Database Connectivity from Python Code

import psycopg2  
class DatabaseObject(object):  
 def \_\_init\_\_(self):  
 try:  
 connection = psycopg2.connect(user = **"reema1"**,  
 password = **"mathi200"**,  
 host = **"127.0.0.1"**,  
 port = **"5432"**,  
 database = **"mydb"**)  
 with connection:  
 cur =connection.cursor()  
 cur.execute(**"CREATE TABLE IF NOT EXISTS employee (eid SMALLSERIAL PRIMARY KEY, ename VARCHAR(30) NOT NULL, dept VARCHAR(25), designation VARCHAR(25) NOT NULL, salary INTEGER);"**)  
 connection.commit()  
  
  
 except (Exception, psycopg2.Error) as error :  
 print (**"Unable to Create Table"**, error)  
  
 finally:  
 *#closing database connection.*  
if(connection):  
 cur.close()  
 connection.close()  
  
 def insert\_data(self,data):  
 try:  
 connection = psycopg2.connect(user=**"reema1"**,  
 password=**"mathi200"**,  
 host=**"127.0.0.1"**,  
 port=**"5432"**,  
 database=**"mydb"**)  
 cursor = connection.cursor()  
  
 postgres\_insert\_query = **""" INSERT INTO employee (ename,dept,designation,salary) VALUES (%s,%s,%s,%s)"""**  
cursor.execute(postgres\_insert\_query,data)  
  
 connection.commit()  
 count = cursor.rowcount  
 print(count, **"Record inserted successfully into employee table"**)  
  
 except (Exception, psycopg2.Error) as error:  
 if (connection):  
 print(**"Failed to insert record into mobile table"**, error)  
  
 finally:  
 *# closing database connection.*  
if (connection):  
 cursor.close()  
 connection.close()  
 print(**"PostgreSQL connection is closed"**)  
 def view\_data(self):  
 try:  
 connection = psycopg2.connect(user=**"reema1"**,  
 password=**"mathi200"**,  
 host=**"127.0.0.1"**,  
 port=**"5432"**,  
 database=**"mydb"**)  
 cursor = connection.cursor()  
  
 postgres\_select\_query = **"""SELECT \* FROM employee;"""**  
cursor.execute(postgres\_select\_query)  
  
 return cursor.fetchall()  
  
 except (Exception, psycopg2.Error) as error:  
 if (connection):  
 print(**"Failed to retrieve records from employee table"**, error)  
  
 finally:  
 *# closing database connection.*  
if (connection):  
 cursor.close()  
 connection.close()  
 print(**"PostgreSQL connection is closed"**)  
  
 def delete\_data(self,id):  
 try:  
 connection = psycopg2.connect(user=**"reema1"**,  
 password=**"mathi200"**,  
 host=**"127.0.0.1"**,  
 port=**"5432"**,  
 database=**"mydb"**)  
 cursor = connection.cursor()  
 sql\_delete\_query = **"""Delete from employee where eid = %s"""**  
cursor.execute(sql\_delete\_query, (id))  
 connection.commit()  
 count = cursor.rowcount  
 print(count, **"Record deleted successfully "**)  
  
 except (Exception, psycopg2.Error) as error:  
 print(**"Error in Delete operation"**, error)  
  
 finally:  
 *# closing database connection.*  
if (connection):  
 cursor.close()  
 connection.close()  
 print(**"PostgreSQL connection is closed"**)  
  
  
 def update\_data(self,data):  
 try:  
 connection = psycopg2.connect(user=**"reema1"**,  
 password=**"mathi200"**,  
 host=**"127.0.0.1"**,  
 port=**"5432"**,  
 database=**"mydb"**)  
 cursor = connection.cursor()  
 sql\_update\_query = **"""Update employee set salary = %s where eid = %s"""**  
cursor.execute(sql\_update\_query, (data[0], data[1]))  
 connection.commit()  
 count = cursor.rowcount  
 print(count, **"Record Updated successfully "**)  
 except (Exception, psycopg2.Error) as error:  
 print(**"Error in update operation"**, error)  
  
 finally:  
 *# closing database connection.*  
if (connection):  
 cursor.close()  
 connection.close()  
 print(**"PostgreSQL connection is closed"**)  
  
