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| --- |
| Close-up image showing the leaf-sides of two oversized books side-by-side on a bookshelf, with additional books in soft focus background |
| BFCAI Library   |  |  |  | | --- | --- | --- | | Ahmed Nasser Emam | Eslam Hany Zoghla | Alaa Mohamed Zahra | |
| |  |  |  | | --- | --- | --- | | Eslam Ahmed Lotfy |  | Ashraf Hamed Abdullahe | |

**Library application**

**Abstract:-**

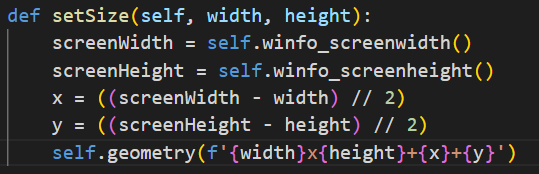
**The purpose of the project is to create a library system in the college.**

This system helps the librarian in managing the library and converting it to the digital system. It provides some features, for example, adding books to the database and modifying them, or searching for a book request from the student, controlling and managing students and adding them to the database. We used visual studio code and Sqlite app to make this system. The application is divided into 5 screens. The first screen is the main screen and the remaining four are sub screens. The main screen has four buttons, when you press any button, the main screen disappears and any of the sub screens appears according to the button, and can back to the main screen.

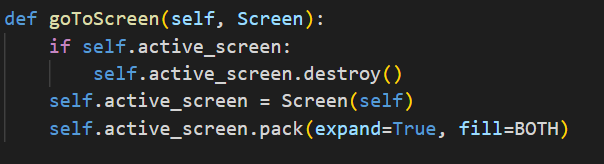
**In the visual studio code ,we used 7 files:-**

**1.App.py:-**

Set size function has two arguments to enter the dimensions of the screen when you call them.

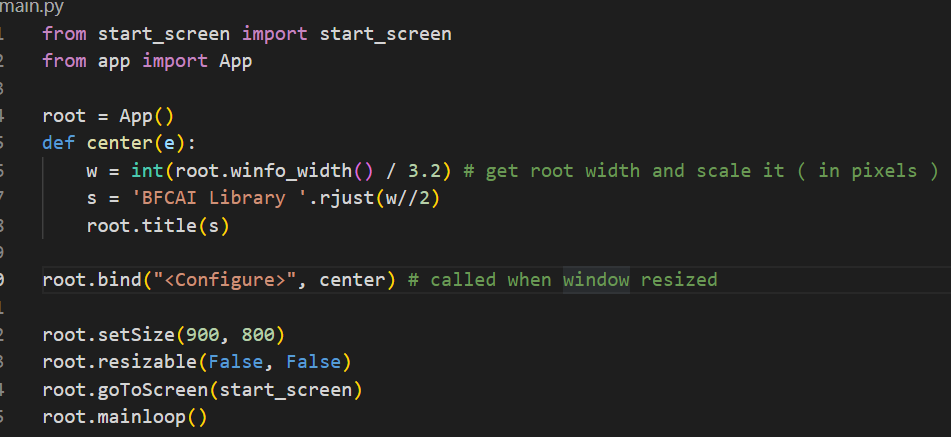
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Go to screen function has one arguments to enter the name screen to open in the screen

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**2.Main.py :-**

We used object in main file

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**3.start screen.py:-**

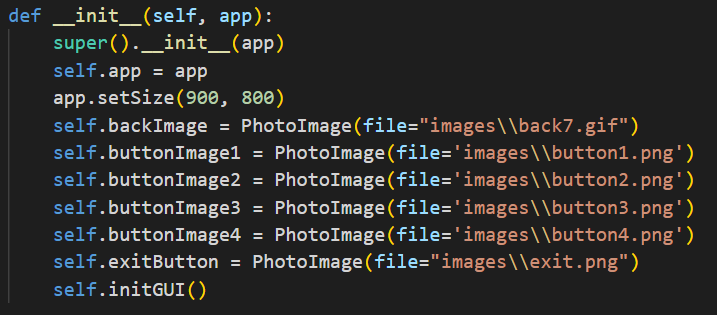
**Screen:-  
**

**description:-**

This is the first screen that appears when you click to run the program. In this screen we show the five button and one text in top. The text called BFCAI library, and the button called book registration, book record, student registration, student record and exit to move from one screen to another easily.

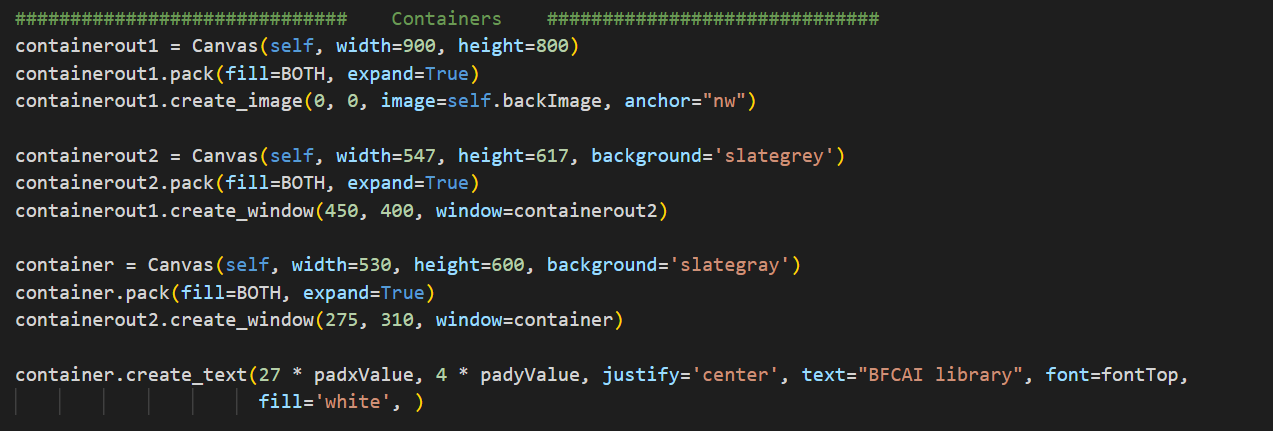
**code: -**

**1.**

****

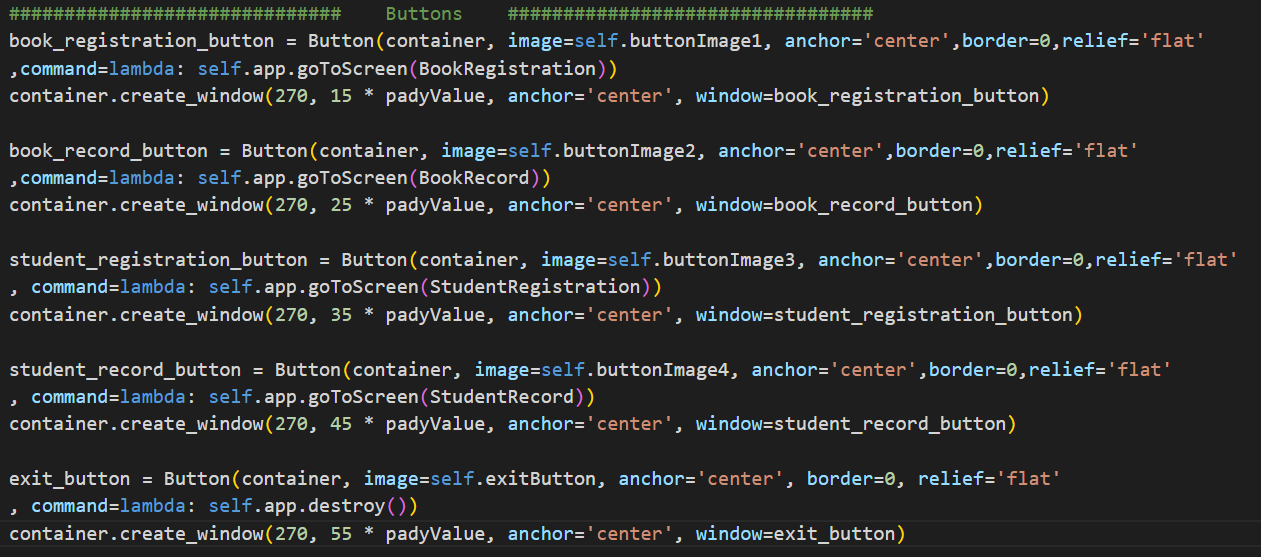
this contractor inherited super class (App), its content path of background image and buttons .

