

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 '3')

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

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, '4' program exit)
- Ask for user's input for the CD's name
- Create a new array 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

(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...