

Some guidelines to creating the software

Step 1

You are obviously going to need some classes to model the member and the book so you should create these first. For each class:

- identify and define the fields required, these can be found in the scenario;
- create accessor and mutator methods for each field;
- create a parameter constructor to simplify the creation of member and book objects;
- create a method that prints the objects details on one line, this will be useful when you want to print a list of members or books.

Step 2

Once you have created these classes you can then create the library class which will be used to maintain collections of members and books.

- Define two fields of type ArrayList, one for the members and one for the books;
- create a constructor that will create the ArrayLists;
- create methods to implement the functionality in 1 and 2 – each user requirement would be a separate method in this class.

Step 3

The final part is implementing the loans functionality. Here I suggest you create a loan class that has at least two attributes which hold member ID and book ID (or member and book object references). To implement the final part using dates I recommend that you investigate the Java library class `GregorianCalendar`.