

COSC 3050, Spring 2016

Professional Responsibility

Case 1:

You are performing software development with a computer graphics group. The team is being motivated (bonuses) to produce an award-winning product for the next release. However, one member of the team, “Allen”, produces dubious code and seems incapable of doing better. The project schedule is in serious jeopardy. One of your fellow programmers, “Rick”, suggests that you and he just rewrite the code written by Allen so that it works right. He says that no one need ever know that the two of you rewrote Allen’s code to make it work properly. Is this type of performance cover-up ethical? What are the possible repercussions of following Rick’s suggestion?

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Case 2:

You are tired from working weeks of consecutive ten-hour days to get your project done and decide to cut corners wherever you can. This results in writing lazy code that will just get by. The code you end up writing will work fine and does not have any (known) security weaknesses, but you know you could write it much better which would result in better utilization of computing resources. Is it acceptable (or even reasonable) to write this weak code when you do not have the time to do the job better because you are being grossly overworked? Why or why not?

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Case 3:

Memory allocation is an important matter for lower-level language (C, C++) programmers and UNIX developers. Properly using system memory can be an ethical issue because wasting memory costs the IT department money and can interfere with other developers' work. Consider the following scenario.

You are working on a program for an accounting firm, which draws data from an accounts database. The size of the data you extract may vary significantly depending on the records for any given month. This program is running on a central server that is shared by the entire firm for most of its database processing. Is it unethical, or just poor coding practice, to waste memory by declaring the maximum possible size for storage of results rather than using dynamic memory allocation? How could using the easy method affect you?

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Case 4:

Most of your development team has remained current with recent coding languages, practices, standards, and changes in your development industry. You personally do not have time for the extra education required to stay current. Your family is growing, the hunting is good, and you spend your free winter time on the slopes or snowmobiling. Do you feel it is ethically correct to enjoy life and remain in the dark when it comes to staying current with your aspects of the industry? What **do** you think is reasonable? What are the long term effects of not keeping up?

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Case 5:

You are in your third year in the workforce. Your college education has been helpful so far. You have not been required to do anything beyond C++ using Visual Studio and some Java. You do good work, have been told that your raise has been approved for the coming year, and are being given more responsibility on projects. You hope to be a lead on the next project in one to two years.

Your company is looking at expanding its product line so that it can be more competitive when the new Data Centers open in Wyoming. The information that has been gathered indicates that data access for accounts at the center nearest your job will require access to a QuantumData database that only runs on AIX.

The company has called a meeting for all programmers and engineers. You are being told that 30% of the current workforce has to become proficient with AIX and the new database system within 90 days. You are all being asked if you would like to volunteer for training on the new systems. You have decided that you want the training and now you have to submit a statement of why you should be selected for this training. What do you say?

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Case 6:

You are the project manager in charge of developing the latest release of your software firm's flagship product. The product release date is just two weeks away and enthusiasm for the product is extremely high among your customers. Stock market analysis is forecasting sales of more than \$25 million per month because of the new release. If so, earnings per share will increase by nearly 50 percent. There is just one problem: two key features promised to customers in this release have several bugs that would severely limit the software's usefulness. You estimate that at least six weeks are needed to find and fix the problems. In addition, even more time is required to find and fix 15 additional, less severe, bugs just uncovered by the QA team. What do you recommend to management and why? What is your major concern: your job, your standing in the company, or your share of the take?