

Capability Maturity Model(CMMM)

- The intent of the maturity model is to provide an overall indication of the **“process maturity” exhibited by a software organization.**
- That is, an indication of the **quality of the software process, the degree to which practitioner’s understand and apply the process, and the general state of software engineering practice**

- Capability Maturity Model suggests five levels of maturity

Level 1, Initial

- Processes are disorganized, ad hoc and even chaotic.
- Success likely depends on individual efforts and is not considered to be repeatable

Level 2, Repeatable

- Requisite processes are established, defined and documented.
- Basic project management processes are established to track cost, schedule, and functionality.
- requisite processes are established, defined and documented Planning and managing new products is based on experience with similar projects

- **Level 3, Defined**
- An organization develops its own standard software development process.
- These defined processes enable greater attention to documentation, standardization and integration.
- All projects use an approved, tailored version of the organization's standard software process for developing software.

- **Level 4, Managed**
- At the managed level, an organization monitors and controls its own processes through data collection and analysis.
- Meaningful variations in process performance can be distinguished from random noise, and trends in process and product qualities can be predicted.

- **Level 5, Optimized**
- Processes are constantly improved through processes are constantly improved through monitoring feedback from processes and introducing innovative processes and functionality.
- The organization has quantitative feedback systems in place to identify process weaknesses and strengthen them pro-actively.
- Project teams analyze defects to determine their causes; software processes are evaluated and updated to prevent known types of defects from recurring.

5 levels of the Capability Maturity Model

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
Initial Software development processes are disorganized.	Repeatable Processes are defined and documented.	Defined Processes are standardized.	Managed Processes are monitored and controlled.	Optimizing Processes are continuously improved.