

SENG4921 Professional Issues and Ethics
Assignment 1
Professionalism, Engineering and Software Engineering

15 April 2011

Due date: **Fri 13th May 2011, Week 10**
Weighting: **30%**

Each question must be submitted separately:

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give se4921 essayQ1 <your Q1 document>
give se4921 essayQ2 <your Q2 document>
give se4921 essayQ3 <your Q3 document>
give se4921 essayQ4 <your Q4 document>
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where <your Q_n document> should be a PDF document. If there are any changes to the submission process, you will be advised by email.

General Instructions

The assignment is comprised of 4 essay questions. Each essay will be marked separately, so you are asked to be careful to concentrate the answers in each essay, although you may cross-reference answers to other questions, it would be advisable to keep this to a minimum.

Important

The whole assignment may be done by yourself or jointly with another student. We encourage you to work in pairs, but no distinction will be made in the marking of assignments done by 1 or 2 students, except under exceptional circumstances. Pairs do not have to be in the same seminar class, as questions will be marked across the whole class, not within seminars.

Please put your name and student number and that of your partner (if applicable) on the first page of each essay submission. If you are going to work in pairs, you **MUST** register your pairing (through a web form) before you submit your essays. An email will be sent when the web form is ready.

Students working in pairs must answer **all four** essay questions,
Students working alone: if you intent to work alone, then you should answer **any three** out of the four essay questions.

Answers to all questions should cite and critically analyse data, opinions and issues relevant to the topic and should *not* simply be an informal discussion of the topic based on your own opinion.

For maximum weight, citations must be ones where the author(s) can be identified. This means that while *wikipedia* can be used to investigate a topic and it can be cited, you cannot use it as a primary citation source, as the entries are anonymous. It is still plagiarism to quote from *wikipedia* without citation.

A limit of 1000 words is suggested for each question, however answers will not be marked on length: clarity, precision, and even concision will be valued. **Excessively long essays may be ignored.**

Plagiarism

All essay answers will be subjected to similarity analysis provided by TurnItIn (www.turnitin.com):

References: you should seek out material from other sources to develop the arguments in your essay.

All sources must be cited in your essay.

Use of material from cited sources: citations of other sources *does not permit* you to use material verbatim from those sources in your essay *without quotation*.

This is poorly understood, in the belief that citation of a source in the bibliography allows free use of the text of the source in the body of the essay.

Verbatim text from a source must be cited and quoted.

Cited paraphrasing is also acceptable.

Originality: it must be appreciated that while quoting of material from other sources avoids plagiarism, it dilutes the original content of an essay. There should be significant *original content* in your essays.

The following link will help you to understand what is plagiarism and how to avoid it:

<http://www.lc.unsw.edu.au/plagiarism/index.html>.

Learning Objectives

On completion of this assignment you should have a better understanding of:

- the social, ethical and economic impact of computing and IT;
- the meaning of Professionalism and its relevance to Software Engineering and Computer Science;
- an understanding of the role of design in engineering;
- a better understanding of *risks* in system design, implementation and deployment;
- a better idea of how to deal with software as a component;
- a better understanding of the ethical responsibility professionals have to society;
- various technical, professional and social aspects of *intellectual property, copyright, digital rights management, contracts* and *negligence*.

Question 1: There's a storm coming (approx 1,000 words)

Cloud computing is being touted by industry as a technology that will one day break the current dominance of desktop computing. Some experts believe that cloud computing is the kind of technology that will make desktop computing obsolete. With the promise of having your data in the cloud accessible anytime and from anywhere in the world via a small and portable *netbook* or mobile device, it is not too difficult to see the attraction for users who are increasingly mobile.

The cost effectiveness of cloud computing is also seen by many in business as an inexpensive way to meet its computing needs without having to invest significant portions of their annual budget on maintaining and replacing expensive and under utilised desktop computers, software and infrastructure.

While the promised costs savings and convenience of cloud computing may be seductive, there are many potential dangers in adopting this form of technology without giving careful thought and consideration to what the ramifications might be to your business or personally should things go wrong.

In this essay, you are to critically analyse the potential dangers of cloud computing, both technically and legally. Also discuss what safeguards and potential redress that may or may not exist for consumers when things go wrong.

Question 2: Calling them out (approx 1,000 words)

Behind closed doors, private corporations can get away with a wide range of questionably unethical behaviour that may ultimately impact the public negatively. Without an inside voice blowing the lid on these practices, it would most likely continue unabated and unnoticed.