2.

****

these containers are content background image and all components.

3.

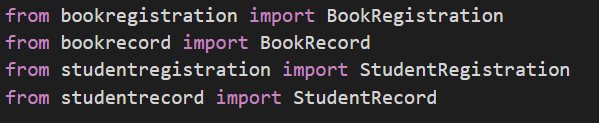


These buttons that show on screen, its coded with fixed position and specific font, width and color.

Each button has commend for example,

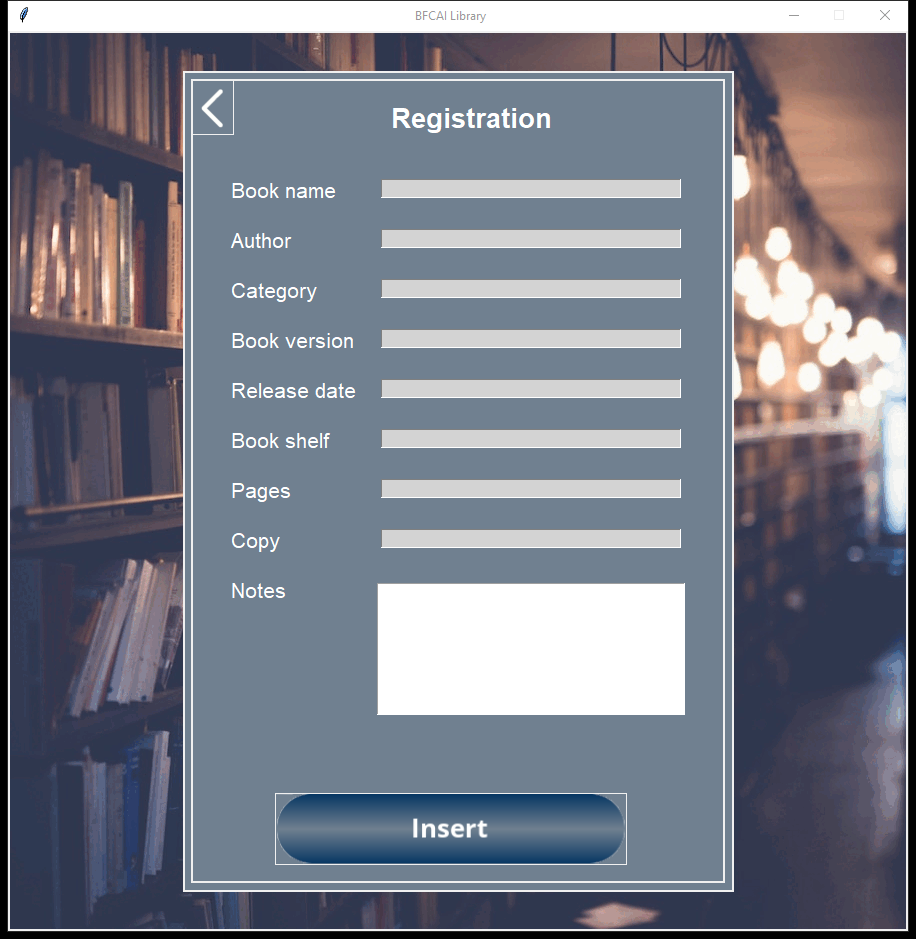
1. Book registeration button used to go the book registeration screen .
2. Book record button used to go the book record screen .
3. Student registeration button used to go the student registeration screen .
4. Student record button used to go the student record screen .
5. exit button used to exit from application .

4.



Library used .

**4.bookregistration.py: -**

**Screen: -**

**description:-**

It's a frame used to collect and register all required data of a book in each and add it to library database.

Its content 2 button

1. Back button to return to start screen
2. Insert button to add data to database after gather all data.

**Code:-**

**1.**

def \_\_init\_\_(self, app):

        super().\_\_init\_\_()

        self.app = app

        app.setSize(900, 900)

        self.backImage = PhotoImage(file="images\\back7.gif")

        self.backButton = PhotoImage(file="images\\backbutton1.png")

        self.insertButton = PhotoImage(file="images\\insert.png")

        self.initGUI()

this contractor inherited super class (App), its content path of background image and buttons .

2.

def clear\_enteries(self):

        self.enterBookname.delete(0, END)

        self.enterAuthor.delete(0, END)

        self.enterCategory.delete(0, END)

        self.enterBookVersion.delete(0, END)

        self.enterReleaseBook.delete(0, END)

        self.enterPages.delete(0, END)

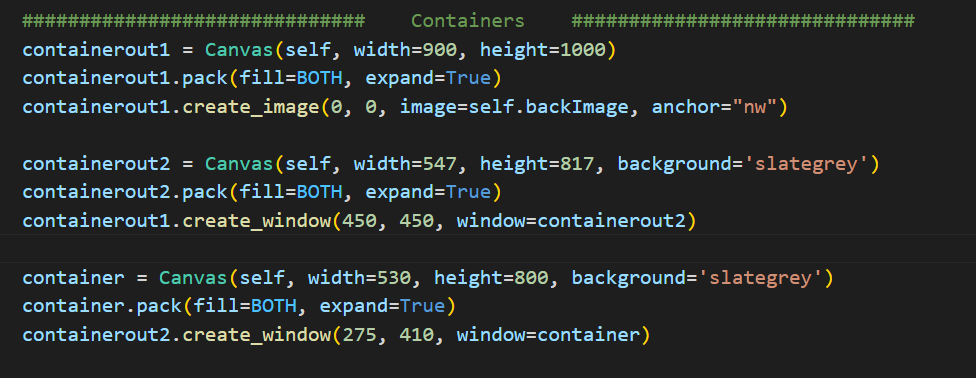
        self.enterCopies.delete(0, END)

