Ethical Hacking

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Question One

The therac-25 incident is one example where insufficient testing was a factor that led to program error. It is featured with different injuries and deaths. The factors that led to the failure of the system included insufficient testing and also poor system design. Another example consists of the customers at AT&T hat lost telephone service for data and voice. This resulted from software errors in various programs (Sultan, Thanoon & Ibrahim, 2020). A change in two-million-line telecommunication led to the failure of telephone networks in different cities.

Question Two

In the Great Hall report, the group noted that the Denver airport's completion delay was due to weaknesses that were pointed out in the system. There were areas of weaker-than-expected existing concrete discovered in the terminal after the commencing of the construction (Chukhleb, 2021). In case the other milestones were to be added, the current timeline could be achieved. This could easily add more days to the schedule.

Question Three

There are different reasons why the healthcare government website did not work. At first, it was noted that the capacity of the website was the problem. Users showed various issues, such as the drop-down menus not being able to work. The insurance company showed problems such as the user data being incorrect or complete when it reached the company. All these issues can be caused by a lack of proper testing (Conteh, 2021).

Question Four

A high-reliability organization is featured with various significant characteristics. These traits include the organization being sensitive to different operations. The organization is featured to be reluctant to oversimplifying the other reasons that caused the problem. Thirdly, the organization featured with the preoccupation of various failures. Fourthly, the organization has deference to expertise. Lastly, the organization is featured with resilience.

Question Five

As a result of more exposure to the different warnings and other additional use of IT systems in the organization, the various users are likely to become prone to alert fatigue. The alerts can easily lead to medical errors and affect the patient's safety in the healthcare organization (Conteh, 2021). The same is caused as a result of a high number of warnings. Therefore, it is essential to ensure that there is no increased number of alert fatigues and warnings.

Question Six

Different factors cause problems in the Therac-25 case and the space shuttle disaster. The first factor was a result of a lack of specification for carrying out the project. Secondly, lack of forming the required testing procedures (Sultan, Thanoon & Ibrahim, 2020). The procedures are essential for conducting the process in the most efficient manner. As a result, different bugs were found in the software, causing it not to work as expected.

Question Seven

It is an essential technique that various software developers use. It is an approach where the designers put in mind the system errors during building software. This is important as the system errors are handled. It is the process of self-healing and developing software that does not have errors. It is essential for acknowledging that failures are likely to happen (Chukhleb, 2021).

References

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