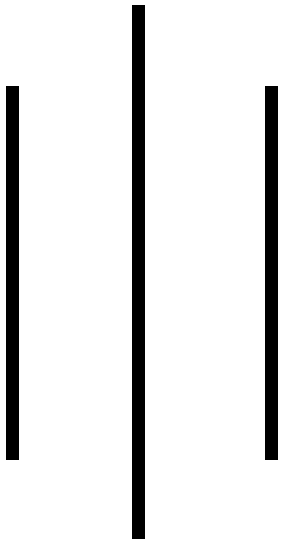
Registration No: 6-2-756-8-2019

NIMS COLLEGE

(Tribhuvan University)

Kanibahal, Lalitpur



Presentation

On

CMM

Submitted by
Raj Kumar Karki
Semester: 4th

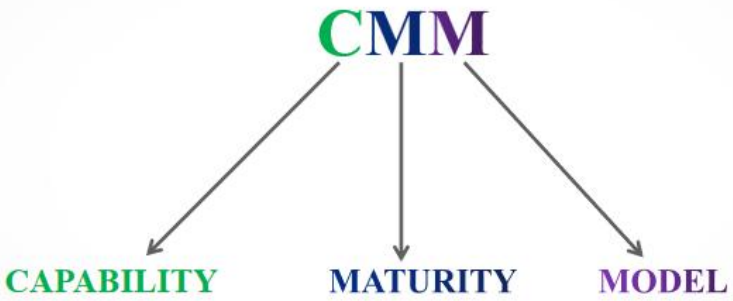
Submitted To
Sajesh Piya
BCA (Bachelor in Computer Application)

SOFTWARE ENGINEERING

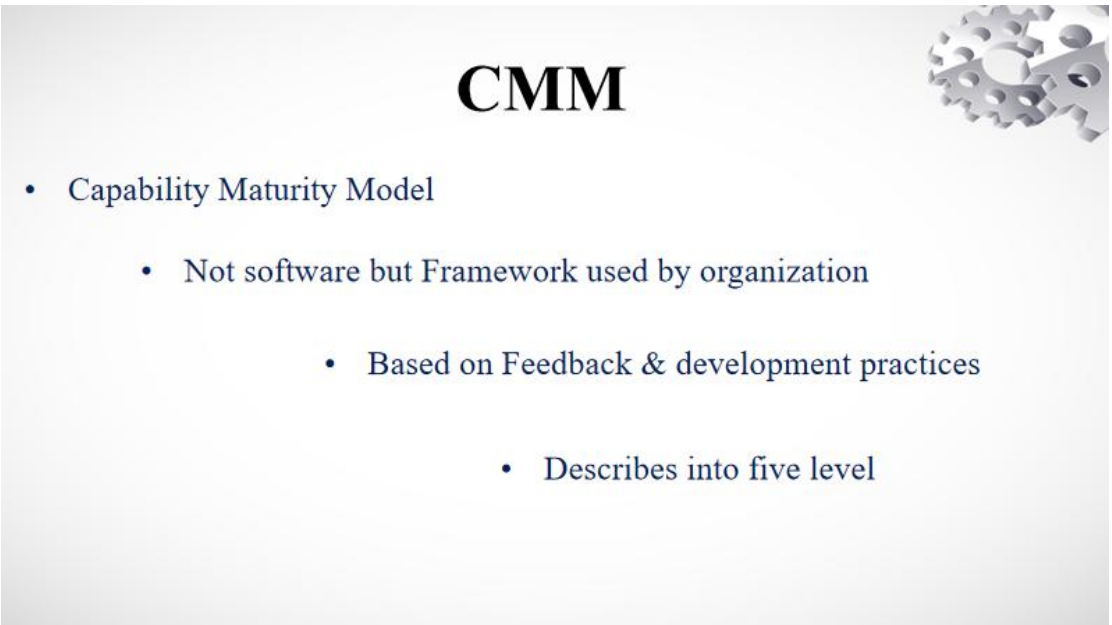
SOFTWARE TESTING

SOFTWARE MEASUREMENT & METRIC

CMM



What is Capability Maturity Model (CMM)?



The Capability Maturity Model (CMM) is a methodology used to develop and refine an organization's software development process. The model describes a five-level evolutionary path of increasingly organized and systematically more mature processes.