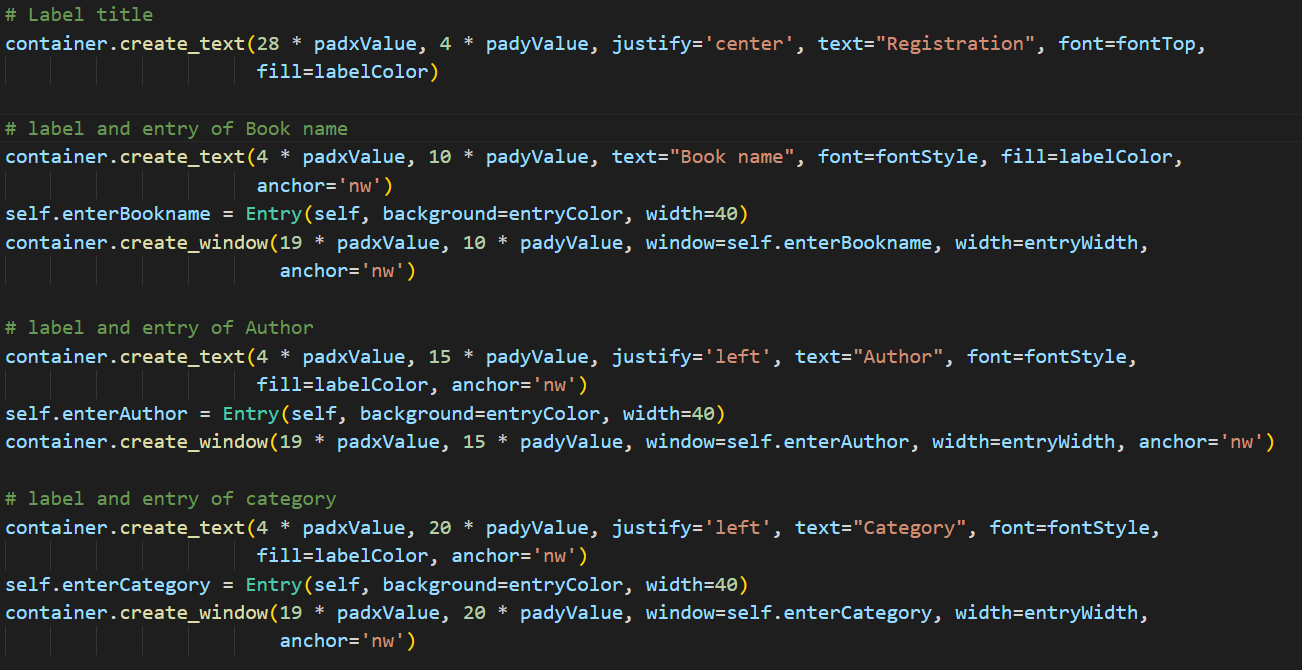
        self.enterBookShelf.delete(0, END)

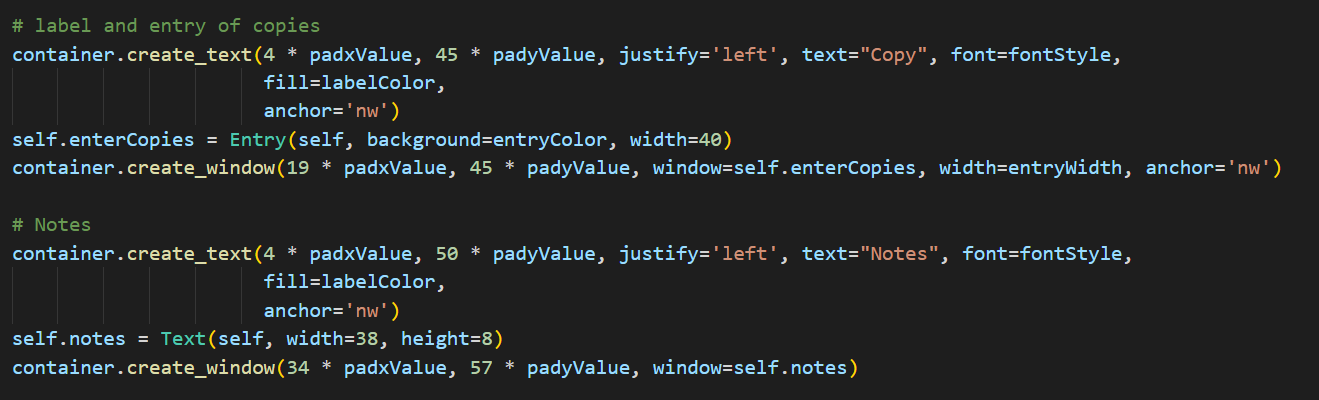
        self.notes.delete("1.0", "end")

this function used to clear all entries in this frame.

3.

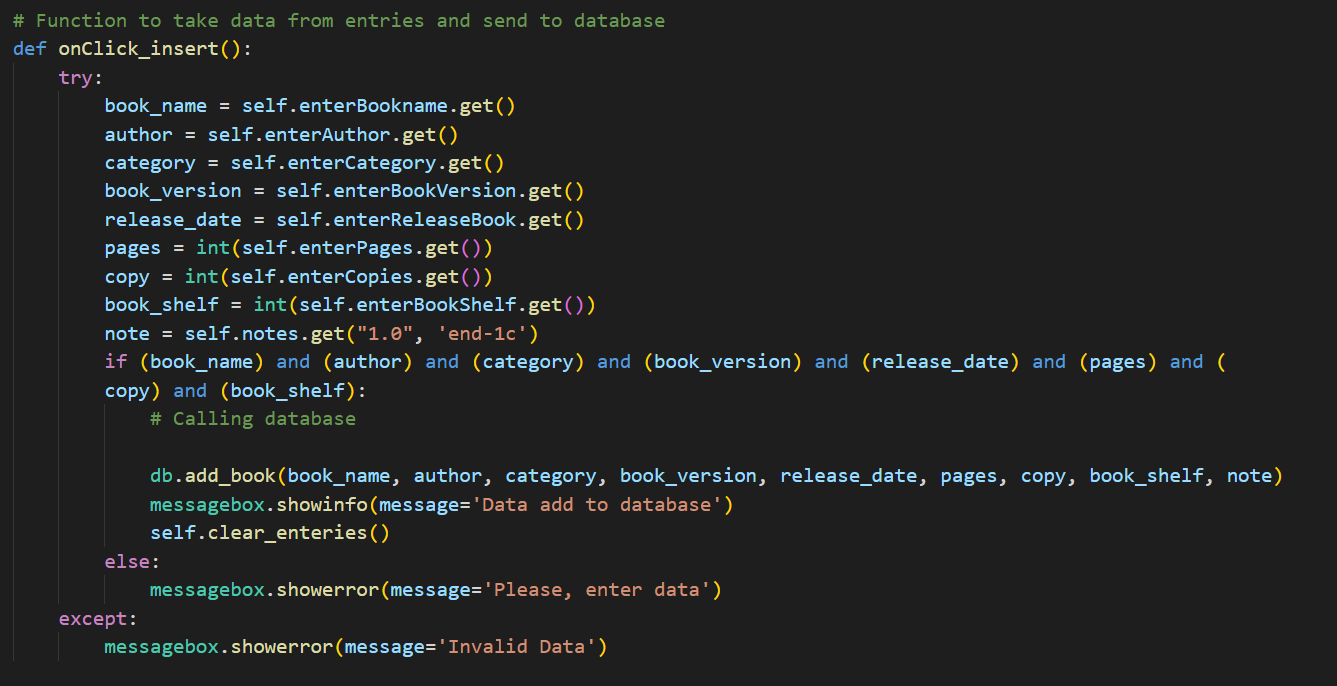
  
these containers are content background image and all components.

4.

