Module Code:	**CS6004NA**
Module Title:	**Application Development**
Module Leader:	**Mr. Ishwor Sapkota(Informatics College Pokhara)**

Coursework Type:	**Individual**
Coursework Weight:	This coursework accounts for **30%** of your total module grades.
Submission Date:	**Week 11**
When Coursework is given out:	**Week 5**
Submission Instructions:	Submit the following to Informatics College Pokhara RTE department before the due date: • The software application to be developed in C# • The documentation in MS Word compatible or PDF format
Warning:	London Metropolitan University and Informatics College Pokhara take Plagiarism seriously. Offenders will be dealt with sternly.

Plagiarism Notice

You are reminded that there exist regulations concerning plagiarism.

Extracts from University Regulations on Cheating, Plagiarism and Collusion

Section 2.3: "The following broad types of offence can be identified and are provided as indicative examples …..

(i)   Cheating: including copying coursework.
(ii)   Falsifying data in experimental results.
(iii)   Personation, where a substitute takes an examination or test on behalf of the candidate. Both candidate and substitute may be guilty of an offence under these Regulations.
(iv)   Bribery or attempted bribery of a person thought to have some influence on the candidate's assessment.
(v)   Collusion to present joint work as the work solely of one individual.
(vi)   Plagiarism, where the work or ideas of another are presented as the candidate's own.
(vii)   Other conduct calculated to secure an advantage on assessment.
(viii) Assisting in any of the above.

Some notes on what this means for students:

(i)   Copying another student's work is an offence, whether from a copy on paper or from a computer file, and in whatever form the intellectual property being copied takes, including text, mathematical notation and computer programs.
(ii)   Taking extracts from published sources without attribution is an offence. To quote ideas, sometimes using extracts, is generally to be encouraged. Quoting ideas is achieved by stating an author's argument and attributing it, perhaps by quoting, immediately in the text, his or her name and year of publication, e.g. " $e = mc2$ (Einstein 1905)". A reference section at the end of your work should then list all such references in alphabetical order of authors' surnames. (There are variations on this referencing system which your tutors may prefer you to use.) If you wish to quote a paragraph or so from published work then indent the quotation on both left and right margins, using an italic font where practicable, and introduce the quotation with an attribution.

Further information in relation to the existing London Metropolitan University regulations concerning plagiarism can be obtained from
http://www.londonmet.ac.uk/academic-regulations

Software Development Task

Student need to design and implement Student Information System in C# - <u>desktop</u> application (**not** a web-based or database application) for a company. The application must allow the user to input the student personal detail including registration date so that a system can generate a weekly enrolment report of the student. System must include detail like Name, address, contact no, email, program enrol, registration date and daily wage amount of the employee.

The application is to keep track of the student's details, program enrol and registration date.

The application should implement the following functions:

1. To import a record from a text file (e.g. in .CSV format for bulk data input), or to allow manually inputting details like ID number, name, address, contact no, course enrol, registration date etc.

2. To generate and display two different reports, listing the students detail like id, name, program enrol and registration date: (a) one sorted by student first name and (b) the other sorted by registration date.

3. Display weekly tabular report showing total number of students enrolled so far in each program offered by the institution.

   e.g.

Programme	Total Student
Computing	50
Multimedia Technologies	10
Networks and IT Security	30

4. To display chart showing total number of student on each program (computing, multimedia, networking etc).

5. Save and retrieve the student enrol status with the student details.

<u>Note</u>: *You may add extra features - both data and functionality to the application, if you wish.*

Your software implementation should demonstrate the following features

1. Use of appropriate data types (built-in and programmer-defined) to handle the application data
2. Use of appropriate data structures e.g. arrays/linked-list for the required programming scenario
3. Use suitable algorithms e.g. sorting
4. Define and use your own class or classes
5. Provide window-based user interface for your application
6. Save and retrieve the objects state using serialization.

Deliverables

Your submission should include the software project and a reflective essay as described below.

1. Your software artefact(code) in the form of a Visual Studio 2013 project or later, which should include the program's source code, compiled classes, the executable file and data file (if any).
2. A reflective essay (1000 words), which concisely documents:
   a. detailed instructions to run the program
   b. the architecture of your software in terms of software classes, clearly indicating which classes to be of your own work and which classes from other sources (e.g. from textbooks, online sources such as MSDN etc.).
   c. detailed description of the classes' properties and methods
   d. description of your algorithm to build the salary distribution chart of the employee in the form of a flowchart and/or decision table.
   e. which data structures and which algorithms you have used, in which part of your program, and why.
   f. your reflection of own experience of using C# and Visual Studio for the development task, which feature you like and why, what issues you experienced and your solution to overcome it.