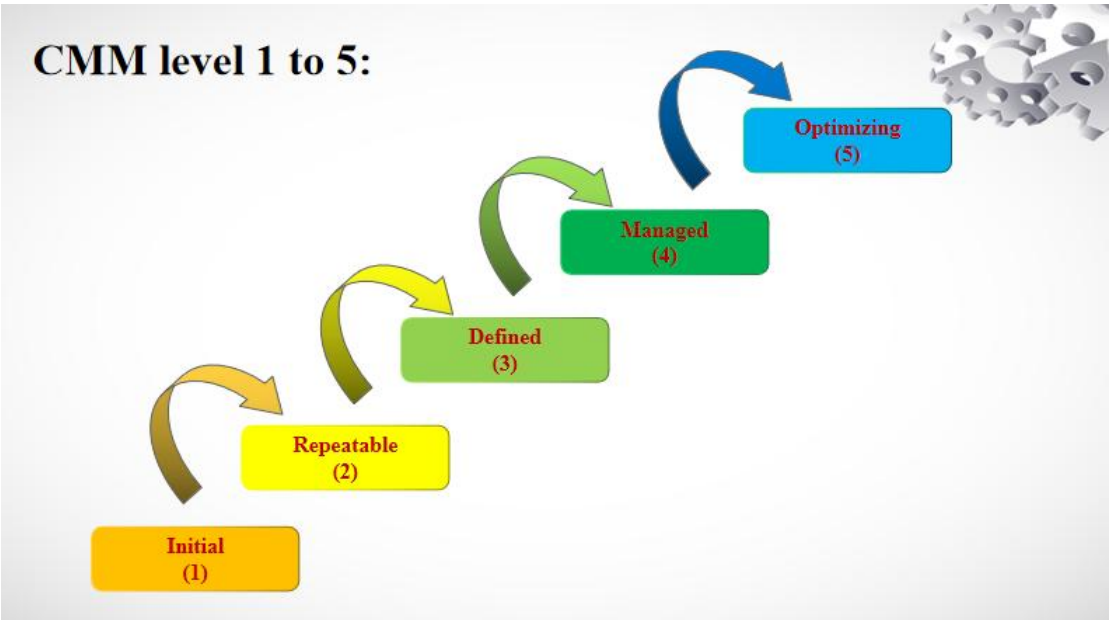
CMM was developed and is promoted by the Software Engineering Institute (SEI), a research and development center sponsored by the U.S. Department of Defense (DOD) and now part of Carnegie Mellon University. SEI was founded in 1984 to address software engineering issues and, in a broad sense, to advance software engineering methodologies. More specifically, SEI was established to optimize the process of developing, acquiring and maintaining heavily software-reliant systems for the DOD. SEI advocates industry-wide adoption of the CMM Integration (CMMI), which is an evolution of CMM. The CMM model is still widely used as well.

CMM is similar to ISO 9001, one of the ISO 9000 series of standards specified by the International Organization for Standardization. The ISO 9000 standards specify an effective quality system for manufacturing and service industries; ISO 9001 deals specifically with software development and maintenance.

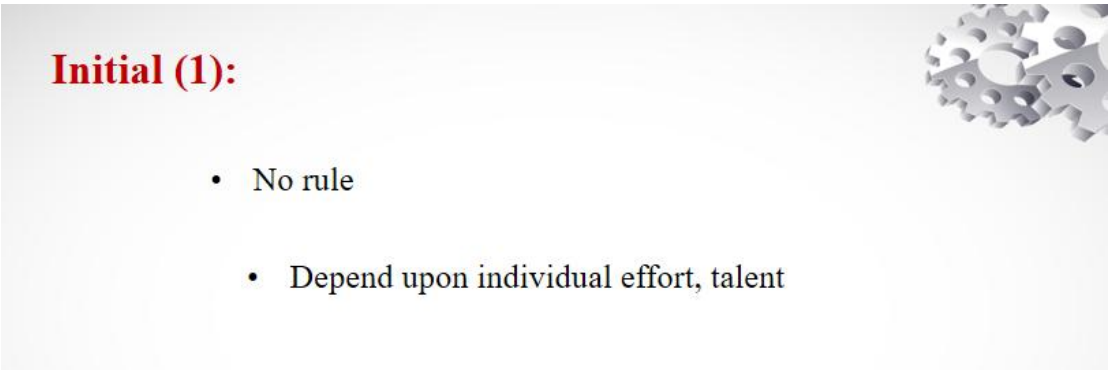
The main difference between CMM and ISO 9001 lies in their respective purposes: ISO 9001 specifies a minimal acceptable quality level for software processes, while CMM establishes a framework for continuous process improvement. It is more explicit than the ISO standard in defining the means to be employed to that end.