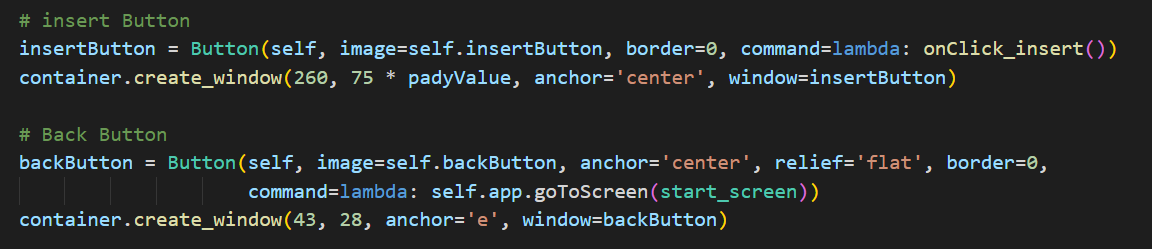


These are codes of entries and his fixed position on screen and specific font, width, color and so on.

5. onClick\_insert(): -



This function used to collect data from entries and send it to be added to database by calling function add\_book(…) we will see it later. If user doesn’t enter any field, it will print message “Please, enter data”.

6.

These buttons that show on screen, its coded with fixed position and specific font, width and color.

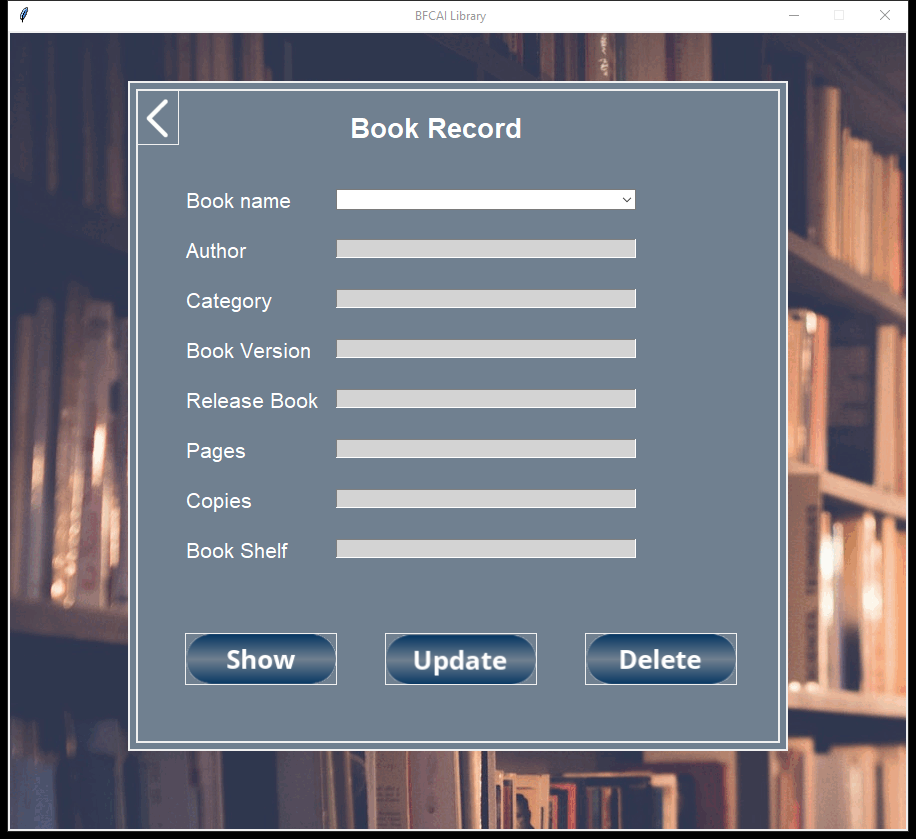
Each button has commend for example,

1. Insert button calling function onClick\_insert()

shown in previous page

1. Back button used to return to previous screen(main screen).

**5.bookrecord.py: -**

**Screen:-**   
 **description:-**It's a frame which has all the data of books in the library and where we can show all the data of the library , update the data of a book in each , delete a book from the library and search about book using its name only.

**Codes:-**1.  
Text

Description automatically generated this contractor inherited super class (App), its content path of background image and buttons .

2. Show\_data():-

Text

Description automatically generatedthis function used to show data in table tree.

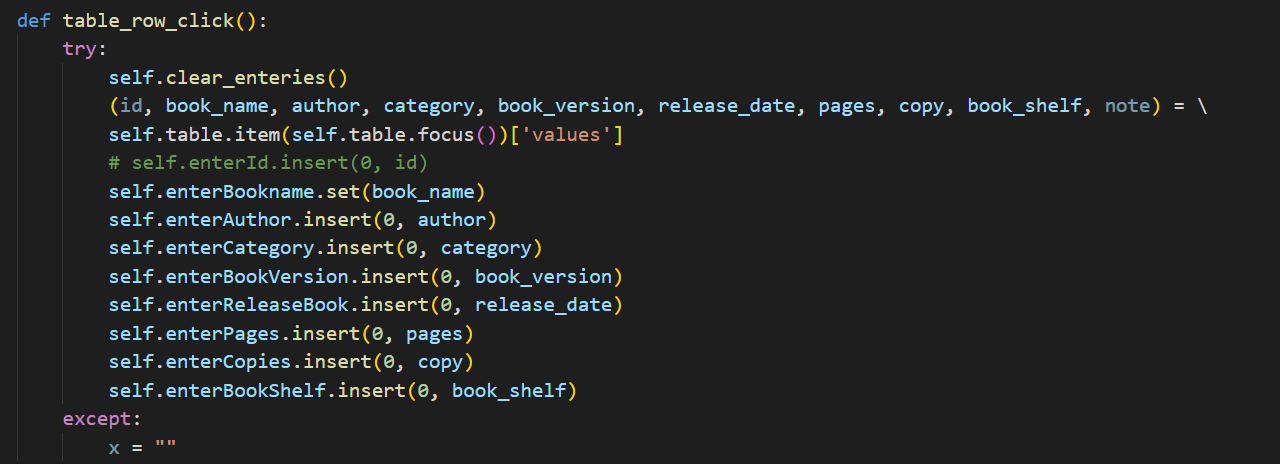
Text

Description automatically generated3.  
these containers are content background image and all components.

Text

Description automatically generated4.

These are codes of entries and his fixed position on screen and specific font, width, color and so on.

5.table\_row\_click()  
used to collect selected table data and passing it to entries.

6.ClickOnCombo()

Text

Description automatically generatedused to get selected book from combo box and get all data to its name and passing it to entries.

Text

Description automatically generated6. ClickUpdate()

This function used to update data of specific book and must entered all date otherwise, you will show message “Please enter date”.

Text

Description automatically generated7.ClickDelete()

This function used to delete specific book from database, you can’t delete any data without select their name.

