Professional Issues in IT
COURSEWORK HANDOUT

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MODULE DETAILS			
DEPARTMENT	Computer Science	**PROGRAMME**	BSc (Hons) – Accredited by BCS (British Computer Society) 
MODULE CODE	CCP2600	**MODULE TITLE**	Professional Issues in IT
SEMESTER	Fall	**SESSION**	2014-2015
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COURSEWORK DETAILS					
C/W NUMBER	1	**CONTRIBUTION**	30 % of the module final mark		
C/W TITLE	Professional Issues Practical				
C/W TYPE	Report				
HAND-OUT DATE	6/11/2014	**SUBMISSION DATE**	19/12/2014	**FEEDBACK DATE**	20/01/2015

LEARNING OUTCOMES

Upon completion of this piece of coursework, a student will be able to:

- Explain how software differs from other forms of intellectual property
- Recognise the institutionalisation of computers in everyday life
- Become aware of the responsibilities associated with software development in the era of the Knowledge Society
- Comprehend and assess the efforts of professional bodies to address such responsibilities
- Demonstrate an understanding of the ethical and professional issues relevant to the discipline
- Analyse complex situations and be able to categorise the constituent components (legal, social, ethical, and professional aspects)
- Investigate several aspects of software development to ensure compliance with various aspects of
- legislation
- Present well structured reports proposing solutions to problematic situations
- Communicate effectively in writing
- Effectively work and collaborate with other people towards the fulfillment of a group project

ASSESSMENT CRITERIA

A central aim of this unit is to cultivate the ethical dimension of decision making in computing and to emphasise the fact that computing and information technology do not exist in a vacuum but rather affect and is affected by society. This practical addresses this need through the use of a number of case studies (scenarios). It contains three case studies, which will be given to you throughout the semester.

You will work these scenarios in self-selected groups of **three/two** people and I must have been notified for the choice of groups.

Part I of this practical will require you to discuss these scenarios in a round-table fashion or over email and report the conclusions of your debate. These scenarios describe moral dilemmas based on actual events and are designed to relate to the course contents. Also you will need to prepare an interim report that you will discuss with me.

Part II of the practical is individual work, which asks you to critically evaluate your role in the group and the benefits that you have gained from carrying out this practical.

Finally you will be required to submit ONE document which contains both the group work as well as the individual piece of work of each member of the group. The group work will attract 70% of the mark whereas the individual work will be 30% of the mark.

The group work is necessary since values and value judgements are highly subjective. Putting together

different individuals means that the problem is seen from a number of different moral perspectives, which in turn becomes a learning curve for each member of the group as well.

For all the scenarios you may want to consider material on moral philosophy and ethical codes of practice for computer professionals (see extra notes in MOLE).

Some instructions for the completion of the practical:

Part I: Group Work [70% of total mark]

In each scenario an ethical/professional/legal/social dilemma will be posed, based on real events for which you should consider very carefully all the facts, identify the problems and explore the implications. Your groups should discuss each scenario as described above.

Questions that you might address in the discussion of the scenario could include the following (note that the following list of question is merely suggestive and by no means exhaustive):

- Is there an ethical issue involved in the scenario at all or is it simply a legal or social issue? For example, should someone have done something or not have done something?
- What moral principles are involved in the scenario? For example, good/bad, right/wrong, justice, professional responsibility, respecting the autonomy of others, confidentiality, truth/deceit, avoiding harm to others etc.
- Have any laws been broken? What is the relevant legislation?
- What are the possible solutions to the dilemma? Which one of these do you consider to be the right course of action and why?
- How does the moral dilemma in the scenario relate to the ethical codes of practice of the BCS and ACM? What action do the BCS and ACM codes suggest?

For each scenario a report of approx. 1000 words should be written. This report, which will include an introduction and conclusion, should reflect a distillation of the comments from each group member and should be a coherent, well written and presented report. In other words the report will not merely contain what X and Y member of the group said but these will be collated together in a way that the report is like an essay.

Also there will be a group meeting with me during which I would like to see a progress report on the work done so far. This will attract a 20% of the mark allocated to this section.

Part Ia: Interim Report: [20% of the mark allocated in Part I]

Also there will be an Interim report, which will be a meeting with me during which I would like to see a progress report on the work done so far. This Interim report will have to point out the skeleton of the work that is to be completed and submitted in the final report. What I want to see is whether for each scenario there will have been identified all the legal social and ethical issues. For each of these issues, there has been considered all points of view, i.e. the point of view of each person that is involved in the issue? Have their concerns/interests have been considered? Are these concerns/interests legitimate/ethical/professional? Is there a reading in the scenario to suggest these interests/concerns may lack foundation? Also have the social issues/implications have been considered?

