DESKTOP DATABASE APP

FRONT END

```
from tkinter import *

window=Tk()

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)


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

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

#connecting listbox and scrollbar
list1.configure(yscrollcommand=sb1.set)
sb1.configure(command=list1.yview)


#CREATING ALL BUTTONS
b1=Button(window,text="View all",width=12)
b1.grid(row=2,column=3)

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

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

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

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

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

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

window.mainloop()
```

BACKEND

```
import sqlite3

def connect():
    conn=sqlite3.connect("books.db")            #database name is book
    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()

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=""):     #provide an active string so if given value not passed then also fn runs
    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,))        #(don't forget comma , after 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=?",(id,title,author,year,isbn))
    conn.commit()
    conn.close()



connect()
```

CONNECTING FRONTEND TO BACKEND

In script1.py

```
from tkinter import *
import Backend

#to change window name
window.wm_title("BOOKSTORE")

def view_command():
    list1.delete(0,END)     #to delete anything present initially
    for row in Backend.view():
        list1.insert(END,row)                                #to add in list box,ENd mea
ns every now row is inserted at end


def search_command():
    list1.delete(0,END)
    for row in Backend.search(title_text.get(),author_text.get(),year_text.get(),isbn_text
.get()):                          #.get() as title_text is Stringvar() not string
        list1.insert(END,row)

def add_command():
    Backend.insert(title_text.get(),author_text.get(),year_text.get(),isbn_text.get())
  #no list1 as no display on listbox
    list1.delete(0,END)
    list1.insert(END,(title_text.get(),author_text.get(),year_text.get(),isbn_text.get()))

def get_selected_row(event):
    global selected_tuple            #as defined by bind ,to get which one is selected
    index=list1.curselection()[0]      #to get id
    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 delete_command():
    Backend.delete(selected_tuple[0])


def update_command():
    Backend.update(selected_tuple[0],title_text.get(),author_text.get(),year_text.get(),is
bn_text.get())
```

Changes made in fronted

```
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)          #have parame
ter passed
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)
```