Assignment 2

Deadline:	Friday 21st August 2015
Evaluation:	10 marks – which represents 4% of your final grade
Late Submission:	1 mark per day late
Teams:	The assignment can be done individually or in teams of up to four people (one assignment per team submitted including all student names in the source code).
Purpose:	Practice with C++ classes.

Problem to solve:
Write a program which reads a file of employee records and prints lists of employees whose salaries fall within given ranges. An **Employee** class should be created to store the records.

Requirements:
The **Employee class** should contain the following **private data members**: the employee's first and last name, an id number and a salary. Your class should have the appropriate **constructors** and **methods** to test the employee's salary against a given range and to output the employee's details. You **must not** have get/set methods that allow access to the private data members. All input and output for the employe objects should be performed with **input** and **output operators**.

A file of records should be named **a2.txt** and should have one record per line with the fields separated by blank spaces. Start by building a small sample data file and hard-wiring the filename into your program. Each line should be read and stored in an instance of the **Employee** class. Once the records have been stored, the user should be able to query the records by salary range.

Your program should:

- Display the names of the students who contributed to the solution
- Read the employee records from the file into an array
- Repeat
    - Ask the user for a salary range
    - Display the all the records whose salary falls within that range
    - Display the number of records displayed

You **must** follow the next three specifications in **each and every assignment for this course**

1. Place the following comments at the top of your program code and **provide the appropriate information**:

```
// Family Name, Given Name, Student ID, Assignment number, 159.234
/* explain what the program is doing . . . */
```

2. Create the function *displayInfo* as shown below and **provide the appropriate information**:

```
void displayInfo() {
   cout << "----------------------------------------" << endl;
   cout << "Assignment 1 Semester 2 2013"            << endl;
   cout << " Submitted by: Mouse, Mickey, 12345678"  << endl;
   cout << "          and  Duck,  Donald, 98765432"  << endl;
   cout << "----------------------------------------" << endl;
   cout << endl;
}
```

The *displayInfo* should be the first thing that you display on the screen. If I supply the *main()* then you are responsible only for the implementation of the function *displayInfo* and I will call it in my *main()*.

3. **DO NOT** use any function to clean the screen at any stage of a program, for any assignment in this course.

Hand-in: Submit **a2.cpp** electronically on stream

Marks will be allocated for: correctness, completeness, no code duplication, use of C++ tools, documentation, clear on-screen output display**…**

If you have any questions about this assignment, please ask the lecturer.

EXAMPLE input file data *a2.txt*

```
John Doe 000123 50000.0
Mark Twain 000456 64000.0
Mary Poppins 000789 27000.0
Marie Curie 000345 90000.8
```

EXAMPLE output

```
----------------------------------------
Assignment 2 Semester 2 2015
Submitted by: Mouse, Mickey, 12345678
         and  Duck,  Donald, 98765432
----------------------------------------
John Doe 000123 50000
Mark Twain 000456 64000
Mary Poppins 000789 27000
Marie Curie 000345 90000.8

Enter low salary: 40000
Enter high salary: 80000.5

John Doe 000123 50000
Mark Twain 000456 64000
2 matching employees found

Repeat (y/n)? y

Enter low salary: 70000
Enter high salary: 100000

Marie Curie 000345 90000.8
1 matching employee found
Repeat (y/n)? n
```