Software Quality Metrics

by 

https://www.tutorialspoint.com/software_quality_management/index.htm

Software Quality Factors

McCall's Factor Model:

- **Product operation factors** − Correctness, Reliability, Efficiency, Integrity, Usability.
- **Product revision factors** − Maintainability, Flexibility, Testability.
- **Product transition factors** − Portability, Reusability, Interoperability.

Software Quality Metrics

These are a subset of software metrics that focus on the quality aspects of the product, process, and project. These are more closely associated with process and product metrics than with project metrics.

Software quality metrics can be further divided into three categories −

- Product quality metrics
- In-process quality metrics
- Maintenance quality metrics

Product Quality Metrics

This metrics include the following

- Mean Time to Failure
- Defect Density
- Customer Problems
- Customer Satisfaction

In-process Quality Metrics

In-process quality metrics deals with the tracking of defect arrival during formal machine testing for some organizations.

This metric includes −

- Defect density during machine testing
- Defect arrival pattern during machine testing
- Phase-based defect removal pattern
- Defect removal effectiveness

Maintenance Quality Metrics

Although much cannot be done to alter the quality of the product during this phase, following are the fixes that can be carried out to eliminate the defects as soon as possible with excellent fix quality.

- Fix backlog and backlog management index
- Fix response time and fix responsiveness
- Percent delinquent fixes
- Fix quality
  - No. defective fixes