ONE PAGE SUMMARY

IT & Software › Software Testing › Quality Metrics

Introduction to Quality Metrics

Quality Metrics: Measuring Software Testing Success

DEFINITION

> Quality metrics are standards used to evaluate the effectiveness of software testing. They help teams assess the quality of their software and improve testing processes.

KEY CONCEPTS

Defect Density

This metric measures the number of defects per unit of software size, helping identify areas needing improvement.

Test Coverage

Test coverage indicates the percentage of code or requirements tested, ensuring comprehensive testing efforts.

Mean Time to Detect (MTTD)

MTTD measures the average time taken to identify defects, reflecting the efficiency of the testing process.

Mean Time to Repair (MTTR)

MTTR tracks the average time required to fix defects, indicating the responsiveness of the development team.

Customer Found Defects

This metric counts the defects reported by customers post-release, highlighting the effectiveness of testing before launch.

EXAMPLES

→ A software project has a defect density of 0.5 defects per 1000 lines of code.

→ Test coverage for a new application is reported at 85%, indicating thorough testing.

→ The team reduced their MTTR from 5 days to 2 days after process improvements.

MEMORY TIPS

★ Remember 'DCT' for Defect Density, Coverage, and Time metrics.

★ Use the phrase 'Detect and Repair' to recall MTTD and MTTR.

★ Think of 'Customer Complaints' to remember customer-found defects.

COMMON MISTAKES

✗ Confusing test coverage with defect density.

✗ Neglecting to track MTTD and MTTR over time.

✗ Assuming high test coverage guarantees software quality.

QUICK RECAP

Quality metrics are essential for evaluating software testing effectiveness. Key metrics include defect density, test coverage, and MTTD/MTTR. Understanding these metrics helps improve software quality and testing processes.