8.

def clear\_enteries(self):

        self.enterBookname.delete(0, END)

        self.enterAuthor.delete(0, END)

        self.enterCategory.delete(0, END)

        self.enterBookVersion.delete(0, END)

        self.enterReleaseBook.delete(0, END)

        self.enterPages.delete(0, END)

        self.enterCopies.delete(0, END)

        self.enterBookShelf.delete(0, END)

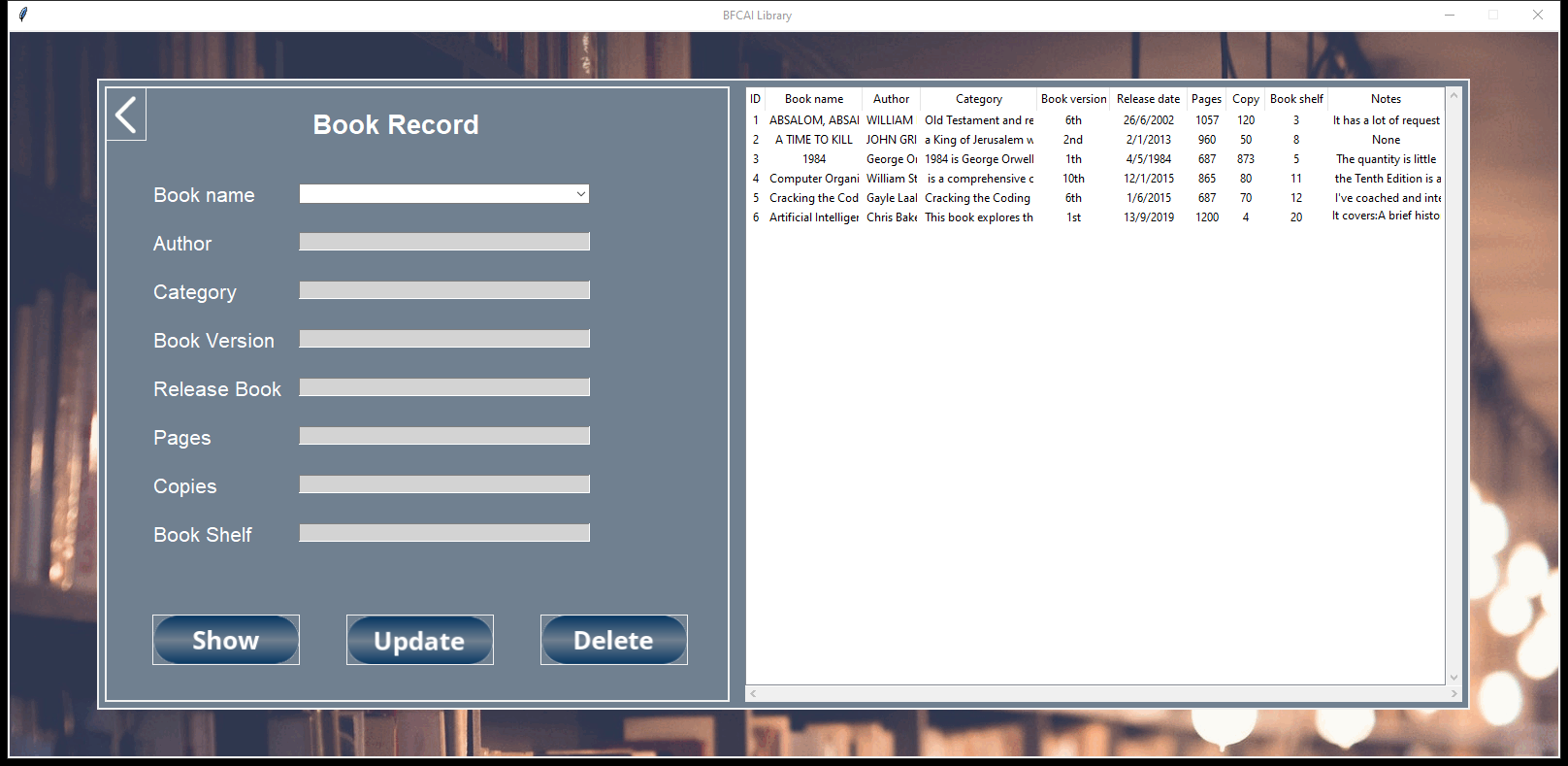
        self.notes.delete("1.0", "end")

this function used to clear all entries in this frame.

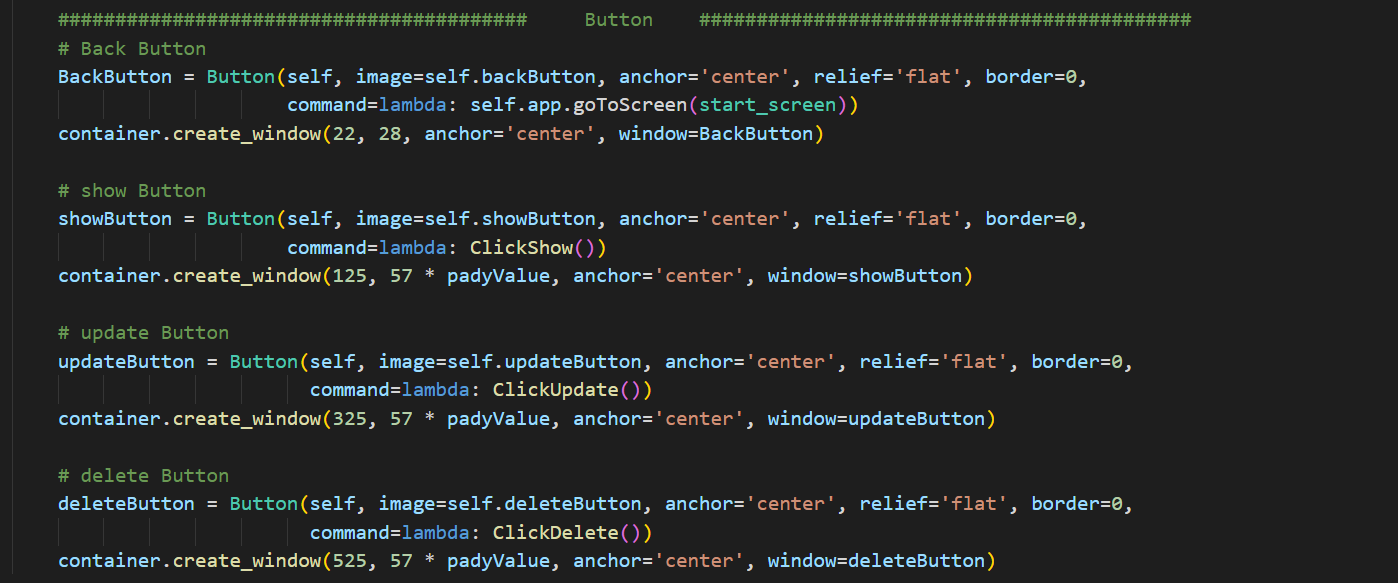
Text

Description automatically generatedText

Description automatically generated9.  
show all the data of book in a shape of table and by selecting in any row of them you can fill the entries by selected data

-> Note the return date if it hasn't come yet it will appear black as normal if the return date has already come or it passed the color becomes red ("warning method").