Whistle blowing, is itself not a simple matter. It can cause widespread damage to the business, the whistle blower, shareholders and the public. This was illustrated by the stunning collapse of One.Tel in 2001. Despite such events and the subsequent reforms to the law in the last decade to protect whistle blowers, many believe that Australia is not up to par when it comes to whistle blowing legislation, and that more should be done to encourage and protect whistle blowers.

However there are those who would argue that there are far too many false and vexatious claims made by spiteful workers against their employers for wrongdoings that do not exist.

In this essay, you are to critically analyse the impacts of whistle blowing. Discuss the laws in Australia, and in other countries, that are meant to protect whistle blowers and evaluate their effectiveness especially for Professionals.

Question 3: Where to now for the EMR in Australia? (approx 1,000 words)

The EMR (Electronic Medical Record) or EHR (Electronic Health Record) has long been promoted as a lynchpin in the support of healthcare delivery in the 21st century. For many years Australia has been promised an EMR that will include information needed by patients and medical practitioners to provide healthcare services effectively and efficiently. But still there is no EMR/EHR in Australia? Why?

Your essay should consider this question, along with subsidiary questions such as:

- What is meant by an EMR or EHR (are these different)?
- What are the main issues surrounding the introduction of an EMR/EHR?
- Do people even want an EMR/EHR?

- What data should be included on an EMR/EHR?
- Who owns that data? Who can access that data? Who can control access to that data?
- What technical obstacles exist to the introduction of an EMR/EHR?
- What political/organizational obstacles exist to the introduction of an EMR/EHR?
- What has been done in other countries to address these questions and concerns?
- What is the likely future for the EMR/EHR in Australia?

Question 4: The Web: Past, Present and Future (approx 1,000 words)

The basis for this question is the article *Long Live the Web: A Call for Continued Open Standards and Neutrality* that can be found as a PDF or the original article on the web. The author of the article is Tim Berners-Lee who is the originator of *the Web*. Note that Berners-Lee expressly distinguishes between the *the Web* and the internet and this question will continue the distinction by using *the Web*.

This article is a very impassioned plea for recognition, conservation and development of the fundamental characteristics of *the Web*.

In this essay you must identify and discuss the following:

- the important characteristics of *the Web*;
- threats to the integrity of *the Web*;
- opportunities for developing *the Web*;
- the ethical responsibilities and threats of *the Web*.

It is important that the discussion is carefully argued, researched and supported by references, not simply colloquial comments.

Sources, Citations and Bibliography

You are encouraged to seek out information in journals, books and reports that may be available in the library, on CD-ROMS or the Internet. Some resources may be found on the course website. You may reference information given in lectures. The sources of all information must be cited and your assignment should contain a bibliography with adequate detail to locate the reference, this includes a specific page in a book or a specific Internet site (include the URL and when you had last visited the site). For example:

Jones and Smith, "Ethics in IT: an oxymoron?" , MISQ Vol. 23, No 2, Pages 23–34

For a comprehensive introduction to the Oxford referencing system, you should visit the following site:

<http://www.lc.unsw.edu.au/onlib/refbib.html>

The bibliography is not included in the word count.

Form of Assignment Submission

- Where an assignment has been done by 2 students:
 - you must register your pairings before submitting your essays;
 - only one student need submit the essays.
- Where an assignment has been done by 1 student:
 - you need only do any 3 out of the 4 questions;
 - ensure that you submit your answer with the appropriate give command
- **IMPORTANT:** Each essay assignment answer (hence each PDF file you create) must have a title page, which should contain:
 - Course Id and Name,
 - Assignment Details,
 - Student Id and Name of each student completing the assignment,
 - Seminar Id/Day and Time as well as each Facilitator's name.
- Each essay assignment answer **must** be converted to a **searchable** PDF file and submitted as described above. The ability for us to search the text within your PDF file is essential in helping us to mark your assignment. Please ensure that the PDF file you create is in fact searchable.
- Your essay must be typeset in 10-point Times New Roman font, single spaced, 3 cm left and right margins, 4.5 cm top and 3.5 cm bottom margins. If you are using \LaTeX , then the default margins provided by `a4wide.sty` would be acceptable.

Reports must be presented in a format suitable for publication (i.e. suitable layout, no spelling and grammatical errors).

Late penalties

Late assignments attract a 10% deduction on the graded mark for every day they are late.