

SE 494

Fall 2017

Portfolio Ethics Essay Assignment

Therac-25

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- ❖ Write a paragraph about what you might have done if you were a software engineer in that project?

As a software engineer I would have made sure to follow the Software design principles, so as to develop a modularized and well-connected software component so as to make a whole software. I would have also made sure that I wrote the code in such a manner that the code is testable. I would have followed the test drive development format so as to avoid messy codebase which would be hard to test and debug if errors do pop up. We can clearly see in the case of Therac-25, that the software engineers were a bit too overconfident that they can reuse software and write unclean code that is hard to test which unfortunately resulted in death and injury of patients.

- ❖ Write a paragraph about why you think Therac or VW engineers ended up doing what they did?

I think the biggest reason Therac engineers messed up with the project was because they did not assess the old software to run properly for on a new hardware machine and also, they made poor software design choices which ultimately led them to code in such manner that it was really hard to test the code for any bugs. The alert systems and error warnings system was also poorly designed which would have let the operator to manually override the machine, which in turn would have saved multiple patients from getting exposed to radiation overdose. Also, the written documentation was not renewed or updated from the old documentation which in turn led to multiple errors and accidents due to this. Overall, the moral of the story is that every software team should use good software design principles and write testable code and most importantly update the documentation regularly.