Lab 2b Worksheet

Please upload your lab sheet through the Moodle facility provided.

Review the set of slides on moodle called “Capability Maturity Model (CMM/CMMI)” and answer the questions below.

**Part 1**

1. What is the Capability Maturity Model?

The CMM represents structured collections of practices that have been proven to be effective in describing the characteristic of effective process is software development. The CMM describes different level of maturity in an organization’s process.

1. What are the five levels of the model?
2. Initial
3. Repeatable
4. Defined
5. Quanititatively Managed
6. Optimasing
7. Give a brief explanation of each of the five levels.
8. In this level, the organization’s process is described as chaotic. The project team has no standards in the methods and procedures they use to develop a software and the team doesn’t document the process they use. As there are fewer process defined, success depends open individual efforts of the team.
9. In this level, basic management process have been established to track cost and schedule etc. Discipline has been established in order to gain success in developing applications, which they experience in their earlier stage. Discipline has influenced the software developer to defined activities such as the reporting of task completion and time & effort timing.
10. In this level, the process standards have defined how the software should be enacted. All projects us an approved version od the organization’s standard software process for developing software. The software process for both management and engineering is documented, standardised and integrated into a standard software process for the organization.
11. The quality is managed in this level. Both software process and product are quantitatively understood and uncontrolled. Detailed measures of software process and product quality are collected and analysed. Defect prevention is prioritised.
12. Continous process improvement is enabled by quantitative feedback from the process & from piloting innovative ideas and technologies. Process change management is another key process activity.
13. Explain how the adoption of the model can be of benefit to a software development organization.

The adoption of the model has many benefits. The model provides the benefit of prior experience, a shared vision, a place to start improving and a framework to priorities actions. The model also helps to manage, measure and monitor development process.

1. What is the Capability Maturity Model Integration?

The Capability Maturity Model Integration was develop to integrate the other CMMs that were develop to target other disciplines (e.g System Engineering CMM(SE-CMM) and people CMM(P-CMM) ).As stated by SEI, CMMI helps “integrate traditionally separate organizational functions, set process improvement goals and priorities, provide guidance for quality process, and provide a point of reference for appraising current process

**Part 2**

Please read the Accenture article on the Capability Maturity Model (CMM) and make your own notes to the questions below.

1. What are the key reasons the CMM has become very relevant to application development organisations?

The CMM has become very relevant to application development organisations as many organisations achieve demonstrable results from using the CMM. As the CMM model provides many benefits and because of the tight labour markets and increasing pressure to deliverever faster and cheaper, many executives ask if the CMM model can help them achieve their business goals such as increasing customer satisfaction, responsiveness and productivity.

1. Give examples of 3 process areas addressed by the CMM.
2. Requirement Management
3. Software Configuration Management
4. Software project planning
5. Explain the most common mistakes made by companies in adopting CMM.

It is easy to make mistakes when establishing the CMM model as there are no guidance for its implementation.

One of the common mistakes made by companies adopting CMM is that they set the wrong or incomplete goals. This is because sometimes the organazation gets comfused with distincting between the achievements of business goals and CMM goals. The business doesn’t consider wether the CMM model is right for them as thet didn’t start by understanding their business strategy and how the CMM could help them acieve their strategy.

Another mistakes made by the companies adopting CMM is that the believing that the CMM will fix all or most of their problems. The CMM has many aspects of the business that are not part of the model. CMM software doesn’t encompass some functions such as customer relationship managemant and risk management.

1. Go to the following link <https://sas.cmmiinstitute.com/pars/pars.aspx> and use the filter for Maturity Level 5 to find 3 examples of well known software development organisations who have reached level 5 in CMMI (latest version of CMM).
   1. What is the highest level an Irish based company has achieved?