Note:

1) Projects can be completed in groups (<mark>max 3 per group</mark>) but submission in Webcourses is individual. Don't copy anybody's work nor give your code to anybody unless you **seriously** worked together on the project.

2) Apply the Java naming conventions. See ***JavaNamingConventions.pdf*** posted on Webcourses

3) If you work with a classmate(s), your .java file must contain the following comment (**<u>Please submit ONE .java file</u>**):

```
/*
-   Project 1
-   Names (first and last names) of students who worked together on the project
-   (optional) Add anything that you would like the TA to be aware of
*/
```

Example:
```
/*

-  Project 1
-  Hatim Boustique, Ericka Edwards and Jamal Dubois
   (In this case, Hatim, Erika and Jamal must submit the same .java file on Webcourses)

*/
```

```java
public class Project1 {

    public static void main(String[] args){

        //Your test code goes here
    }

    . . .
}


class Abc {


    //code of class Abc
    . . .
}


class Xyz {


    //code of class Xyz
    . . .
}
```

Project 1 statement

This project involves implementing a simple university personnel management program. The program stores relevant information such as university ID, name, etc. Different information is stored depending on the type of the person (Student Faculty or Staff). For example, a student has a GPA, a faculty has a title and department (professor, mathematics), and a staff has a department where the staff works.

For a student, we need a:
- full name
- id
- gpa
- Number of credit hours currently taken

For a faculty, we need a:

- full name
- id
- department (mathematics, engineering or english)
- Rank (professor or adjunct)

For a staff, we need a:

- full name
- id
- department (mathematics, engineering or english)
- status (part time or full time)

Students in this university pay $236.45 per credit hour in addition to a $52 administrative fee. Your code should generate a tuition invoice. Note that students get a 15% off total payment if their gpa is greater or equal to 3.85.

Your code should demonstrate the use of classes. Test your code with one faculty and two students objects. The sample run below should give you a clear idea about how your code should run. The user's entry in marked in **bold** so you can tell what your code should display to the screen and what the user enters.

Please note well that:

1) Your code should run exactly as shown on the sample run below (However, the TA will not deduct points because you skipped two lines instead of three or your tuition invoice has 56 hyphens instead of 63!).
2) When asked to enter the enter the faulty department, **matheMatics** and **MathematiCs** are considered to be the same, and your program should display *mathematics* if faculty information is to be displayed to the screen. However, if the user enters ***Mathematics department***, then this is an invalid entry. **There are three departments: Mathematics, Engineering and English.**
3) The university ID has no required form so you may choose to enter anything to be the ID.

Sample Run: (Below is how your code should run)

```
                        Welcome to my Personal Management Program


        Choose one of the options:

        1- Enter the information of the faculty member
        2- Enter the information of the two students
        3- Print tuition invoice
        4- Print faculty information
        5- Enter the information of the staff member
        6- Print the information of the staff member
        7- Exit Program

            Enter your selection: 2



        Enter student 1 info:

                Name of Student: Julia Alvarez

                ID: ju1254

                Gpa: 3.26

                Credit hours: 7

        Thanks!



        Enter student 2 info:

                Name of Student: Matt Jones
```

ID: **ma0258**

                    Gpa: **2.78**

                    Credit hours: **0**

Thanks!

1- Enter the information of the faculty
2- Enter the information of the two students
3- Print tuition invoice
4- Print faculty information
5- Enter the information of the staff member
6- Print the information of the staff member
7- Exit Program

        Enter your selection: **A**

Invalid entry- please try again

    1. Enter the information of the faculty
    2. Enter the information of the two students
    3. Print tuition invoice
    4. Print faculty information
    5. Enter the information of the staff member
    6. Print the information of the staff member
    7. Exit Program

        Enter your selection: **1**

Enter faculty info:

            Name of the faculty: **John Miller**

ID: **jo7894**

Rank: **Instructor**

"Instructor" is invalid

Rank: **Assistant Professor**

"Assistant Professor" is invalid

Rank: **Professor**

Department: **Engineering**

Faculty successfully added!

1. Enter the information of the faculty
2. Enter the information of the two students
3. Print tuition invoice
4. Print faculty information
5. Enter the information of the staff member
6. Print the information of the staff member
7. Exit Program

   Enter your selection: **3**

   Which student? Enter 1 for Julia Alvarez or Enter 2 Matt Jones ? **1**

   Here is the tuition invoice for Julia Alvarez :

```
--------------------------------------------------------------------------

Julia Alvarez                     ju1254

Credit Hours:7 ($236.45/credit hour)

Fees: $52


Total payment (after discount): $1,707.15          ($0 discount applied)

--------------------------------------------------------------------------


1. Enter the information of the faculty
2. Enter information of the two students
3. Print tuition invoice
4. Print faculty information
5. Enter the information of the staff member
6. Print the information of the staff member
7. Exit Program

Enter your selection: 3


Which student? 1 Julia Alvarez or 2 Matt Jones ? 2


--------------------------------------------------------------------------

Matt Jones                     ma0258

Credit Hours:0 ($236.45/credit hour)

Fees: $52


Total payment (after discount): $52.00             ($0 discount applied)

--------------------------------------------------------------------------
```

```
1. Enter the information of the faculty
2. Enter information of the two students
3. Print tuition invoice
4. Print faculty information
5. Enter the information of the staff member
6. Print the information of the staff member
7. Exit Program

Enter your selection: 2

You already have two students filled in. Do you want to update their information?

Yes or No: Yes
```

Enter student 1 info:

```
        Name of Student: Erick Smart

        ID: er1254

        Gpa: 4

        Credit hours: 3
```

Thanks!

Enter student 2 info:

```
        Name of Student: Komal Shah

        ID: ko0258

        Gpa: 3.1

        Credit hours: 3
```

Thanks!

```
1. Enter the information of the faculty
2. Enter information of the two students
3. Print tuition invoice
4. Print faculty information
5. Enter the information of the staff member
6. Print the information of the staff member
7. Exit Program

   Enter your selection: 4




   ------------------------------------------------------------------------

   John Miller                jo7894

   Engineering Department, Professor

   ------------------------------------------------------------------------



   1. Enter the information of the faculty
   2. Enter information of the two students
   3. Print tuition invoice
   4. Print faculty information
   5. Enter the information of the staff member
   6. Print the information of the staff member
   7. Exit Program

   Enter your selection: 6



   Sorry! No Staff member entered yet



   1. Enter the information of the faculty
   2. Enter information of the two students
   3. Print tuition invoice
   4. Print faculty information
   5. Enter the information of the staff member
```

```
6. Print the information of the staff member
7. Exit Program

Enter your selection: 5




Name of the staff member: Jamal Kareem

Enter the id: ja6980

Department: ENGLIsh

Status, Enter P for Part Time or Enter F for Full Time: f


Staff member added!


1. Enter the information of the faculty
2. Enter information of the two students
3. Print tuition invoice
4. Print faculty information
5. Enter the information of the staff member
6. Print the information of the staff member
7. Exit Program


Enter your selection: 6


--------------------------------------------------------------------------

Jamal Kareem          ja6980

English Department, Full Time
```

```
1. Enter the information of the faculty
2. Enter information of the two students
3. Print tuition invoice
4. Print faculty information
5. Enter the information of the staff member
6. Print the information of the staff member
7. Exit Program


Enter your selection: 7




Goodbye!
```