Homework 6: Ethics and Software Reliability

Answer each of the following questions. Use a minimum of **250 words** for each. Your answers will be graded largely based on how thoroughly you argue/explain your position. To submit your work, you must fill in the form fields below with your answers, save this Word document, and upload the Word document to the appropriate eCourseware dropbox. Your submission must be in the form of a Word document (docx). If this is a problem, let me know.

**IMPORTANT:** Your submission will be analyzed by a plagiarism-detection system. Do not include text copied directly from any source in your answers. If you want to say the same thing that another source says, you must restate that thing in your own words.

Consider the following scenario. A software company, *MicroBanana*, is about to release a new product, *MobileAwesomeness*. This is a critical time for the company because they will be getting this product to market ahead of their competitors. In doing so, they stand to make their employees and stock holders oodles of money. In contrast, if their competitors get to market first, MicroBanana could be put out of business.

However, just days before the release, a security bug is discovered that could cause users’ privacy to be violated. Unfortunately, fixing the bug would take considerable work, requiring the release date to be moved back, and giving competing companies the advantage. On the bright side, the bug seems like it would be difficult to exploit in practice.

**QUESTION:** Should MicroBanana release MobileAwesomeness with the bug, and keep the bug a secret?

1. [10pts] Consider the following principle from the ethical theory of Kantianism (Quinn, p71).

*Categorical Imperative (Second Formulation): Act so that you always treat both yourself and other people as ends in themselves, and never only as a means to an end.*

To paraphrase, this imperative basically says it is wrong for one person to “use” another.

Now, argue that to be consistent with the Categorical Imperative the answer to the MicroBanana question must be “no”.

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| Fill in your answer here. |

1. [10pts] Consider the following principle from the ethical theory of Act Utilitarianism (Quinn, p75).

*Principle of Utility (Greatest Happiness Principle): An action is right (or wrong) to the extent that it increases (or decreases) the total happiness of the affected parties.*

In contrast to problem 1, for this one you must argue that to follow the Principle of Utility the answer to the MicroBanana question must be “yes”.

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| Fill in your answer here. |

1. [10pts] Imagine that the CEO of MicroBanana decides to release MobileAwesomeness with the bug, keeping it a secret from the public. Subsequently, criminals discover the exploit and are able to steal, among other things, credit card numbers from a large number of MobileAwesomeness customers. Using these cards, the criminals rack up many purchases, causing banks, credit card companies, and customers to lose a considerable amount of money. What should the response to this security breach be, assuming that the company did not know about the security vulnerability? Consider all the different entities who might need to respond (e.g., parties hurt by the vulnerability, the government, etc.).

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| Fill in your answer here. |

1. [10pts] If it was revealed that MobileAwesomeness did know about the security vulnerability and kept it a secret, what would your response to problem 3 be?

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| Fill in your answer here. |