

**ITWELEC4A**

**(Information and Software Assurance and Security**)

CASE STUDY

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**CASE STUDY #1: SOFTWARE QUALITY**

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1. A programmer claims that because only a small proportion of software errors turn into software failures, it is unnecessary to make substantial investments in the prevention and elimination of software errors.
   1. Do you agree with this view?

No, because even the simplest error can be troublesome in the future especially if malicious hackers exploit it.

* 1. Discuss the outcome of accepting these views.

To ensure a good software, it must be error-free. It is always wise to prevent errors from happening to minimize the damage if the software encounters failure. The results of a software failure could be catastrophic for a business or an organization because it can stop the software production, interrupt processes, and ultimately lead to financial losses. However, system developers must not only forsee errors from their part but errors from external parts of the software as well. For example, one must consider the operations of a cloud server and their business policies before choosing one. This could save a company from losing money if ever the cloud computing platform experiences difficulties of their own.

1. George Wise is an exceptional programmer. Testing his software modules reveals very few errors, far fewer than the team’s average. He keeps his schedule promptly, and only rarely is he late in completing his task. He always finds original ways to solve programming difficulties, and uses an original, individual version of the coding style. He dislikes preparing the required documentation, and rarely does it according to the team’s templates. A day after completing a challenging task, on time, he was called to the office of the department’s chief software engineer. Instead of being praised for his accomplishments (as he expected), he was warned by the company’s chief software engineer that he would be fired unless he began to fully comply with the team’s coding and documentation instructions.
   1. Do you agree with the position taken by the department’s chief software engineer?

Yes, because the coding and documentation standards of a company not only boosts the team’s morale but also makes the transfer of knowledge to new employees easier.

* 1. If yes, could you suggest why his or her position was so decisive?

A chief software engineer takes the lead in developing software and delivering it to consumers. By strictly implementing the standards of the company, he exhibits his leadership and discipline that other employees should follow. The act of not following the standard could be a problem in the future if some of the key components of the development is lost. If ever it happens, a centralized coding style and documentation could help fix the problem because it makes the long-term system maintenance easier.

In my opinion, violating the set standards for development is also violating the company’s code of conduct.

1. Pressman’s definition of quality requires the client to specify the software requirements because only documented requirements are binding for the developer. Any omissions or errors made by the client are considered as his or her fault, and not listed among the developer’s errors.
   1. How can a client be sure that his or her organization has the professional capabilities to cope with this issue?

A client must be knowledgeable with the software they want from the developers.

* 1. In what ways can the developer support the client in this matter?

Developers can support the client in such matters not by directly communicating with them but by having the project manager be the middleman between them and the client. Developers must explain to the project manager what they can do to fulfill the requirements set by the client and that no other features should be made or be prioritized. The project manager then communicate with the client to discuss the progress of the team.

* 1. Suggest pro and con arguments to Pressman’s definition of the client’s responsibility.

Pro: Clients may specify whatever they want in the software requirements.

Con: If clients want more features, they can’t just demand it without proper documentation.

1. It is claimed that the expanded definition of SQA supports those who are interested in increasing client satisfaction.
   1. Do you agree with this claim?

No, because in my opinion, software quality assurance only covers the technical stuff such as preventing an error-prone software to reach production. The act of supporting the increase of client satisfaction is under project management.

* 1. If yes, provide arguments to substantiate your position.