This table will shown when you clicked this button

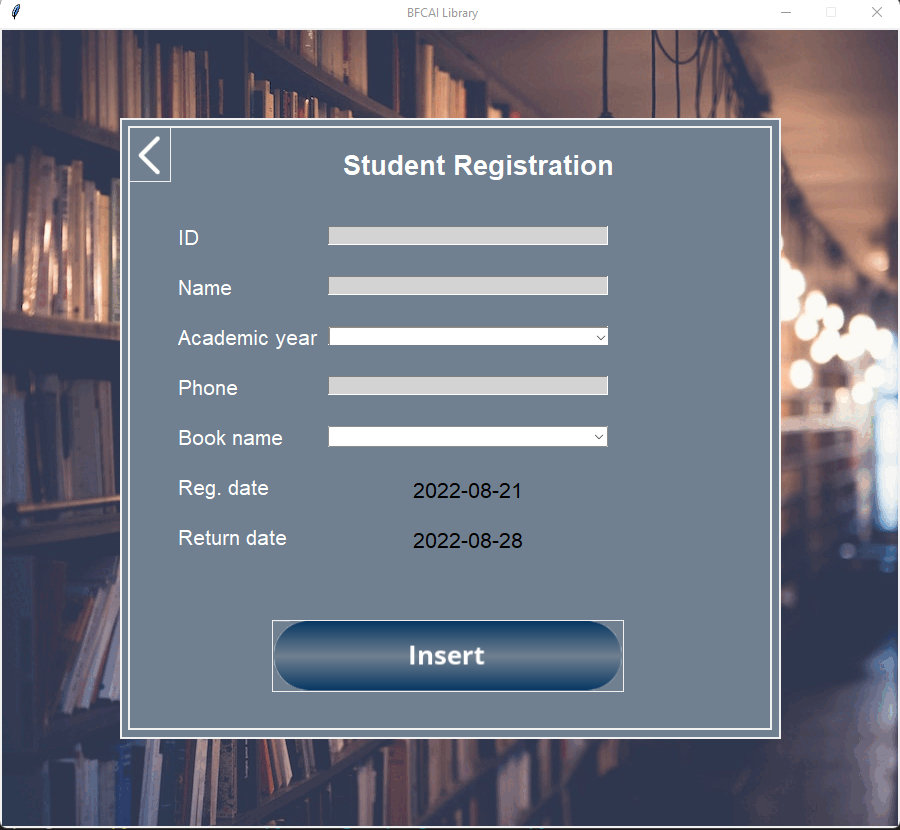
10.  
These buttons that shown on screen, its coded with fixed position and specific font, width and color.

Each button has command for example,

1. Back button used to return to previous screen(main screen).
2. Show button used to call function Show button.
3. Update button used to update specific data entered.
4. Delete button used to delete select book within combo box from database by deleting all record to this book.

**6.studentregistration.py: -**

**Screen:-**

****

**description:-**

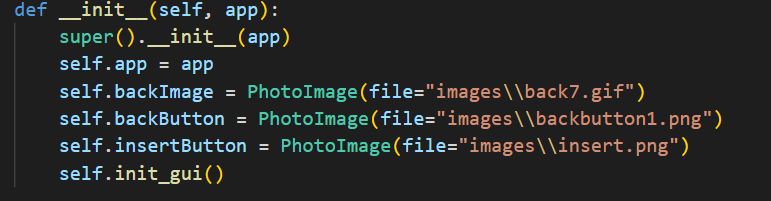
It's a frame used to collect and register all required data of a borrowed student books in each and add hem to library database.

Its content 2 button

1. Back button to return to start screen
2. Insert button to add data to database after gather all data.

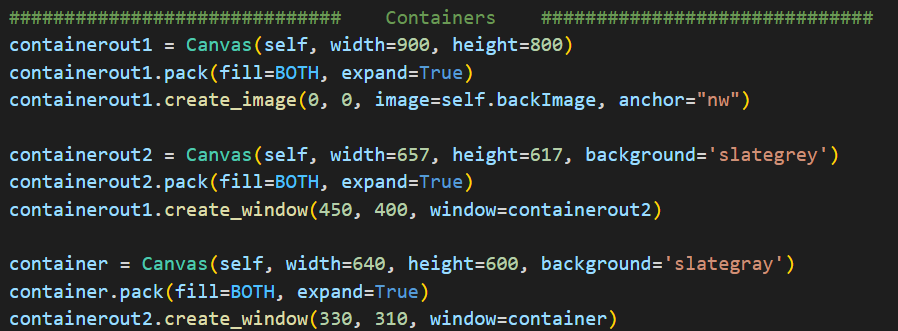
**Code:-**

**1.**

****

this contractor inherited super class (App), its content path of background image and buttons .

2.



these containers are content background image and all components.

3.



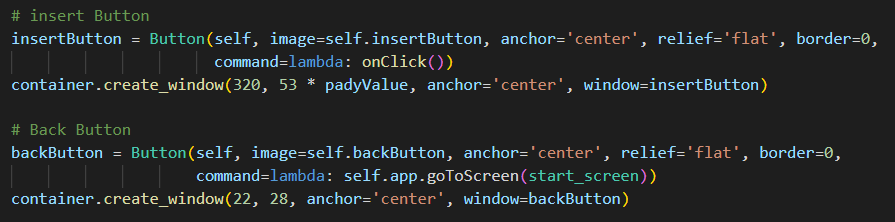
These are codes of entries and his fixed position on screen and specific font, width, color and so on.

4.

****

This function used to collect data from entries and send it to be added to database by calling function add\_student(…) we will see it later. If user doesn’t enter any field, it will print message “Please, enter data”.

5.



These buttons that show on screen, its coded with fixed position and specific font, width and color.

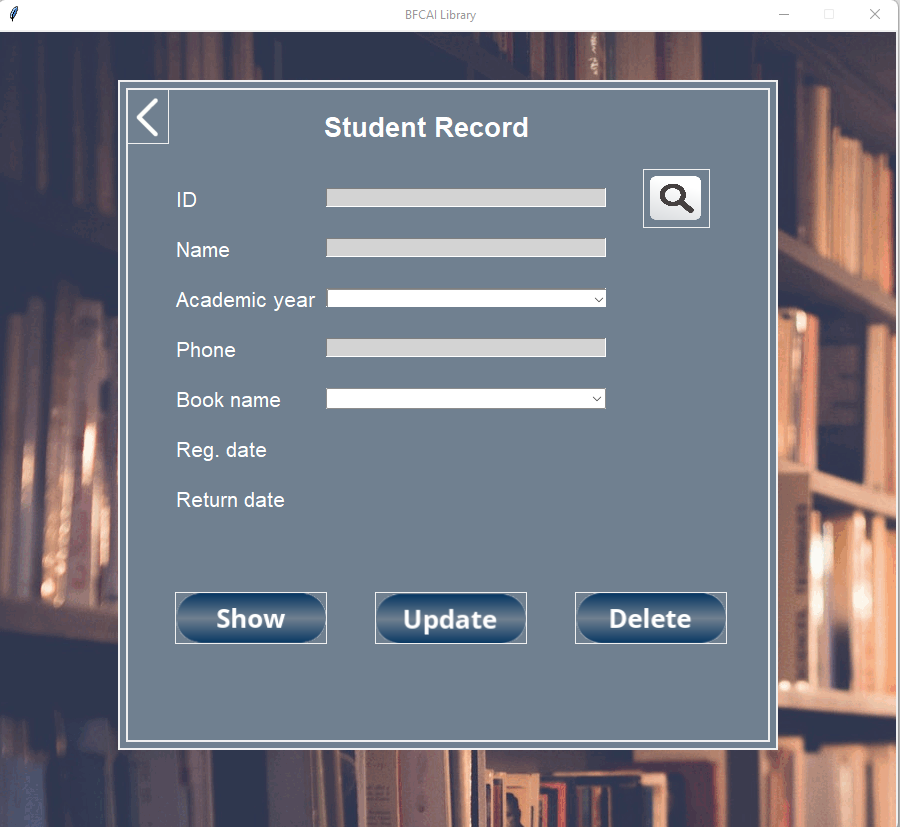
Each button has commend for example,

1. Insert button calling function onClick()

shown in previous page

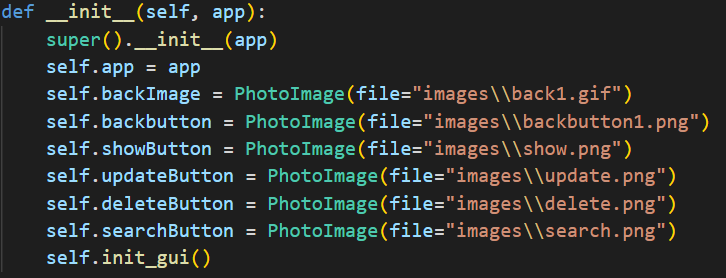
2. Back button used to return to previous screen(main screen).

