

SRS

Q1) Bitcoin Hack, Mt. Gox

Answer: 1. How do you relate the incidents to requirements engineering?

In requirement engineering, if all of the requirements are listed accurately, the project will be completed successfully. If they aren't, difficulties are almost certain to arise. So, in order to avoid situations like the Bitcoin Hack and Mt. Gox, documenting proper requirements and testing them must be necessary.

2. Requirements incompleteness

As the initial phase in the project development process is a well-defined requirement to provide greater clarity as well as to confirm that the requirements have been met. Hence, adequate requirement documenting is very crucial. However, in this case, the system contains numerous weaknesses, and not every need was thoroughly checked, resulting in a failure.

Q2) Child

Answer: 1. How do you relate the incidents to requirements engineering?

Prior to developing a system, developers and clients must achieve agreement on requirements. A major change in the structure of the organization occurred after developing this system. As a result, the requirements were not met. It demonstrates how detrimental a requirement change can be to the system. The problem could have been predicted if the user had taken a more active role in requirements engineering.

2. Changing requirements:

In this scenario, after developing the system, the company's entire structure was altered. Consequently, the basic system's requirements changed. Furthermore, the requirement specification did not anticipate this required modification. This resulted in the system's failure and a loss of \$1 billion. This whole scenario could have been avoided and billions of dollars saved if this shifting requirement had been predicted and the system designed properly.

Q3) Heathrow's Terminal

Answer: 1. How do you relate the incidents to requirements engineering?

Before designing a system, developers and clients must agree on several issues such as completeness of requirements, clear objectives, and so on. In this case, all of the requirements were not thoroughly tested during the development of the system. Furthermore, the purpose was

not obvious enough to proceed with this, which definitely led to a massacre in Heathrow's Terminal, which had a negative impact on the entire scenario.

2. In our opinion, the above scenario was caused by two issues related to requirements engineering identified by the Standish Group (1995):

A: Requirements incompleteness

The fact is that taking a bag out of the system manually after a passenger left an important item in their bag confused the entire system and caused a crash, hence it should be regarded as a critical requirement and so needed to be tested. Due to the absence of this requirement, we interpreted this situation as resulting from incomplete requirements.

B: Unclear objective

It is crucial to have a clear understanding of what the system will accomplish before developing it. It is unclear in this scenario how the system will respond when a passenger manually removes an item from their luggage, which implies there was no clear goal while developing the system.

Q4) Patriot Missile Error

1. How do you relate the incidents to requirements engineering?

Answer: Define requirements clearly - While timeframes may appear fair at first, they can rapidly become impossible as more criteria are added. To avoid any unpleasant surprises or missed deadlines, carefully define needs and goals from the beginning.

2. Unrealistic expectations

It can soon become chaotic if the project strategy is overly ambitious or unrealistic. This happens a lot when different stakeholders have different ideas about what the project should achieve. Unless objectives are explicit, measurable, achievable, directly linked to the project's deliverables, and fundamentally significant to the project's business owners, they might be construed in a variety of ways, leading to unreasonable expectations regarding the project's deliverables. If the corrected software had arrived at the base the day before the attack, this problem may have been avoided.

Q5) spacecraft

1. How do you relate the incidents to requirements engineering?

Answer: Understanding what the customer wants, analyzing the need, determining feasibility, negotiating a reasonable solution, clearly specifying the solution, validating the specifications, and managing the requirements as they are transformed into a working system are all covered by requirement engineering. And, in order to achieve this, users must be involved at every level of

development. Without this, the project may collapse, like the Mariner 1 Spacecraft happened in 1962 which was dangerous as it threatened to crash back to Earth, as well as incur financial losses.

2. Lack of user involvement

Throughout the process, users are the most significant and strong influencing force. If they are not involved in any step of the project development, the project requirements may fail to meet the user expectations, resulting in the project's failure. We need to identify which users need to be involved, why, and how to reduce the danger of lack of user involvement. However, in this case, failing to receive the correct team input resulted in gaps in the proper information needed for this project, as well as a financial disaster.