

Book.h

```
#include <iostream>
```

```
#include <stdio.h>
```

```
using namespace std;
```

```
class Book {
```

```
public:
```

```
    int Book_no;
```

```
    char Book_name[20];
```

```
    Book() {
```

```
    }
```

```
    void enterdetails() {
```

```
        cout<<"Enter No ";
```

```
        cin>>Book_no;
```

```
        cout<<"Enter name ";
```

```
        cin>>Book_name;
```

```
        if (Book_no < 0) {
```

```
            throw exception();
```

```
        }
```

```
    }
```

```
    void showdetails() {
```

```
        cout << Book_no << " - " << Book_name << endl;
```

```
    }
```

```
//function to return Book_no
```

```
    int Rbook_no() {
```

```
        return Book_no;
```

```
    }
```

```
//function to return Book_name

char* Rbook_name() {

    return Book_name;

}

};
```

Main.cpp

```
//=====

// Name    : Question47279.cpp
// Author   :
// Version  :
// Copyright : Your copyright notice
// Description : Hello World in C++, Ansi-style

//=====
```

```
#include <iostream>
#include <cstdlib>
#include <stdio.h>
#include <string>
#include <fstream>
#include <vector>
#include "Book.h"
```

```
using namespace std;
```

```
const int DELETED = -1;
```

```
vector<Book> books;
```

```
void read() {

    ifstream in("test.dat");

    if (!in.good()) {

        return;

    }
```

```

while (!in.eof())
{
    Book curBook = Book();
    in >> curBook.Book_no;
    in >> curBook.Book_name;
    books.push_back(curBook);
}
in.close();

size_t booksAmount = books.size();

for (size_t i = 0; i < booksAmount; ++i) {
    books[i].showdetails();
}

}

void rewriteFile() {

    ofstream outfile;
    outfile.open("test.dat");

    size_t nBooks = books.size();
    for (size_t i = 0; i < nBooks; ++i) {
        if (books[i].Book_no != DELETED) {
            outfile << books[i].Book_no << books[i].Book_name;
        }
    }
}

void appendBook() {
    Book newBook = Book();
    newBook.enterdetails();
    books.push_back(newBook);
}

```

```
    rewriteFile();  
}
```

```
void modifyBook() {  
    cout<<"Enter book No ";  
  
    int n;  
  
    cin>>n;  
  
    if (n > 0) {  
        int found = DELETED;  
  
        size_t nBooks = books.size();  
  
        for (size_t i = 0; i < nBooks; ++i) {  
            if (books[i].Book_no == n) {  
                found = i;  
            }  
        }  
  
        if (found != DELETED) {  
            cout<<"Enter new name ";  
  
            cin>>books[found].Book_name;  
        }  
    }  
  
    rewriteFile();  
}
```

```
void searchBook() {  
    cout<<"Enter book name ";  
  
    char val[20];  
  
    cin>>val;  
  
    bool found = false;  
  
    size_t nBooks = books.size();  
  
    for (size_t i = 0; i < nBooks; ++i) {  
        if (books[i].Book_name == val) {  
            books[i].showdetails();  
  
            found = true;  
        }  
    }
```

```

    }

    if (!found) {
        cout<<"No results found"<<endl;
    }

    rewriteFile();
}

```

```

void deleteBook() {
    cout<<"Enter book No ";

    int n;

    cin>>n;

    if (n > 0) {
        size_t nBooks = books.size();

        for (size_t i = 0; i < nBooks; ++i) {
            if (books[i].Book_no == n) {
                books[i].Book_no = DELETED;
            }
        }
    }

    rewriteFile();
}

```

```

int main() {

    char res = ' ';

    bool quit = false;

    while (!quit) {
        cout<<"-----Content of dat file-----"<<endl<<endl;

        read();

        cout<<endl<<"-----"<<endl;

        cout<<"What do you want to do?"<<endl;

        cout<<"1 - Add new book"<<endl;

        cout<<"2 - Modify book"<<endl;
    }
}

```

```
cout<<"3 - Delete book"<<endl;  
cout<<"4 - Search book"<<endl;  
cout<<"q - Quit"<<endl;
```

```
cin>>res;  
switch (res) {  
case '1':  
    appendBook();  
    break;  
case '2':  
    modifyBook();  
    break;  
case '3':  
    deleteBook();  
    break;  
case '4':  
    searchBook();  
    break;  
case 'q':  
    quit = true;  
    break;  
}
```

```
}
```

```
return 0;
```

```
}
```