**7.studentrecord.py: -**

**Screen:-**

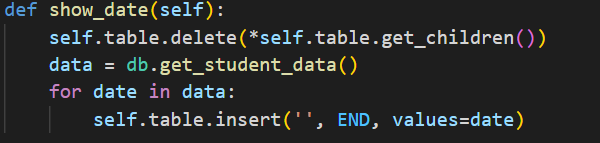
**description:-**It's a frame which has all the data of students borrowed from the library and where we can show all the data of the library , update the data of a student in each , delete a student from the library and search about student using its id only.

Code:-

1.

this contractor inherited super class (App), its content path of background image and buttons .

2.show\_data()

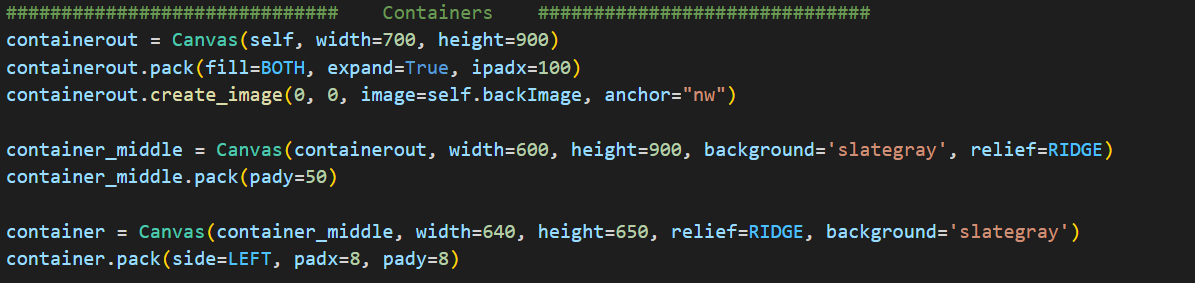


this function used to show data in table tree

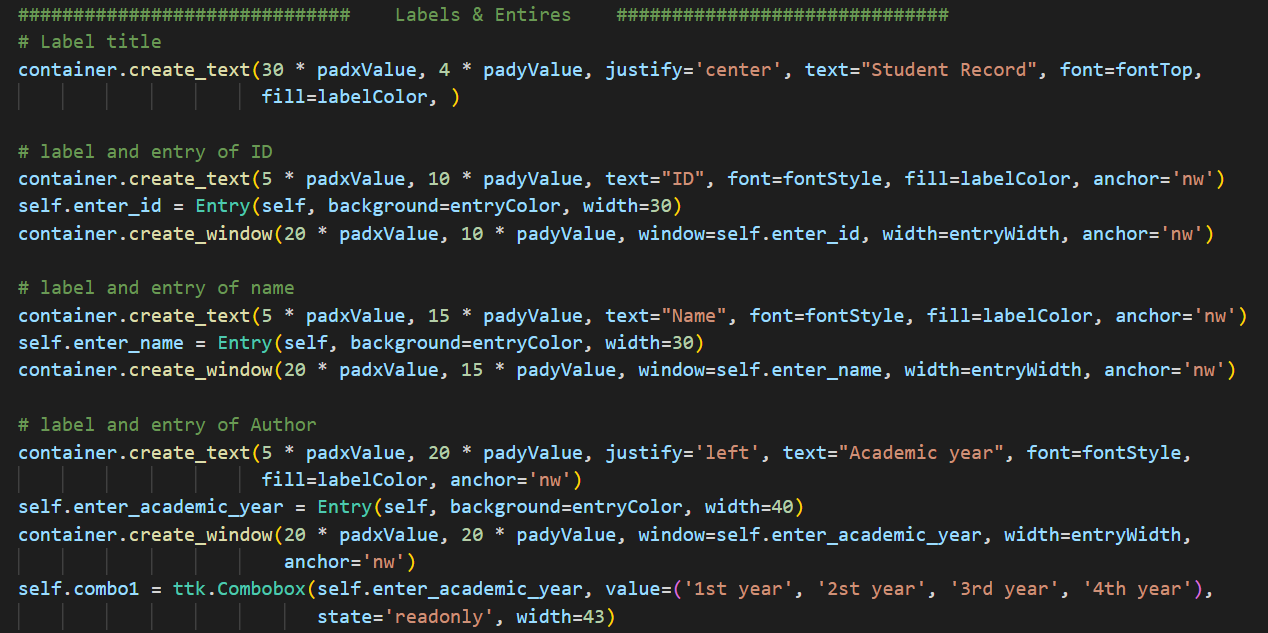
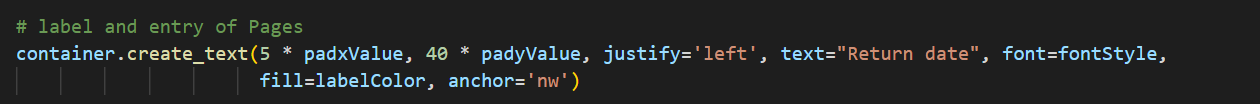
3.

this function used to clear all entries in this frame.

4.



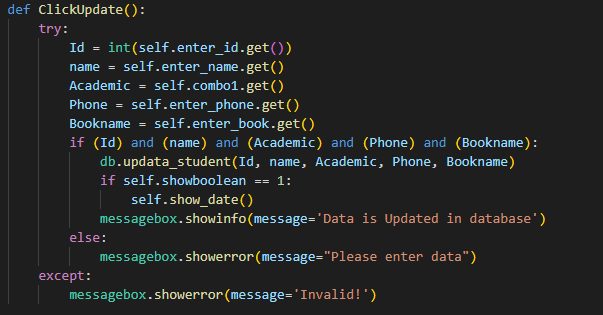
these containers are content background image and all components.

5.

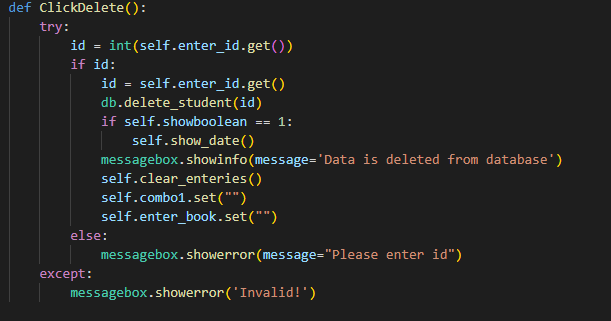
These are codes of entries and his fixed position on screen and specific font, width, color and so on.

6. table\_row\_click()

used to collect selected table data and passing it to entries.

