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Heathrow's Terminal 5 Project Disaster

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Heathrow's Terminal 5 Project Disaster

Introduction

Over the years, software errors have proven to be destructive, annoying, expensive and deadly and organizations are continuing to invest more in quality development of systems to evade such circumstances. ² Software Development Life Cycle (SDLC) is one of the approaches that these organizations have adopted to improve the quality of software produced. As highlighted by Tuteja & Dubey (2012), SDLC is a framework that defines tasks to be accomplished in every development stage commencing from planning, implementation, testing, documentation, deployment, support and maintenance.

This paper presents a research concerning a real-life disaster that happened as a result of software errors. Heathrow Terminal 5 project undertaken by the British Airport Authority and the British Airlines in the UK faced a huge IT failure with the baggage handling system which failed during the opening of the terminal in March 2008. According to Davies et al. (2016), Terminal 5 had been designed to handle approximately 35 million passengers annually making it necessary to have a computerized system to handle baggage in the airport.

The Baggage System Disaster

The research on the baggage system failure will aid in comprehending the significance of applying SDLC in the development of software to ensure production of accurate and quality systems. As stated by Davies et al. (2016), a series of factors were behind the meltdown in terminal 5. During the incident, the computers failed to recognize the baggage handlers' IDs denying them access to the handling system. This situation saw only two desks operating and the rest remaining closed for a few days till the issue was fixed.

Another issue is that software filters that had been installed during the testing phase of the baggage handling system were accidentally left in place even after the system had gone live (Brady & Davies, 2010). The filters were to prevent sending of the specimen messages that were being generated during the test to other live systems in Heathrow Airport. Once the terminal 5 system went live, the filters ensured that information about bags transferring from other airlines was not received in terminal 5 causing delays, confusion and inconvenience to the passengers.

Additionally, the British Airways had held a number of trials before the terminal was officially opened but the testing was not enough to provide assurance that the baggage system could cope. During the incident, real-world scenarios such as manually removing a bag from the handling system when a passenger had left an important item on the luggage resulted to the entire baggage handling system to become confused and shut down completely.

Results

According to Gil et al. (2014), the end result of the baggage handling system failure was the cancellation of more than 500 flights while other planes took off with the passengers leaving their baggage behind. Further, items of luggage ended up being mishandled as many passengers lost their valuables and insurance companies failed to compensate for the loss claiming that was an avoidable disaster.

The disaster cost British Authorities at least £16m to manually sort the baggage, send them to specific destinations and fixing the software errors that had caused chaos in the airport (Gil et al., 2014). As reported by Brady & Davies (2010), the incident resulted in the resignation of two senior managers.

Staff confusion prevailed during the entire period as most of them had received insufficient training and were unfamiliar with the systems in place. Also, Heathrow Terminal 5 lost trust and reputation with passengers and the government ministers branding it as a disaster.

Disaster Avoidance Strategies

The disaster that occurred at Heathrow Terminal 5 project could have been avoided by applying the software development lifecycle methodology. The major reason for the system failure was a result of poor implementation, testing and support.

First, it is clear that enough real-world scenarios were not included during the user acceptance test for the baggage handling system. This could have been handled by using the SDLC which would further aid in functional and performance testing an aspect that would have ensured there is correct validation and authentication while login to the computer systems.

Support and training was another significant aspect that was ignored during the development of the system. The airport staff should have received sufficient training as well as get involved throughout the development cycle to ensure they are familiar and have acquired the skills to handle such a disaster. Additionally, a backup plan of the system should have been put in place in order to trace back to the errors soonest possible.

Conclusion

From the discussion above, it is crystal clear that the success of a software involves integrating all the aspects of System Development Methodologies Cycle without compromising any of the phases. Testing the baggage system sufficiently would have saved the British Authorities from incurring the extra costs of fixing the bugs, losing the customers trust and having the Heathrow airport reputation destroyed. Hence, ensuring system quality should be a priority in software development.

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