Assignment No. 1

# Software Process Improvement

Software Process Improvement (SPI) methodology is defined as a sequence of tasks, tools, and techniques to plan and implement improvement activities to achieve specific goals such as increasing development speed, achieving higher product quality or reducing costs.

# Lifecycle

There are four basic stages in it which basically rerun in a cycle

### Current Situation Evaluation Analyzing the situation and bringing out all increments for the requirements of client

### Improvement Planning Organizing part where we need to find out the next increment with most priority as our next target to work on

### Improvement Implementation The working part to make the implementation of the functionalities/coding.

### Improvement Evaluation The measurement of improvement/increment to assure that the quality work is being delivered

### REFERENCES

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* Staples, M. and Niaz, M. (2010). Two Case Studies on Small Enterprise Motivation and Readiness for CMMI. [online] Available at <https://ts.data61.csiro.au/publications/nicta_full_text/2191.pdf> [Accessed 19 Jun. 2018].

# The Capability Maturity Model

CMM is a methodology used to develop and refine an organization's software development process. The model is divided into 5 levels and with each increasing level, processes became more organized and systematically mature. CMM was developed and is promoted by the Software Engineering Institute (SEI) research and development center that was found in 1984 for the purpose of optimizing the process of developing, acquiring, and maintaining heavily software-reliant systems.

CMM's Five Maturity Levels of Software Processes

1. At the initial level, processes are un-organized, even chaotic. Success is likely to depend on individual efforts, and is not considered to be repeatable, because processes would not be sufficiently defined and documented to allow them to be replicated.
2. At the managed level, basic project management techniques are established, and proper procedures are defined, and documented at project level.
3. At the defined level, an organization has developed its own standard software process through greater attention to documentation, standardization, and integration on organizational level.
4. At the quantitative management level, an organization monitors and controls its own processes using statistical techniques.
5. At the optimization level, processes are constantly being improved through monitoring feedback from current processes and introducing innovative processes to better serve the organization's particular needs.

### REFERENCES

* https://searchsoftwarequality.techtarget.com/definition/Capability-Maturity-Model