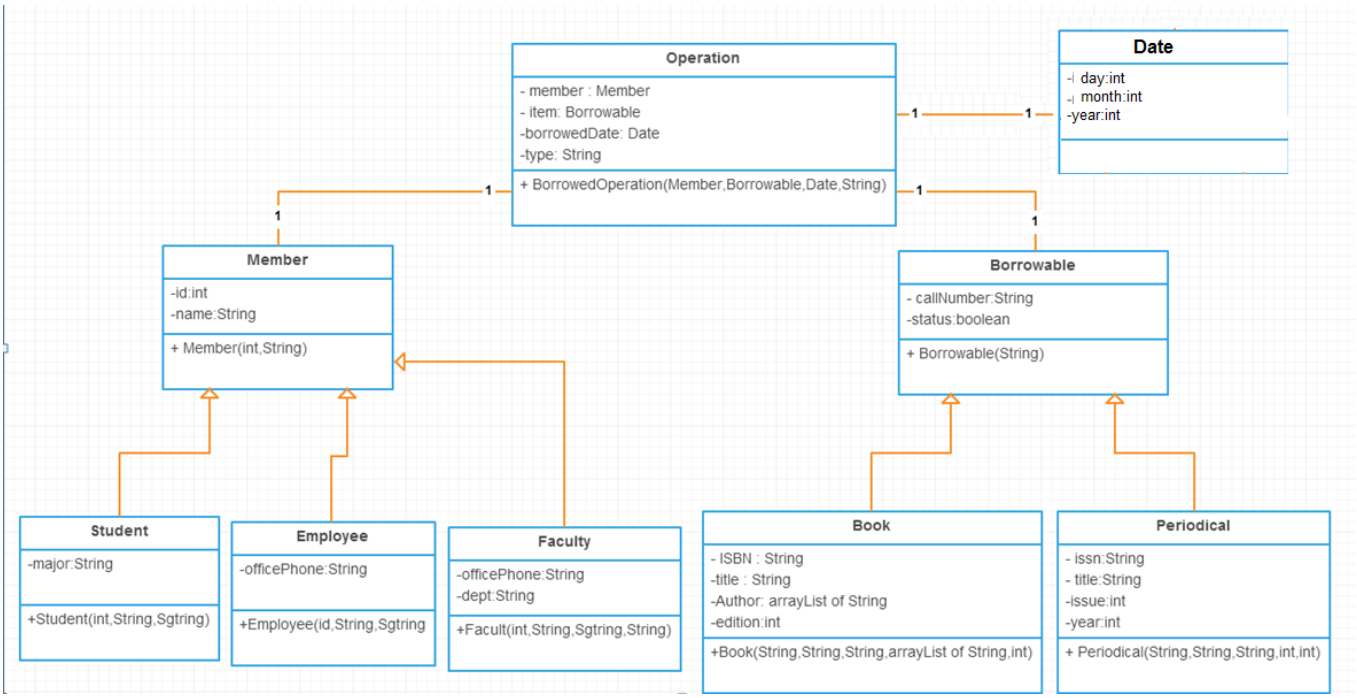
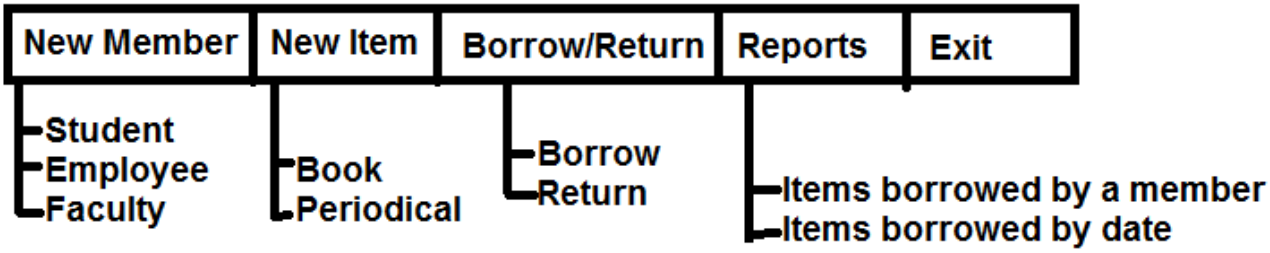
Project: Library System

This project aims to develop a system to manage borrowing operations in a university library. We assume this system is going to be used by librarians at the library to facilitate library loaning service offered to university community which include students, employees, and faculties. The system will track two types of items: books and periodicals (magazines, scholarly journals, newspapers, and newsletters).
The following class diagram displays the model of this system



You will have one more class that represents the library which will have array list of members, and array list of borrowable items, and array list of the borrowing operations.

Your system will have a **GUI** contains the following menues (you will use JMenu in WindowBuilder):



When user selects a menu item, a new frame is displayed to get the data based on the selected item. Therefore, the system will have the following functionalities:

1- Add member :
   - Student
   - Employee
   - Faculty
2- Add item:
   - Book

- Periodical

(When new item is added, its status is true i.e. considered **available**)

3- Borrow an item

When the librarian enters member's id, his name is displayed, then ISBN or ISSN is entered then title of the item is displayed. The system ensures the availability of the item (its status is true). If the operation is correct, your system should change the status of that item to false, and create an object of Operation (its type is "Borrow") and add it to the array list of Operation.

4- Return an item

When librarian enters ISBN or ISSN of the item, it displays its title, and member name who borrowed that item then when he pressed "Return" button, the item's status is changed to true, it also create an object of Operation (its type is "Return") and add it to the array list of Operation.

5- Reports

- Items are currently borrowed by a member: where librarian enters member's id, then the system display titles of all items that are currently borrowed by that member (not return yet).
- Borrowed by a specific date: where librarian enters the date, the system should display all items titles, type, and name of member for items that were borrowed on that specific date.

6- Exit: the system saves data to the disk (as object).

Note: when system starts, it should upload previous data (if there is).

Instructions

1. This is a group-work project (3 students per group). Please immediately form your group and inform your instructor by sending names of the team members by email, also register your name on one of the Blackboard groups on your course website.
2. Please start immediately and plan your time so that you finish within the project period. Submissions after the due date will incur a 25% penalty for every day or part of a day.
3. No grade without presentation.
4. Name of the member who created a class must be written as the author using Javadoc comments. Also, add the date of creation of the class.
5. Each group should submit one softcopy of their work by uploading an archive of their project folder to the course website on Blackboard.
6. Also, upload an MS-Word document containing a cover page that lists your names and QU ID's. In addition, the document should contain screen shots of all input/output.

Evaluation Criteria:

Implementing the class diagram above	20
Each functionality (1 to 6)	60
Friendly GUI: Organized, easy to be used, validate input ,…. Etc.	20

Deadline for submission is 20/4/2019