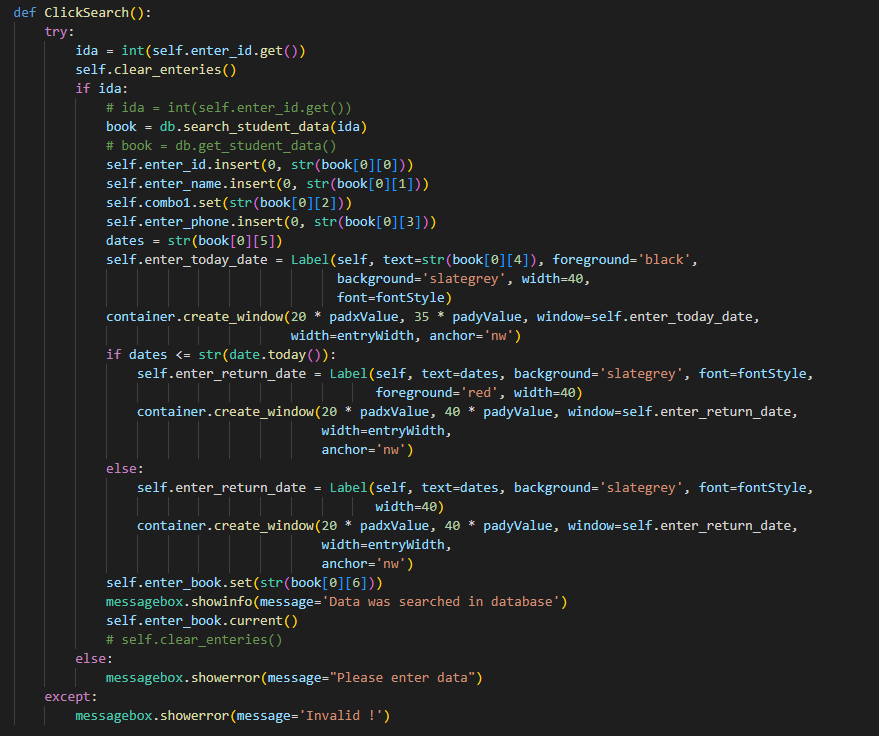
7.ClickUpdate()

This function used to update data of specific student and must entered all date otherwise, you will show message “Please enter date”.

8.ClickDelete()

This function used to delete specific student from database, you can’t delete any data without select their id.

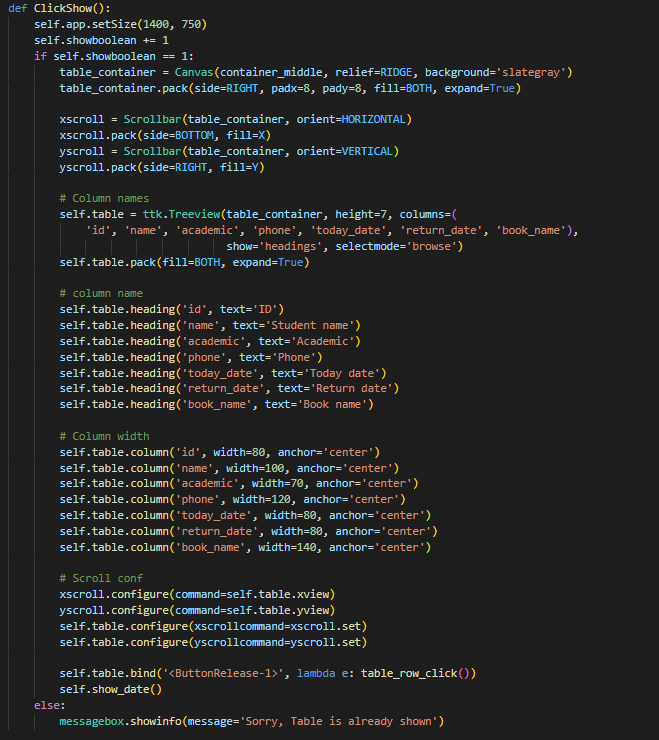
9.ClickSearch()



This function used to search from student in database, you can’t search from student without enter data. It show data from first day to last day .if student is late from last data it will

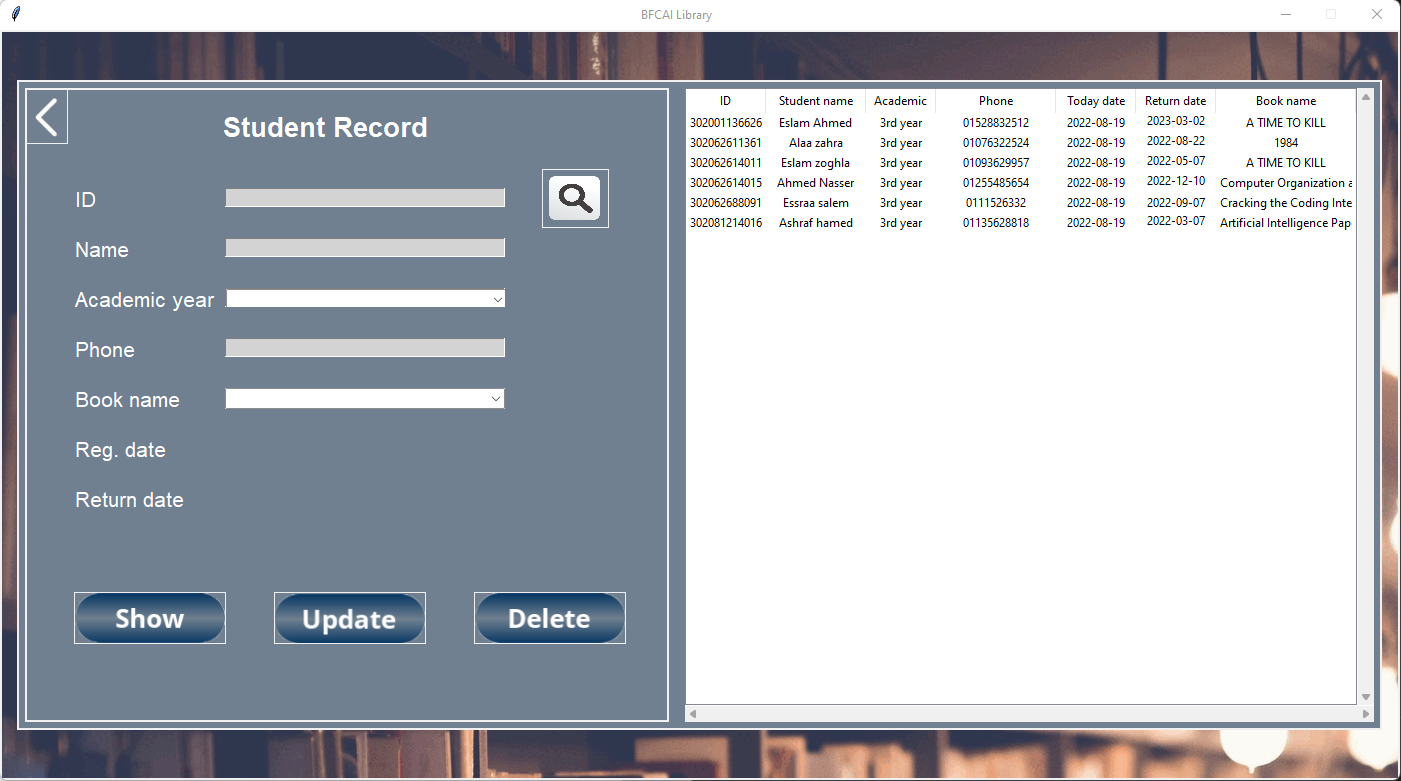
Show red color

10.ClickShow



show all the data of student in a shape of table and by selecting in any row of them you can fill the entries by selected data

-> Note the return date if it hasn't come yet it will appear black as normal if the return date has already come or it passed the color becomes red ("warning method").



10.



These buttons that shown on screen, its coded with fixed position and specific font, width and color.

Each button has command for example,

1. Back button used to return to previous screen(main screen).
2. Show button used to call function Show button.
3. Update button used to update specific data entered.
4. Delete button used to delete select student from database.
5. Search button used to search any student from database.