**Module 1: Critical Thinking**

**Standard Software Systems Development Questions**

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CSC 505

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12 June 2024

***Why does it take so long to get software finished?***

Software requires a large labor cost, which takes a lot of time. Software takes planning, execution, and debugging. A lot of time will be spent on planning and debugging the software before its initial release. A good plan can save time on the execution portion and reduce the amount of bugs/errors in the software platform.

***Why are development costs so high?***

The cost comes from research and development as well as maintenance. Maintenance and support is an ongoing process that goes along with the development of software. All of this takes time and time costs money. Therefore, the development costs are high primarily due to the amount of time a software platform requires. Which essentially boils down to a giant labor cost. Additionally, the high cost also comes from the hardware required for development and deployment. Some of the required hardware includes computers, peripherals, and servers.

***Why can't we find all errors before we give the software to our customers?***

It is nearly impossible to test every way the customers will use the software. Therefore, the customers are bound to find new bugs and errors. This is actually a good way to locate and discover new bugs not previously found. Sometimes having customers test out a software platform is the best way to debug it.

***Why do we spend so much time and effort maintaining existing programs?***

Maintaining software platforms is crucial to squashing newfound bugs and errors. Additionally, it makes sure the software platform is working in the operating systems and environments. Once those operating systems and environments are updated the software platform needs to adjust to its new home. Therefore, the software may need updates to go along with the operating system updates.

***Why do we continue to have difficulty in measuring progress, as software is being developed and maintained?***

Software is nearly never done being developed and maintained. If a software platform is not maintained it will lead to bugs and errors. Which could lead to the software platform not working all together. Therefore it can be difficult to measure software’s progress since it is essentially never done being developed and maintained.

***References***

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