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//Linh Phan - COP3502 - Assignment 1

#include <stdio.h>

//to storing the book data
typedef struct {
    char bookName[101];
    char authorName[101];
    int year;
} bookInfo;

int main()
{
    //to see how many books there are
    int bookNumber;
    bookInfo myArray[50];

    //ask user to input how many books they want to document
    printf("Enter the number of books: ");
    scanf("%d", &bookNumber);
    while ((getchar()) != '\n');

    //for loop to get each book's details
    for(int i = 0; i < bookNumber; i++){
        printf("Enter details for book %d:\n", i + 1);
        printf("Title: ");
        fgets(myArray[i].bookName,100,stdin);
        printf("Author: ");
        fgets(myArray[i].authorName,100,stdin);
        printf("Year: ");
        scanf(" %d", &myArray[i].year);
        while ((getchar()) != '\n');
    }

    //to sort through the list using bubble sort
    for (int j = 0; j < bookNumber; j++) {
        for (int i = 0; i < bookNumber - j - 1; i++) {
            if (myArray[i].year > myArray[i + 1].year) {
                bookInfo temp = myArray[i];
                myArray[i] = myArray[i + 1];
                myArray[i + 1] = temp;
            }
        }
    }

    printf("Library Inventory (Sorted by Year of Publication):\n");

    //to print everything
    for(int i = 0; i < bookNumber; i++){
        printf("%d. Title: %s \tAuthor: %s \tYear: %d\n", i + 1,
myArray[i].bookName, myArray[i].authorName, myArray[i].year);
    }

    return 0;
}

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