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Course:	Python on Udemy	USN:	4AL18EC400
Topic:	Build a desktop database application	Semester & Section:	6th SEM B
Github Repository :	Sushant7026		

AFTERNOON SESSION DETAILS

Image of session:Output

Fixing the Bug (Practice)

Exercise

If you haven't already noticed, the program has a bug. When the listbox is empty and the user clicks the listbox, an `IndexError` is generated in the terminal:

```

Traceback (most recent call last):
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/tkinter.py", line 1699, in __call__
    return self.func(*args)
  File "frontend.py", line 6, in get_selected_row
    index=list1.curselection()[0]
IndexError: tuple index out of range

```

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Report –

Frontend.py

```
from tkinter import *
import backend

def get_selected_row(event):
    global selected_tuple
    index=list1.curselection()[0]
    selected_tuple=list1.get(index)
    e1.delete(0,END)
    e1.insert(END,selected_tuple[1])
    e2.delete(0,END)
    e2.insert(END,selected_tuple[2])
    e3.delete(0,END)
    e3.insert(END,selected_tuple[3])
    e4.delete(0,END)
    e4.insert(END,selected_tuple[4])

def view_command():
    list1.delete(0,END)
    for row in backend.view():
        list1.insert(END,row)

def search_command():
    list1.delete(0,END)
    for row in backend.search(title_text.get(),author_text.get(),year_text.get(),isbn_text.get()):
        list1.insert(END,row)

def add_command():
    backend.insert(title_text.get(),author_text.get(),year_text.get(),isbn_text.get())
    list1.delete(0,END)
    list1.insert(END,(title_text.get(),author_text.get(),year_text.get(),isbn_text.get()))

def delete_command():
    backend.delete(selected_tuple[0])

def update_command():
    backend.update(selected_tuple[0],title_text.get(),author_text.get(),year_text.get(),isbn_text.get())

window=Tk()

window.wm_title("BookStore")

l1=Label(window,text="Title")
l1.grid(row=0,column=0)

l2=Label(window,text="Author")
l2.grid(row=0,column=2)

l3=Label(window,text="Year")
l3.grid(row=1,column=0)

l4=Label(window,text="ISBN")
l4.grid(row=1,column=2)

title_text=StringVar()
e1=Entry(window,textvariable=title_text)
e1.grid(row=0,column=1)

author_text=StringVar()
e2=Entry(window,textvariable=author_text)
e2.grid(row=0,column=3)

year_text=StringVar()
e3=Entry(window,textvariable=year_text)
e3.grid(row=1,column=1)

isbn_text=StringVar()
e4=Entry(window,textvariable=isbn_text)
e4.grid(row=1,column=3)
```

```

list1=Listbox(window, height=6,width=35)
list1.grid(row=2,column=0,rowspan=6,columnspan=2)

sb1=Scrollbar(window)
sb1.grid(row=2,column=2,rowspan=6)

list1.configure(yscrollcommand=sb1.set)
sb1.configure(command=list1.yview)

list1.bind('<<ListboxSelect>>',get_selected_row)

b1=Button(window,text="View all", width=12,command=view_command)
b1.grid(row=2,column=3)

b2=Button(window,text="Search entry", width=12,command=search_command)
b2.grid(row=3,column=3)

b3=Button(window,text="Add entry", width=12,command=add_command)
b3.grid(row=4,column=3)

b4=Button(window,text="Update selected", width=12,command=update_command)
b4.grid(row=5,column=3)

b5=Button(window,text="Delete selected", width=12,command=delete_command)
b5.grid(row=6,column=3)

b6=Button(window,text="Close", width=12,command=window.destroy)
b6.grid(row=7,column=3)

window.mainloop()

```

Backend:

```

import sqlite3

def connect():
    conn=sqlite3.connect("books.db")
    cur=conn.cursor()
    cur.execute("CREATE TABLE IF NOT EXISTS book (id INTEGER PRIMARY KEY, title text, author text, year integer, isbn integer)")
    conn.commit()
    conn.close()

def insert(title,author,year,isbn):
    conn=sqlite3.connect("books.db")
    cur=conn.cursor()
    cur.execute("INSERT INTO book VALUES (NULL,?,?,?,?)",(title,author,year,isbn))
    conn.commit()
    conn.close()
    view()

def view():
    conn=sqlite3.connect("books.db")
    cur=conn.cursor()
    cur.execute("SELECT * FROM book")
    rows=cur.fetchall()
    conn.close()
    return rows

def search(title="",author="",year="",isbn=""):
    conn=sqlite3.connect("books.db")
    cur=conn.cursor()
    cur.execute("SELECT * FROM book WHERE title=? OR author=? OR year=? OR isbn=?", (title,author,year,isbn))
    rows=cur.fetchall()
    conn.close()
    return rows

def delete(id):
    conn=sqlite3.connect("books.db")
    cur=conn.cursor()
    cur.execute("DELETE FROM book WHERE id=?", (id,))
    conn.commit()

```

```
conn.close()
```

```
def update(id,title,author,year,isbn):  
    conn=sqlite3.connect("books.db")  
    cur=conn.cursor()  
    cur.execute("UPDATE book SET title=?, author=?, year=?, isbn=? WHERE id=?", (title,author,year,isbn,id))  
    conn.commit()  
    conn.close()
```

```
connect()  
insert("The Sun", "John Smith",1918,913123132)  
delete(3)  
update(4,"The moon", "John Smooth",1917,999999)  
print(view())  
print(search(author="John Smooth"))
```