

Software Testing Metrics

Measurement: Quantifying the quality of an Application

Metric: It is the combination of measurements

Some important testing metrics:

- 1) Schedule variance = $(\text{Actual time taken} - \text{planned time}) / \text{planned time} * 100$
- 2) Effort variance = $(\text{Actual effort} - \text{Planned Effort}) / \text{Planned effort} * 100$
- 3) Test Case coverage = $(\text{Total Test Cases} - \text{Requirements that cannot mapped to test cases}) / \text{Total Test cases} * 100$
- 4) Customer Satisfaction = number of complaints / Period of time
- 5) Test Case effectiveness = The extent to which test cases are able to find defect.
- 6) Time to find a defect = The effort required to find a defect
- 7) Defect Severity = business impact = effect on the end user
- 8) Test Coverage = To which test case covers the products complete functionality.
- 9) Defect Severity index = An index representing the average of the severity of the defect.
- 10) Time to Solve a Defect = Effort Required to resolve the a defect
- 11) No Of Defect = The Total number of defects found in time
- 12) Defects/KLOC = The number of defects per 1000 lines of code
- 13) Defect severity = The severity level of a defect indicates the potential business impact for the end user.
(business impact = effect on the end user)
- 14) Time to find the defect = The effort required to find a defect.
- 15) Time to solve a defect = Effort required to resolve a defect (diagnosis and correction)
- 16) Test coverage = Defined as the extent to which testing covers the product's complete functionality.
- 17) Test case effectiveness = The extent to which test cases are able to find defects.
- 18) Defect Age = Fixed date - Reported date
- 19) Defect Density = Number of defects in the module.
- 20) Defect cost = Cost to analyze the defect + Cost to fix it + Cost of failures already incurred due to it.
- 21) Bug clearance Ratio = The ratio between valid & Invalid bugs
- 22) DRE (Defect Removal Efficiency) = $A / A+B$
A- Defects found by testing team (Fixed Defects)
B- Defects found by customers (Missed Defects)