**Static Testing vs Dynamic Testing**

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| **Criteria** | **Static Testing** | **Dynamic Testing** |
| **Definition** | Testing without executing the code | Testing by executing the code |
| **Objective** | To find defects early in documents, code, and design | To validate the software’s behavior and functionality |
| **Performed On** | Requirement docs, design, source code, test cases | Compiled and running application |
| **Techniques Used** | Reviews, Walkthroughs, Inspections, Static Code Analysis | Unit, Integration, System, Acceptance, Regression Tests |
| **Cost & Time** | Less expensive, done early in SDLC | More expensive, done after development |
| **Tools** | SonarQube, PMD, Checkstyle, StyleCop | Selenium, JUnit, TestNG, JMeter |
| **Type of Errors Found** | Syntax errors, design flaws, code standard violations | Logical errors, runtime errors, functional bugs |
| **Performed By** | Developers, reviewers, analysts | Testers, QA engineers, developers |
| **Nature** | Preventive | Corrective |
| **Execution Requirement** | Does **not** require code execution | Requires **code execution** |