COMP 311-007 In-Class Assignment 1

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1. Which phase in a software development process is cause of main cause for most bugs?

The specifications process is the main cause for the most bugs.

1. The sample chapter gives five rules for determining what is considered to be a bug in a software product. Which of the following is not one of those five? (1) Hint: the wording is changed to make you think.

b. The product offers functionality beyond what is required by the specification

1. Which one of the five rules is left out of the list of options for the previous question? (1)

The software does something that the product specification says it shouldn't do.

1. Philip Crosby, one of the pioneers of quality assurance coined the phrase Quality is free. Clearly applying QA is not literally “free” because the company must pay salaries of QA professionals and testers and cover the costs of following QA and test processes. What did Crosby mean by claiming that quality is free? (2)

Brainstorming specifications and requirements for a product is already a necessary process when developing software. What Philip is saying that if this necessary process is done properly and well thought out then technically you aren’t spending any more money on it than you would have already spent.

1. In the example of the Y2K bug, do you think that the hypothetical programmer Dave took the wrong approach in storing years as only two-digits. If your group has divided opinions, say so. (2)

We think that it Dave’s idea was good because it saved space, however, the years should have been converted to 4 digit format in preparation for 2000 to avoid confusion between the 1900s and the 2000s.

1. Can you give other example of famous product recalls or notorious software bugs that you learned about from the news or experienced personally? Hint: You may search the Web if you give the URL of your main reference below. Briefly describe the problem and the impact it had on the company that produced the product and on users. If possible, apply the wisdom of hindsight to suggest how company could have prevented or reduced the impact of the problem? (3)

Problem description: XL foods recalled 1.8 million kilograms of beef in Canada in 2012 due to it being tainted with E.coli.

Impact on the company: had to spend money on lawsuits against them and it tarnished their reputation.

Impact on users: they became sick with E.coli.

Could it be prevented?: According to an article from the CBC, the E.coli outbreak happened due to the relaxed attitude towards food safety. The plant’s staff responsibility towards food safety were not always met and therefore caused a huge meat recall.

Articles cited:

<http://www.cbc.ca/news/politics/xl-foods-e-coli-recall-preventable-probe-finds-1.1338330>

<http://www.theglobeandmail.com/news/national/largest-canadian-meat-recall-4m-settlement-in-xl-foods-tainted-meat-lawsuit/article25544588/>