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TidBIT

Why should software developers care about software quality? Quality is everyone's responsibility. Each member of a development team plays an important role related to quality. Sometimes new developers are surprised about how much time they are expected to spend developing test cases for the software they develop, but this is how released defects and escapements are prevented. According to Edsger Dijkstra, "If debugging is the process of removing software bugs, then programming must be the process of putting them in" (https://www.goodreads.com/author/quotes/1013817.Edsger_W_Dijkstra).

Required Resources

Reading: When Coding Goes Wrong (https://medium.com/@coderacademy/when-coding-goes-wrong-e46d84c6565f)
This article highlights four real-life examples of what happens when coding goes wrong. Consider the following questions as you read:

- What were the results of the issues with the onboard computer systems of the F35 fighter jet?
- Was there any way the results of the Microsoft Tay artificial intelligence experiment could have been prevented?
- What did Apple fail to do before releasing Apple Maps?

Reading: Clear and Present Danger: Why We Refused to Give Up (https://link.gale.com/apps/doc/A82751984/GBIB?u=nhc_main&sid=ebsco&xid=b3035697)
This Shapiro Library article describes how failed software may have led to the Chinook helicopter crash. It is critical to have a mature software-testing process in place to ensure that quality is not an afterthought. In addition, responsibility for software quality belongs to everyone on the team. Consider the following questions as you read:

- What breakdown in the testing process or management contributed to the Chinook helicopter disaster?
- Why should it be your duty and obligation to deliver safe, usable, and trustworthy code?

Reading: The Explosion of Ariane 5 (http://www-users.math.umn.edu/~arnold/disasters/ariane.html)
Software defects can be detrimental to a software project. Defects can lead to an application failing

to be adopted by users or can cause millions of dollars in losses. Consider the following question as you read:

- How did a software bug contribute to the $500 million mistake in the Ariane 5 rocket explosion?