Assignment 4

Deadline: Day 21/04/2018 @ 23:59

**[Total Marks for this Assignment are 4]**

***Professional Issues***

***IT407***

**Instructions:**

* This Assignment must be submitted on Blackboard (**WORD format only**) via the allocated folder.
* Email submission will not be accepted.
* You are advised to make your work clear and well-presented, marks may be reduced for poor presentation. This includes filling your information on the cover page.
* You MUST show all your work, and text must not be converted into an image, unless specified otherwise by the question.
* Late submission will result in ZERO marks being awarded.
* The work should be your own, copying from students or other resources will result in ZERO marks.
* Use **Times New Roman** font for all your answers.

Student Details:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| **Name:**  **CRN:** |  | **ID:** |
|  |  |  |

# Question One

***2 Marks***

*Learning Outcome(s):*

*LO2: Interpret the code of ethics in computing so that they are able to use them in their professional careers including during the process of decision making.*

Two weeks ago, you started a new job as a system administrator for a computer lab at a small college. Wanting to make a good impression, you immediately set out to learn more about the various applications provided to the users of the lab. One of the packages, an engineering design tool, seemed out of date. You looked through the lab’s file of licensing agreements to see how much it would cost to get an upgrade. To your horror, you discovered that the college never purchased a license for the software-it is running a copied version!

When you bring this to the attention of your boss, the college’s Director of Information Technology, he says, “The license for this software would cost us $10,000, which we do not have in our budget right now. This software is absolutely needed for our engineering students, though. Maybe we can get the license next year. For the time being, just keep the current version running.”

How would you respond to your manager?

Note: You need to do the following for the above question:

1. Give your own opinion about the above situation.
2. Write the “clauses” which relate most to the above scenario. Do not just write the clause number but also write the whole sentence with it. For example “**8.05** Improve knowledge of relevant standards.” Only write the clauses which are most relevant to the above scenario.
3. Write the “principles” which relate most to the above scenario.” For example, “Principle: Share your knowledge, expertise, and values.”

Answer: [2 Marks = 0.5+1+0.5]

1. Students answer may vary so the instructor can judge accordingly.

2. **Most relevant clauses are:**

1.07 Consider factors that diminish access to software

1.08 Volunteer professional skills to good causes

2.02 Don’t use software obtained illegally

3.13 Use only accurate data appropriately acquired

6.12 Share concerns about Code violations with the people involved

6.13 “Blow the whistle” when no alternative to reporting significant Code violations

1. **Most relevant principles are:**

* Be impartial.
* Disclose information that others ought to know.
* Take responsibility for your actions and inactions.
* Take responsibility for the actions of those you supervise.
* Maintain your integrity.

# Question Two

***1 Mark***

*Learning Outcome(s):*

*LO3: Participate in well-reasoned discussions of social and ethical issues in computing as a computer professional.*

1. You studied online voting in this course. List and explain at least 2 ways a voting thief could cast/register several votes in an online voting system.
2. There was an email sent by Mr. Andy Sudduth after the release of famous InternetWorm. The purpose of this email was to explain to network administrators the process to stop the worm. However, this email was of no help to the network administrators. Why? Briefly explain your answer.

Answer: [0.5+0.5]

a.

* A vote thief could cast multiple votes in an on-line election by purchasing pass codes from people willing to sell their right to vote.
* A thief could fool other voters into revealing their pass codes and then using this information to cast multiple votes.

b.

Andy Sudduth's email was of no help for two reasons.

* First, it didn't have a subject line.
* Second, and more importantly, the email was not delivered in a timely manner, because the mail server handling it was infected with the worm.

# Question Three

***0.5 Marks***

*Learning Outcome(s):*

*LO3: Participate in well-reasoned discussions of social and ethical issues in computing as a computer professional.*

Discuss in your own words the benefits and the risks of online voting.

Answer:

Benefits:

* More people would vote
* Votes would be counted more quickly
* No ambiguity with electronic votes
* Cost less money
* Eliminate ballot box tampering
* Software can prevent accidental over-voting
* Software can prevent under-voting

Risks:

* Gives unfair advantage to those with home computers
* More difficult to preserve voter privacy
* More opportunities for vote selling
* Obvious target for a DDoS attack
* Security of election depends on security of home computers
* Susceptible to vote-changing virus or RAT
* Susceptible to phony vote servers
* No paper copies of ballots for auditing or recounts

# Question Four

***0.5 Marks***

*Learning Outcome(s):*

*LO3: Participate in well-reasoned discussions of social and ethical issues in computing as a computer professional.*

What are the uses of computer simulations? List any four.

Answer:

* Replace physical experiments where experiments may be too expensive, time-consuming, unethical or impossible to perform.
* Model past events.
* Understand world around us.
* Predict the future.