

## Application Title : My Personal Library Management (PLM) : 3 hours

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### 1. Problem Definition

We will develop a small sample application to track our personal library of books. It will also include a list of people to whom we loan our books. The application will have three Java classes:

1. Person will have fields for the person's name and a number which will be the maximum number of books this person can borrow at one time.
2. Book will have fields for title, author, and the person who is currently borrowing the book.
3. MyLibrary will contain a list of all of our books and a list of all of the people who might borrow them.

### 2. Business Requirement

In this system we would like to achieve the following business requirements. Your Library should perform the following operations:

- 1: checkout (Book issue)
- 2: checkIn (Book return)
- 3: add book
- 4: remove book
- 5: add person
- 6: remove person
- 7: get available books for person
- 8: available books

### Application Details:

- 1.1 Make a random list of 15 Books. 5 are Java, 5 are C and 5 are C++.
- 1.2 Make 3 Member Threads in MyLibrary Class which takes these lists, iterate over the lists and perform the different operations on Books by executing the various methods.
- 1.3 Finally output the result in a txt file.

### 3. Evaluation Parameters

- Modular approach should be used in application development. .
  - Class Level
  - Method Level
- Should make use of Interface at appropriate situation.

- Application code should be reusable.
- Application code should be well documented.
- Appropriate name should be used for classes, interfaces, methods and variables.
- Small method size.
- Optimized logic
- User friendly Interface
- Accuracy of calculations and Reports
- Timeline delivery
- Completion status

Good Luck