CMM's five levels of maturity for software processes

There are five levels to the CMM development process. They are the following:

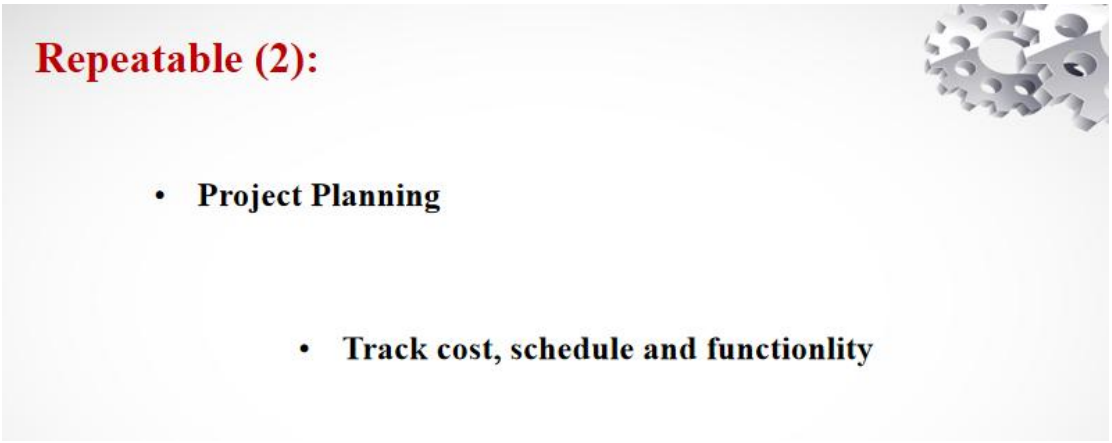


Initial (Level 1):



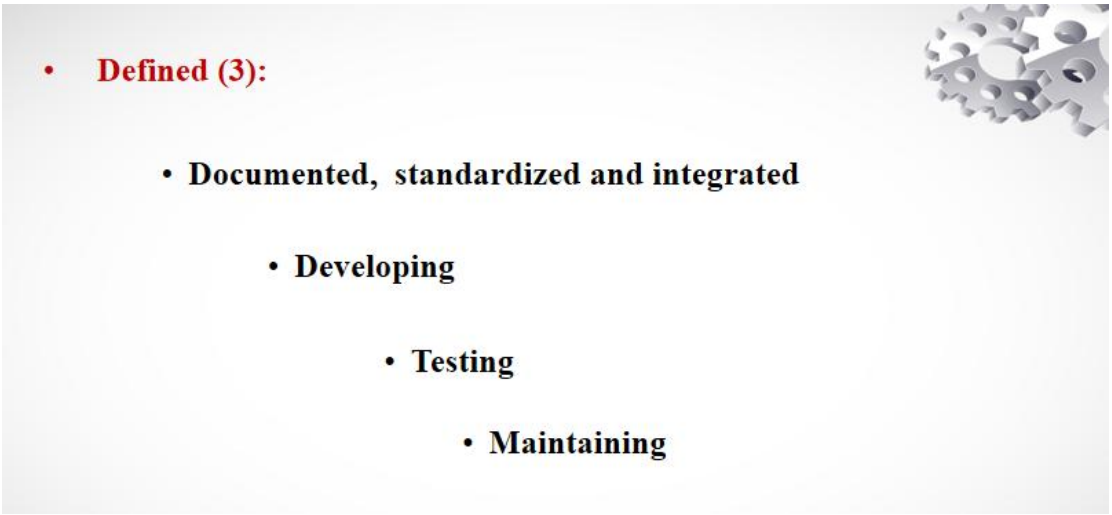
At the initial level, processes are disorganized, ad hoc and even chaotic. Success likely depends on individual efforts and is not considered to be repeatable. This is because processes are not sufficiently defined and documented to enable them to be replicated.

