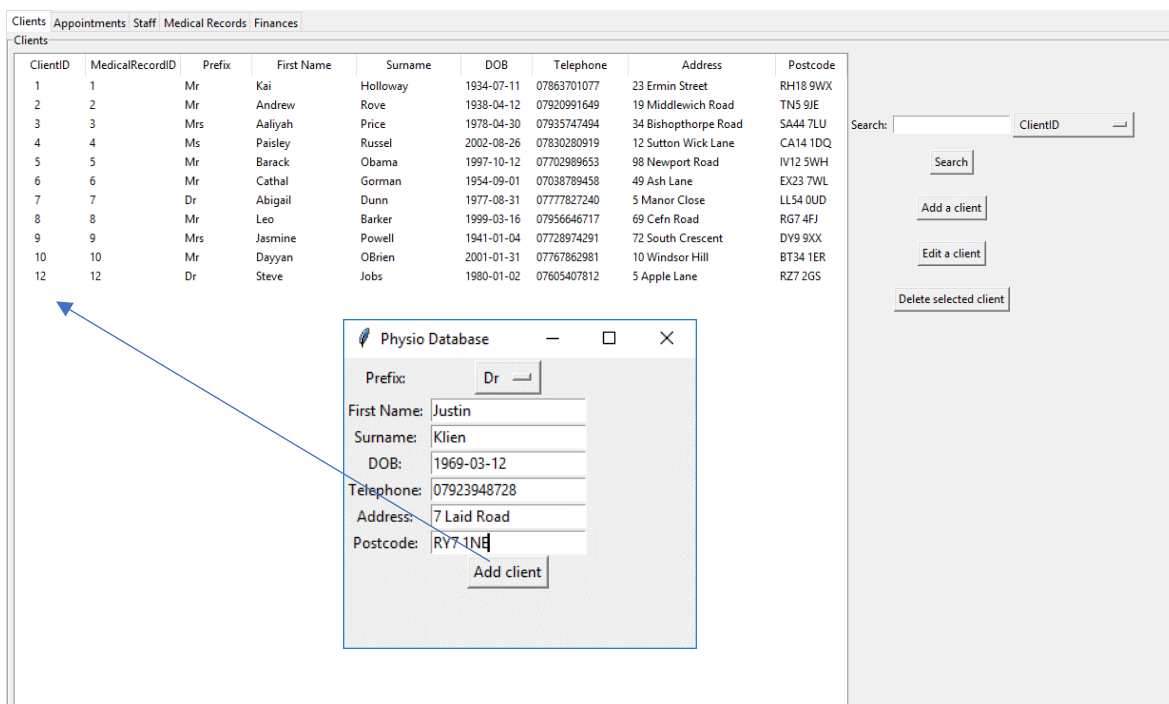
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So now writing out the password looked like:



## 7.6: Records not updating automatically when a client is added

When adding a client, I found that nothing refreshed from the treeview. You can see that nothing is added below:





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So, I decided to check the code that adds a client:

```
self.cursor.execute(
    """INSERT INTO clients(Prefix, FirstName, Surname, DOB, Telephone, Address, Postcode) VALUES (?, ?, ?, ?, ?, ?, ?)""",
    (self.variable.get(), self.first_name_box.get(), self.surname_box.get(),
    self.dob_box.get(), self.telephone_box.get(), self.address_box.get(),
    self.postcode_box.get(),))
self.cursor.execute(
    """SELECT ClientID FROM clients ORDER BY ClientID DESC LIMIT 1""")
)
clientid = self.cursor.fetchone()
clientid = clientid[0]
self.cursor.execute(
    """INSERT INTO medicalrecords(ClientID) VALUES (?)""", (clientid,))
self.cursor.execute(
    """SELECT MedicalRecordID FROM medicalrecords ORDER BY MedicalRecordID DESC LIMIT 1""")
)
medicalrecordid = self.cursor.fetchone()
medicalrecordid = medicalrecordid[0]
self.cursor.execute(
    """UPDATE clients SET MedicalRecordID = ? WHERE ClientID = ?""",
    (medicalrecordid, clientid,))
self.db.commit()
self.create_client_window.destroy()
ClientsFrame.update_table()
```

I noticed that the ClientsFrame.update\_table() is what called the update table function and in this case the function was in a different class, so I added self inside the brackets:

```
self.cursor.execute(
    """INSERT INTO clients(Prefix, FirstName, Surname, DOB, Telephone, Address, Postcode) VALUES (?, ?, ?, ?, ?, ?, ?)""",
    (self.variable.get(), self.first_name_box.get(), self.surname_box.get(),
    self.dob_box.get(), self.telephone_box.get(), self.address_box.get(),
    self.postcode_box.get(),))
self.cursor.execute(
    """SELECT ClientID FROM clients ORDER BY ClientID DESC LIMIT 1""")
)
clientid = self.cursor.fetchone()
clientid = clientid[0]
self.cursor.execute(
    """INSERT INTO medicalrecords(ClientID) VALUES (?)""", (clientid,))
self.cursor.execute(
    """SELECT MedicalRecordID FROM medicalrecords ORDER BY MedicalRecordID DESC LIMIT 1""")
)
medicalrecordid = self.cursor.fetchone()
medicalrecordid = medicalrecordid[0]
self.cursor.execute(
    """UPDATE clients SET MedicalRecordID = ? WHERE ClientID = ?""",
    (medicalrecordid, clientid,))
self.db.commit()
self.create_client_window.destroy()
ClientsFrame.update_table(self)
```

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I then added a client and this time the table automatically refreshed:

Physio Database

Clients Appointments Staff Medical Records Finances

Clients

ClientID	MedicalRecordID	Prefix	First Name	Surname	DOB	Telephone	Address	Postcode
1	1	Mr	Kai	Holloway	1934-07-11	07863701077	23 Ermin Street	RH18 9WX
2	2	Mr	Andrew	Rove	1938-04-12	07920991649	19 Middlewich Road	TN5 9JE
3	3	Mrs	Aaliyah	Price	1978-04-30	07935747494	34 Bishopthorpe Road	SA44 7LU
4	4	Ms	Paisley	Russel	2002-08-26	07830280919	12 Sutton Wick Lane	CA14 1DQ
5	5	Mr	Barack	Obama	1997-10-12	07702989653	98 Newport Road	IV12 5WH
6	6	Mr	Cathal	Gorman	1954-09-01	07038789458	49 Ash Lane	EX23 7WL
7	7	Dr	Abigail	Dunn	1977-08-31	07777827240	5 Manor Close	LL54 0UD
8	8	Mr	Leo	Barker	1999-03-16	07956646717	69 Cefn Road	RG7 4FJ
9	9	Mrs	Jasmine	Powell	1941-01-04	07728974291	72 South Crescent	DY9 9XX
10	10	Mr	Dayyan	OBrien	2001-01-31	07767862981	10 Windsor Hill	BT34 1ER
12	12	Dr	Steve	Jobs	1980-01-02	07605407812	5 Apple Lane	RZ7 2GS
14	14	Mr	Tim	Seeram	2001-01-24	07748592738	7 Leet Hill	RV7 9XE

Search:  ClientID