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Assignment 3

Q1. The software development process is divided in many phases, each depending of the methodology. That said, in a way or another any development process needs to include a phase where the software is designed. This phase is generally described as software design.

In my opinion, the software design phase is part of the group of important phases, as the requirements elicitation/analysis, the implementation, and the testing. Also, it is one of the most difficult and complex phases of the software development process. Here I will give some details to make it clear why it is an important phase as well as its characteristics.

One of the main reasons why it is important is that this phase decides how the software is going to be produced based on the requirements, limitations, and goals. Without it, the other phases cannot be integrated together with cohesion. Therefore, the other phases benefit from the software design phase since it determines the production focusing on realistic conditions.

To be able to design the software many conditions need to be fulfilled. It is important to decide how many people will be take part in the implementation based on an estimative of their skills so that the producing can be completed. This estimation is complex to be done, since there are many variables and no method is able to determine it with desirable accuracy. It is important to attend to the requirements, such as from the client, the company, developers, and time. Also, it has to adjust everything together without attending the desired goals, that could be a very big list.

Q2. The main difference between verification and validation is that while the first certifies that the software being developed is the right one while second one certifies that the production is being done correctly. The verification aims to confirm that requirements are integrated on the software. The validation aims to confirm that the software performs within the desired requirements.

The validation testing should be performed by both the end users and the software develops. To decide if a software is right, the end users’ requirements are used. Since it is not an easy task to understand them correctly and to implement them, the end users should help and do test the validation. Still, the developers need to be sure that their product works accordingly and the tools that are part of it perform their job correctly.

Q3. Agile methods are a more flexible way of developing software when compared to more traditional methods.

They are good to be applied in small groups when the requirements of the software being developed needs to verify by the end users frequently. There is a draw back on that. The end users may change their mind often which could lead to endless repetitions of phases.

They are more flexible, leading to more validations and verifications which could minimize errors in the software production. By being flexible, the phases may not be well done, so problems could appear many times.

Q4. Project managers have to relate with people and understand them. If we could program project managers so that they could understand that and would be able interact to people in a good way, then I think they would be as good as possible. If that is achieved, the using robots as project managers would be a good idea, since they are less propone to errors and most importantly they can supervise more people faster.

Q5. In the next 50 years, software engineering and the software development process will change in some ways. Agile methods will be more mature, and we will be able to better propose them because we will be able to understand their impact better. New technologies will appear, that will change the way the development process is conducted, from how people relate, how the implementation is performed and even by having robots managing teams.