Part II: Individual work [30% of total mark]

The rationale of this part of the practical is to encourage you to think about ethical decisions that you make and how you make them. You are therefore, asked to critically assess your group report and at least answer the following questions:

- Do you think that during course your awareness of ethical issues in information technology has improved? What evidence from the portfolio supports your answer?
- Do you think that the course has improved your ability to reason about ethical dilemmas? What evidence from the portfolio supports your answer?
- What have you learned from doing the project?
- Do you think that the project was useful? Why or why not?
- In addition in this part of the report you will be expected to answer the following questions:
- What was your contribution to the group work?

- How did your group meet?
- Do you think the group mark should be allocated equally to all members of the group? Why or why not?

The assessment criteria are as follows:

- Have all the scenarios been critically analysed? Have you supported your arguments? Have you explored counter-arguments?
- Have you demonstrated that you are able to relate the ethical, legal social and professional dilemmas in the scenarios and your own experience to the lecture course material?
- Have you demonstrated an ability to identify the ethical issues in a scenario and isolate these from purely legal and social issues?
- From the critical evaluation (individual part of the practical), assessment will be on the basis of your answers to the questions given above. However, it should be noted that members of a group that are found not to be working on an equal basis as the rest of the group will only attract an appropriate fraction of the group-work mark. In other words, if you contribute little to the group work, you will be awarded a lesser mark!

DETAILED DESCRIPTION

Scenario I

IndyTech is a large computer hardware and software vendor. Anthony Black is a software-support analyst for IndyTech's field office. Anthony is on the phone with customers much of the time. He reports the customer's program bugs to the engineering department, and he gives his customers software patches or workarounds directly over the phone lines, computer-to-computer, whenever possible.

When Anthony hears about a difficult software problem, he takes his expertise to the customer personally. Until last year, his on-site support and occasional user training were provided as part of the customer's maintenance contracts. That practice became so popular that it was too expensive for IndyTech. They had to change the policy of free support and training, so they unbundled the support services from the maintenance contract. Now IndyTech charges its customers separately for on-site services.

IndyTech suffered during the past recession. Management's response to the crunch was to freeze all salaries for 18 months, apart from those of senior management. Twelve months have passed, and IndyTech is still in trouble. Some people have been laid off, and Anthony suspects that his days are numbered. However, he knows he is still valuable to IndyTech; his supervisor told him that he'd be the first to get a raise, if that were possible.

One of IndyTech's largest customers and one of Anthony's most important clients is the government. Over the years, he has established a close relationship with many civil servants. The government has several sites where employees need a lot of technical held and training; the users prefer to contract with IndyTech rather than to develop the expertise from within. Anthony has been working closely with Mary Sutherland in the Social Security Information Systems Office (SSISO). They know each other well, and have developed a level of mutual trust. Yesterday, Anthony called Mary.

"Anthony, I have a proposition for you to think about. We need someone at the SSISO site to help with our new system. Its a new VAX 7384 system your people installed this summer, and they need support and training really badly. It's right up your alley. Want to do it?" "

Sure, send the paperwork and I'll get started."

"Wait, you don't understand. I want you to do it, not IndyTech. If we get you through the company, it'll take months of paperwork. And besides, we'd have to pay the IndyTech fees."

"I don't know, Mary. You're asking me to do something on my own that my company pays me for. Its a conflict of interest."

"Well, that depends. Your company's present policy on that should really change, don't you think? Like when they unbundled service from maintenance. Anyhow, we want you rather than some other consultant we don't know, even if they're cheaper. You know, success at this site in London means a lot of future business to IndyTech.

My feeling is that they'd go along with this if we explained it to your management."
"Why don't you, what's the rush? Why don't you present your case to our management? Maybe they can hurry up the process, get you an answer in a couple of weeks."
"Anthony, you don't understand. We can't wait that long. And the sooner the system is up and running, the better it will be for the entire country. Don't forget that one of the big reasons we got this system was to reduce the delay on payment of welfare and unemployment compensation. We won't ask you for any time that would interfere with your normal work schedule. You name the hours, show up when you can, and we know you'll do the job. To make it worth your while, we'll pay you 20% above the usual consulting fee, and give you a £5000 bonus when you're through."
Anthony said nothing. He is pleased that his reputation is so good. He is overwhelmed at the generosity of the offer. He considers it to be the chance to start up a decent nest egg in case he's laid off. But he wonders at the consequences if the word gets out...

