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C21

EXPERIMENT 10

AIM:

Python program to demonstrate MYSQL database connectivity with python. Create a GUI based application using widgets Entry, Label, Text, Button, RadioButton, CheckButton, ListBox, Menu, Spinbox **(any five)**.

Save the details in a database and read back from file on python prompt.

THEORY:

MySql DB:

MySQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including **data warehousing, e-commerce, and logging applications**. The most common use for mySQL however, is for the purpose of a web database.

We will use *mysql.connector* library to establish a connection between Python project and MySQL workbench. Db is the object created using mysql.connector.connect class which stores all the information about databases such database name, password, and table name.

Code:

```
from tkinter import *
import mysql.connector as m
conn = m.connect(user='root', password='', host='localhost', database='1.py')
cursor = conn.cursor()
def insert():
    sqlformula = "insert into details(id, name, year, dept) values (%s, %s, %s, %s)"
    info = (int(e0.get()), e1.get(), val.get(), lb.get(lb.curselection()))
    cursor.execute(sqlformula, info)
    conn.commit()
    e0.delete(0, END)
```

```
    e1.delete(0, END)
    lb.selection_clear(0, END)
def delete():
    if e0.get():
        sqlformula = "delete from details where id = %s"
        name = (e0.get(),)
        cursor.execute(sqlformula, name)
        conn.commit()
    elif e1.get():
        sqlformula = "delete from details where name = %s"
        name = (e1.get(),)
        cursor.execute(sqlformula, name)
        conn.commit()
    elif lb.curselection():
        sqlformula = "delete from details where dept = %s"
        dept = (lb.get(lb.cureselection()),)
        cursor.execute(sqlformula, dept)
        conn.commit()
        lb.selection_clear(0, END)
    else:
        sqlformula = "delete from details where year = %s"
        year = (val.get(),)
        cursor.execute(sqlformula, year)
        conn.commit()
    e0.delete(0, END)
    e1.delete(0, END)
    lb.selection_clear(0, END)

def update():
    sqlformula = "update details set year = %s, dept = %s where id = %s"
    info = (val.get(), lb.get(lb.cureselection()), e0.get())
    cursor.execute(sqlformula, info)
    conn.commit()
    e0.delete(0, END)
    e1.delete(0, END)
    lb.selection_clear(0, END)
```

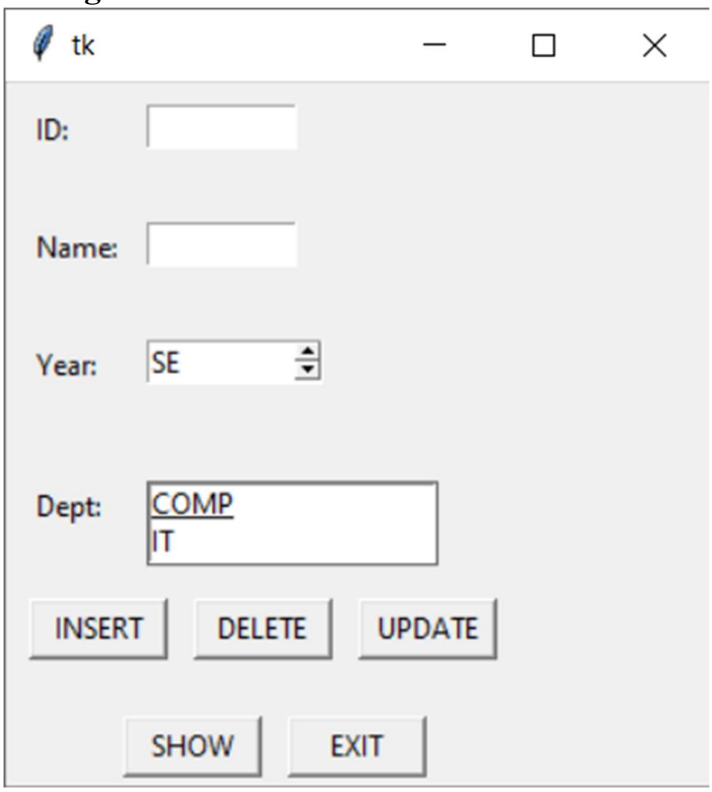
```
def show():
    cursor.execute("select * from details")
    for i in cursor:
        print(i)
    print('*'*20, end="\n")
    e0.delete(0, END)
    e1.delete(0, END)
    lb.selection_clear(0, END)

root = Tk()
root.geometry("300x300")
f1 = Frame(root, height = 300, width = 300)
f1.propagate(0)
f1.pack()
l0 = Label(f1, text="ID: ")
l0.place(x=10, y=10)
l1 = Label(f1, text="Name:")
l1.place(x=10, y=60)
l2 = Label(f1, text="Year: ")
l2.place(x=10, y=110)
l3 = Label(f1, text="Dept: ")
l3.place(x=10, y=170)
e0 = Entry(f1, width=10)
e0.place(x=60, y=10)
e1 = Entry(f1, width=10)
e1.place(x=60, y=60)
val = StringVar()
s1 = Spinbox(f1, values = ('SE', 'TE', 'BE'), textvariable=val, width = 10)
s1.place(x=60, y=110)
lb = Listbox(f1, height = 2, width = 20, selectmode = SINGLE)
lb.place(x=60, y=170)
list1 = ['COMP','IT','EXTC','CHEM']
for i in list1:
    lb.insert(END, i)
b1=Button(f1,text="INSERT",width=7,command=insert)
```

```
b2=Button(f1,text="DELETE",width=7,command=delete)
b3=Button(f1,text="UPDATE",width=7,command=update)
b4=Button(f1,text="SHOW",width=7,command=show)
b5=Button(f1,text="EXIT",width=7,command=root.destroy)
b1.place(x=10,y=220)
b2.place(x=80,y=220)
b3.place(x=150,y=220)
b4.place(x=50,y=270)
b5.place(x=120,y=270)
root.mainloop()
```

OUTPUT:

Filling Details:



After inserting data:

```
    raise errors.get_mysql_exception(exc.errno, msg=exc.msg,
mysql.connector.errors.ProgrammingError: 1054 (42S22): Unknown column 'dept' in 'field list'
PS D:\Harsh\SEM 4\PYTHON\Assingment\EXP 10> python -u "d:\Harsh\SEM 4\PYTHON\Assingment\EXP 10\1.PY"
(2003085, 'Harsh', 'SE', 'COMP')
**********
```

```
SELECT * FROM `details`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

+ Options

id	name	year	dept
2003085	Harsh	SE	COMP

Show all | Number of rows: 25 Filter rows: Search this table

Query results operations

Print Copy to clipboard Export Display chart Create view