For this assignment, you need to work in a **group of two** to answer the following:

Assuming you are working on a software development project to computerize AUIS' library systems. Here are the system requirements:

1) AUIS library contains a wide range of academic resources, including books, ebooks, academic journals, and dissertations. A student, staff member, faculty may borrow these resources as necessary.

2) Each borrower can be lent up to five items. Each item type of library can be lent for a different period of time according to the item type and borrower. The following table shows the policy:
2. a) Faculties and Staff can borrow any academic resource for up to 2 months.
2. b) Students can borrow a book for up to 1 month, a ebook for up to 2 months, an academic journal for up to 2 weeks.
2. c) If an item is returned after the due date, AUIS places a fine based on the type of item (book $1/day, ebook $1/every two days, and journal $2/day).
2. d) The borrower can renew any borrowed item, once and only once.

3) Each faculty, staff member, or student has a unique ID, first name, last name, and the date in which she/he joined AUIS. A faculty and a staff member also belong to a department/office.

For this assignment, do the following:

a) Design your system components by creating CRC cards for the project, and providing a UML class diagram for the project.
Your design must have multiple classes and at least one interface. Apply the Get/Set design pattern.

b) Implement the system. The system should provide a terminal interface to allow a librarian to
- Register a new student/staff/faculty to the system.
- Print the items borrowed by a certain student/staff/faculty.
- Check-in and Check-out academic resources for any student/staff/faculty. During the checkout process, print the fines issued for a lend.

-2 Your CRC cards are limited, incorrect, or do not match your code.
-2 Your UML class diagram is limited or incorrect.
-1 The Get/Set design pattern has not been applied correctly in your code/UML.
-1 Each class not stored in a separate file.
-1.5 The fine of each resource should be hardcoded in each resource class. For instance in the book class, you should have a method returning the cost of the penalty (that is $1).
-1.5 Not implementing check-in and check-out functions.
-1 Faculty and Staff should belong to a department, while students should not have this property.

+1 working alone (to reduce the code requirement by one point).