Repeatable (Level 2):



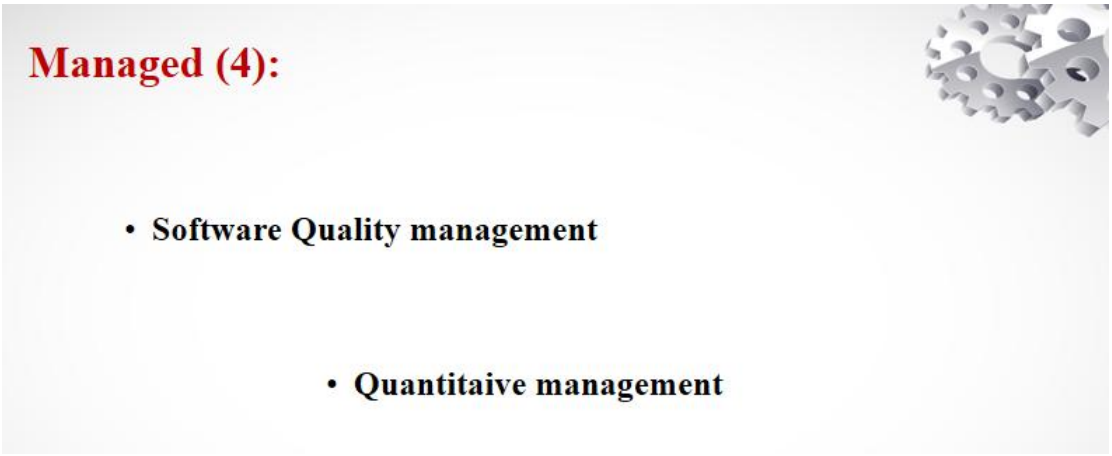
At the repeatable level, requisite processes are established, defined and documented. As a result, basic project management techniques are established, and successes in key process areas are able to be repeated.

Defined (Level 3):



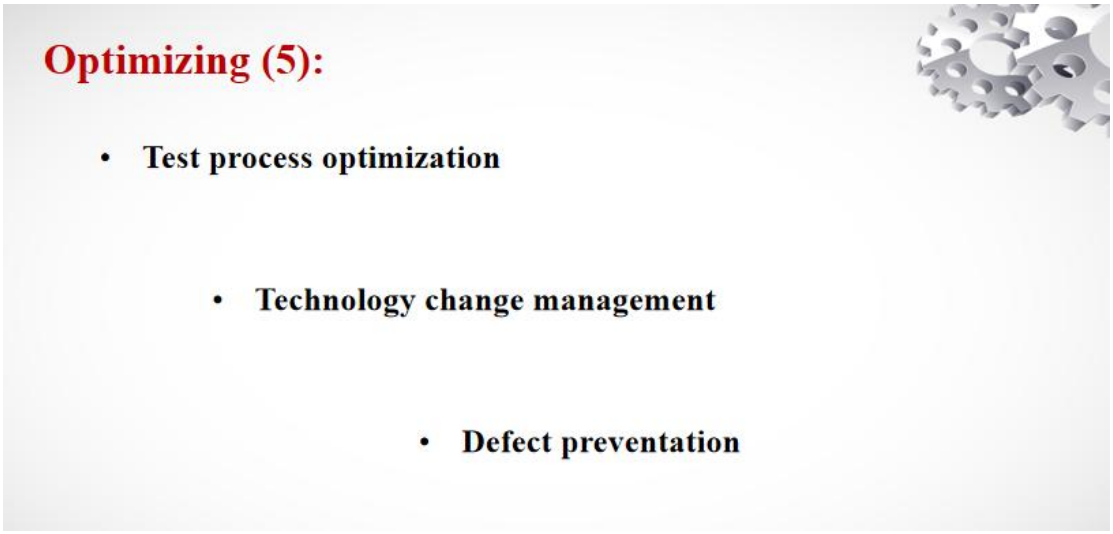
At the defined level, an organization develops its own standard software development process. These defined processes enable greater attention to documentation, standardization and integration.

Managed (Level 4):



At the managed level, an organization monitors and controls its own processes through data collection and analysis.

Optimizing (Level 5):



At the optimizing level, processes are constantly improved through monitoring feedback from processes and introducing innovative processes and functionality.