

Assignment # 1 (Given: Sep 22, Due: Before Oct 4, 10am)

We want to develop an information system for the library. The system should keep information about books. The system should allow the user the **add** new books. The system should also allow to **search** books, **update** their information, **delete** them (one by one), and **list** all the books. Try to provide **different criteria** for search. When the system starts, it should **load** the information about the books from a file, if the file doesn't exist, the system should **create** the file. The system should use **binary** files. The system should **not use any arrays** to store records. All the changes should be reflected in the file. The system should support **command line** arguments, e.g., if a user wants to **add** a book, he can run the program like "library.exe add TITLE AUTHOR ...", this will run the program and add a book with the given book title, author, and other details, **other operations** should also be supported in the similar manner. If the user does not provide any command line argument, the program should open the **menu** to work with the system.

Instructions (*read carefully*):

- Start early.
- Before submission, remove all the debugging and temporary files (in visual studio select menu *Build* → *Clean Solution*). Only submit the .cpp and .h files (no visual studio or other files).
- Select .cpp and .h files and compress them using your full registration number and name, (e.g., 04071512007-Ali-Ahmad.zip).
- Submit through email (rabbasi@gau.edu.pk) within due time (no extensions).
- The source code should be properly indented.
- Properly comment your source code.
- Try to avoid using conio.h, as it is not part of standard C++. Don't use clear screen function. Don't use getch function, instead use the standard getchar function (if required).
- Following these instructions carries marks.
- Any genuine efforts in each part, would result in at least 50% marks (in that part). Make sure you put your best efforts to solve every part. Each part carries its own marks. Different parts are highlighted in the assignment description (see the bold words).
- You are getting 50% marks for any genuine efforts in all the parts to encourage you to learn, even if your program does not compile and is full of bugs). Therefore, please do not plagiarize! Plagiarism includes taking help in any form including but not limited to code, concept or idea for the solution, algorithm, and pseudocode. Taking help from any source including but not limited to classmates, seniors, or internet is prohibited. In case your code is plagiarized, you'll get -50% absolute marks of the whole assignment. For example, if the assignment is of 50 marks, you will get -25 marks. **Even a single plagiarized statement will count as plagiarism for the whole assignment.** Plagiarism in two assignments would result in getting failed in the course.