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Informatics 43

Small Assignment 3

1. List the top ten pitfalls - in your mind, based on reading the articles - of use cases and how people misuse them.
   1. Defining the scope of the Use Case Diagram – It’s very difficult to pinpoint at what level the Use cases should be at.
   2. Too many use cases – Systems are inherently complicated, and trying to include every step/use in the diagram over-complicates it.
   3. The use cases aren’t defined correctly – It’s easy to accidentally define use cases as a step in a process.
   4. Too many Actors – Similar to too many cases, which usually go hand in hand, it creates a confusing diagram.
   5. The use cases defined at the micro level – When starting to define use cases, one might decide to either break down the process until you get to the micro level, or start from the micro level, hoping that it would help with planning, but actually is counter-intuitive.
   6. The use cases are too abstract – Trying to define the system at an overall macro level can keep the cases too abstract to the point of being useless/confusing.
   7. Using GUI in use cases – The articles refer to a common mistake of incorporating GUI screenshots/prototypes in the use case; these usually cause the customer to misjudge the actual project.
   8. No/little input from the customer – Without knowing the proper requirements and needs, it is near impossible to create a good working use case diagram.
   9. Combining actors/Too few actors – This can lead to incorrect use cases, or cause confusion.
   10. Endless Use cases – It’s easy to endlessly write use cases trying to redefine the system until everything is correct, which is near impossible.
2. List three of those pitfalls that you fell into in your own homework assignment #2 for the Parking management system
   1. Defining the scope of the Use Case Diagram – It was hard to determine where I should start for the use cases and who the actors were.
   2. Use cases aren’t defined correctly – Along with determining the scope, I did not really know how to define use cases, and occasionally set use cases as steps in a process.
   3. Use cases are too abstract – My final draft for the assignment may have still been too abstract to really help.
3. Describe three recommendations that could help prevent / avoid these pitfalls
   1. Do not make the use case diagram either too concrete with functions and steps, or too generic and abstract as that will lead to confusion. It is best for the Use Case Diagram to be a mix of these ideals. To capture and overall idea of the system, while still defining some well needed functions to make the overall system work.
   2. Make sure to continuously review the requirements and have the customer input on these requirements and the use case diagram. This will help nail down what the system needs to accomplish and keep the use case clean and easy to follow on what needs to be done.
   3. Make the use cases from the Actor’s point of view, and not the system’s. This will better define what the overall system needs to accomplish. It is not exactly system functions that matter, but what the actor’s need to accomplish for the system to work correctly. Let the task for the actor’s define the system.
4. Describe one recommendation that will help detect / remove pitfalls
   1. Review the requirement document. This will allow the system architect to determine what it is that the system needs to accomplish. Reviewing the requirements will keep the diagram from being too abstract and not too concrete on each process also. As long as the requirements are correct and approved by the customer, the use case diagrams should also be correct.
5. Sources
   1. Lilly, Susan. “How to Avoid Use-Case Pitfalls.” *Dr. Dobbs Journal* January 01, 2000. <http://www.drdobbs.com/how-to-avoid-use-case-pitfalls/184414560>. November 2, 2013.
   2. Fowler, Martin. “Use and Abuse Cases.” *Distributed Computing* April 1998: 1-2. PDF.
6. Gottesdiener, Ellen. “Top Ten Ways Project Teams Misuse Use Cases -- and How to Correct Them - Part II: Eliciting and Modeling Use Cases.” *The Rational Edge* n.d. (2002?). PDF.