Metrics to Improve Quality

Static Code Analysis

- Static analysis helps development teams that are under pressure
  - Quality releases needed to be delivered on time
  - Coding and compliance standards need to be met
  - And mistakes are not an option.
- That’s why development teams are using static analysis tools

- A method of debugging by examining source code before a program is run
- It’s done by analyzing a set of code against a set of coding rules.
- Addresses weaknesses in source code that might lead to vulnerabilities.
- Is performed early in development, before software testing begins

PMD

- An open source static source code analyzer
- Finds common programming flaws like
  - Unused variables
  - Empty catch blocks
  - Unnecessary object creation, and so forth
- Also finds duplicated code

FindBugs

- FindBugs is another static code analyzer very similar to PMD
- The biggest difference between PMD and FindBugs
  - FindBugs works on byte code, whereas PMD works on source code.
- It can detect
  - Bad Practices
  - Malicious Code
  - Performance issues
  - Security issues

Verifying HTML validity

- Use Jenkins Plugin
  - Unicorn Validation
- It's W3C's Unified Validator, which helps improve the quality of Web pages by performing a variety of checks
- Refer
  - https://plugins.jenkins.io/unicorn/

JavaNCSS

- JavaNCSS is utility which measures two standard source code metrics for the Java programming language
  - Calculates totals for number of source code lines
  - Calculates the complexity of code

- A Source Measurement Suite for Java


thanks