  
def main():  
 print(**"\*"**\*40)  
 print(**"Employee Management System"**)  
 print(**"\*"**\*40)  
 db = DatabaseObject()  
 loop= True  
 while(loop):  
 choice = input(**"Press 1. Insert an Employee**\t**2. View all Employees**\t**3. Delete an Employee**\t**4. Update Employee**\t**5. Exit "**)  
 if choice==**'1'**:  
 name = input(**"Enter the Employee name: "**)  
 dept = input(**"Enter the department: "**)  
 designation = input(**"Enter the designation: "**)  
 salary = input(**"Enter the salary: "**)  
 db.insert\_data((name,dept,designation,salary))  
  
 elif choice== **'2'**:  
 for index, item in enumerate(db.view\_data()):  
 print(**"Id: "**+ str(item[0]))  
 print(**"Employee Name: "**+ item[1])  
 print(**"Department: "**+ item[2])  
 print(**"Designation: "**+item[3])  
 print(**"Salary: "**+str(item[4]))  
 print(**"**\n**"**)  
  
 elif choice == **'3'**:  
 id = input(**"Enter the Employee Id to be deleted: "**)  
 db.delete\_data((id))  
 elif choice==**'4'**:  
 id =int(input(**"Enter the Employee Id to be updated: "**))  
 sal =int(input(**"Enter the Salary: "**))  
 db.update\_data((sal,id))  
  
 else:  
 loop=False  
  
  
if \_\_name\_\_ == **'\_\_main\_\_'**:  
 main()

Drop Down Code:

from tkinter import \*  
import psycopg2  
  
root =Tk()  
root.title(**"Drop Down Box Demo"**)  
root.geometry(**"400x400"**)  
  
def fetch\_records():  
 try:  
 connection = psycopg2.connect(user=**"reema1"**,  
 password=**"mathi200"**,  
 host=**"127.0.0.1"**,  
 port=**"5432"**,  
 database=**"mydb"**)  
 cursor = connection.cursor()  
  
 postgres\_select\_query = **"""SELECT eid FROM employee;"""**  
cursor.execute(postgres\_select\_query)  
 return cursor.fetchall()  
  
 except (Exception, psycopg2.Error) as error:  
 if (connection):  
 print(**"Failed to retrieve records from employee table"**, error)  
  
 finally:  
 *# closing database connection.*  
if (connection):  
 cursor.close()  
 connection.close()  
 print(**"PostgreSQL connection is closed"**)  
  
  
def fetch\_row(event):  
 data1 =clicked.get()  
 print(data1[1])  
 try:  
 connection = psycopg2.connect(user=**"reema1"**,  
 password=**"mathi200"**,  
 host=**"127.0.0.1"**,  
 port=**"5432"**,  
 database=**"mydb"**)  
 cursor = connection.cursor()  
  
 postgres\_select\_query = **"""SELECT \* FROM employee where eid = %s;"""**  
cursor.execute(postgres\_select\_query,data1[1])  
 data= cursor.fetchall()  
 print(data)  
 for index,item in enumerate(data):  
 label1[**"text"**] = **"Employeee ID: "**+ str(item[0])  
 label2[**"text"**]= **"Employee Name: "**+item[1]  
 label3[**"text"**]= **"Department: "** +item[2]  
 label4[**"text"**]= **"Designation: "**+item[3]  
 label5[**"text"**]=**"Salary: "**+str(item[4])  
  
  
 except (Exception, psycopg2.Error) as error:  
 if (connection):  
 print(**"Failed to retrieve records from employee table"**, error)  
  
 finally:  
 *# closing database connection.*  
if (connection):  
 cursor.close()  
 connection.close()  
 print(**"PostgreSQL connection is closed"**)  
  
  
  
  
options =fetch\_records()  
  
clicked = StringVar()  
clicked.set(options[0])  
drop = OptionMenu(root,clicked,\*options,command=fetch\_row)  
drop.pack(ipady =10)  
label1 = Label(root,text=**""**)  
label1.pack()  
label2 = Label(root,text=**""**)  
label2.pack()  
label3 = Label(root,text=**""**)  
label3.pack()  
label4 = Label(root,text=**""**)  
label4.pack()  
label5 = Label(root,text=**""**)  
label5.pack()  
root.mainloop()