

Coursework 1: Mini Database Exercise

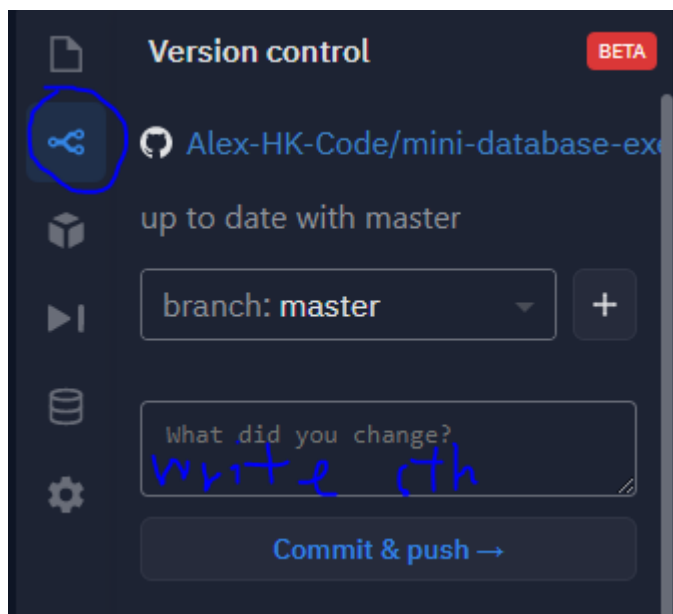
The provided code performs the following:

- Allow users to input a new book (Input '1')
- Allow users to display existing books (Input '2')
- Allow users to quit the program correctly (Input '0')

You are expected to make the following independent modifications, in increasing level of difficulty.

The modifications should be done in order as they are not entirely independent of one another.

Please make sure you clearly comment out the corresponding modifications you make and push it to *Github* for code review.



Important Note:

If you see indentation error when you run the code, fix all **spaces** into **tabs** in the code:

```
7 if(user_selection == str(1)):  
8     book_name = input("Enter Book Name\n")
```

Modification 1: CD storage

The mini database desires to store data beyond books, and we will call it CD. You are expected to do the following:

- Rebind the input option ('1' book data entry, '2' CD data entry, '3' display data, '0' program exit)
- Ask for user's input for the CD's name
- Create a **new list** that stores the name of each CD
- Display CDs AFTER displaying EVERY book data when user selects the display function (new input '3')

Modification 2: Selective Display

The mini database wants to enhance its display function. Instead of displaying EVERY book, THEN EVERY CD, it now provides 3 options to users:

- Display all books ONLY
- Display all CDs ONLY
- Display all books THEN all CDs

You can prompt the user to input anything sensible to trigger this event AFTER the user selects the display function (i.e. '3')

Modification 3: Check for Duplicate

The mini database wants to minimize duplicated data:

- If the user enters a book name that already exists in the book list, DO NOT add the data to the book list
- If the user enters a CD name that already exists in the CD list, DO NOT add the data to the CD list

Hint: You will need an additional variable to check if there is any duplicate, and perform the data insertion AFTER the for loop.

(Challenge) Modification 4: Data Removal

The mini database has gained the power to **delete** existing data.

- If the user inputs '4' (for book) OR '5' (for CD), the program should prompt the user to enter a name. Rebind "exit program" to input '6'
- If the name exists in the corresponding list, it gets removed.

This is a non-trivial implementation. A few hints:

- Look up pop() function in python
- Look up string equality in python
- Call pop() AFTER you iterate the list (how to store the index...?)
- You can use remove(), but you will encounter more unfamiliar concepts...