Scenario II

Smith and Todd (S&T) was a large financial services company. Its computing facility was based around an old mainframe system, which used batch processing. The company wanted to replace this system with a modern network. The Information Systems Department of S&T identified two batch programs for immediate replacement; one performed share analysis, the other managed client transactions. BankSoft developed and marketed a financial analysis package for small businesses, called FairShare. Included in the package were two programs that were of particular interest to S&T; SHARESTAT which performed share analysis, and CLIENT which handled client transactions.
BankSoft had not installed the FairShare package at any site larger than Chamberlain PLC, a small investment company with a network of four microcomputers. BankSoft considered Chamberlain to be a beta test site; BankSoft gave Chamberlain the FairShare package free of charge, on the condition that Chamberlain reported any bugs in the software to BankSoft.
A manager with the Information Systems Department of S&T visited Chamberlain, and saw the FairShare package in action. He was impressed. As a result, S&T decided to upgrade to a network and purchased FairShare, aware that it needed to customize the programs to suit their requirements. The software contract specified that S&T purchased FairShare for £8000, payable on delivery, plus £600 per month for maintenance and upgrades. S&T assembled a team of software engineers to modify the FairShare software. This consisted of a group of 12 new employees, some permanent and some contract workers. The objective of the team was to change FairShare from a small microcomputer-based system to one that would work on a large network of high-end workstations. S&T knew that FairShare had not been fully tested, so its contract with BankSoft included the following clauses:

- The Buyer (S&T) is aware that the product is 'raw' and relatively untested;
- The Supplier (BankSoft) will provide the Buyer with four new releases a year to add new functionality to the system and to correct simple bugs;
- The Supplier makes no guarantee as to the safety or accuracy of the package;
- The Supplier is responsible for 'functional generic package errors'. If such errors occur, the Supplier will fix them and provide the Buyer with the updated code or create a new release.

The contract did *not* include the following:

- A standard for testing the software;
- The amount of testing that the Supplier would do before the package was delivered;
- A disclaimer clause stating that the Supplier was not responsible for the Buyer's lost profits or damage to the Buyer's reputation due to problems with the software.

After a small amount of testing by S&T's programmers, it became apparent that FairShare had some good and bad features. SHARESTAT was better than the software that S&T had used in the past (even better than BankSoft's sales representative had said it was). It also worked well in S&T's new networked environment. On the other hand, the CLIENT program was a disaster. It worked well on a small network, but no amount of rewriting could make it work efficiently and accurately on a large network.
S&T had spent a lot of time and money trying to customize FairShare, but it couldn't use any part of the package other than SHARESTAT. Besides the cost of conversion, S&T had paid BankSoft £4800 for maintenance over eight months. The firm had received quarterly upgrades from BankSoft during this time, but none had helped to solve the problems with the CLIENT program.

The manager of the Information Systems Department estimated that without CLIENT, the functionality of the FairShare package was cut by half. After consultation with the Information Systems Department manager, the chief financial officer of S&T decided to reduce the maintenance and upgrade fee of £600 to £300 a month in compensation for the lost value of CLIENT.
When BankSoft's manager heard of this reduction in payment and the reasons for it, he was furious and instructed his programmers to include a virus in the next upgrade of the FairShare code. Shortly after S&T received the upgrade, the virus activated and erased all of the FairShare programs on S&T's system, including the SHARESTAT program. S&T ceased all payment to BankSoft and sued the firm for malicious damage to property. BankSoft countered by suing S&T for non-payment of contracted services.

SUBMISSION

Students are expected to submit:

A written report (of 2500-3000 words) which has the following sections (indicative):

- Abstract
- Introduction
- The analysis of the scenario (broken in sections if necessary)
- Conclusions
- References

The submission time is **19/12/2014 @ 20:00**

NOTE

All sentences or passages quoted in this coursework from other people's work should be specifically acknowledged by clear cross-referencing to author, work and page(s). Failure to do this amounts to plagiarism and will be considered grounds for failure in this coursework. It is on the instructor's discretion to contact an oral examination, which will result to the award of the final grade to that particular piece of coursework

TURN IT IN REQUIREMENT

Apart from the usual hard copy submission, this piece of coursework is required to be submitted to Turnitin plagiarism detection software at: **ww.turnitin.com** at a date **no later than the submission date**. **This is an absolute requirement for releasing a mark**. **Failing to submit a copy into Turitin may result in no mark be awarded.**

Brief instructions on how you can set up your profile and submit your work can be found at:

https://www.turnitin.com/static/training/student.php

You are going to require:

CLASS ID:	**9015149**	**ENROLLMENT PASSWORD:**	**ccp2600**

If you have any problems in submitting your work, please contact the Course Administrator or the Lecturer.

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