

# Exam 2 Take-Home: Ethics and Software Reliability

Answer each of the following questions. Your answers will be graded largely based on how thoroughly you argue/explain your position. To submit, save your answers (don't reprint the questions) as a TXT, DOC/DOCX, or PDF document, and upload the document to the appropriate eCourseware dropbox.

**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. [5pts] 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".

2. [5pts] 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".

3. [5pts] Now imagine that MicroBanana never knew about the bug, and released the software. Subsequently, criminals discovered the exploit and stole credit card numbers from a large number of MobileAwesomeness customers. Using these cards, the criminals racked up many purchases, causing banks, credit card companies, and customers to lose a considerable amount of money. If you were a judge tasked with deciding the company's liability, how would you go about deciding? What information would you use to determine the extent to which MicroBanana should be held responsible for the damages?