ONE PAGE SUMMARY

IT & Software › QA Automation › Flaky Tests

Introduction to Flaky Tests

Flaky tests disrupt QA automation reliability and efficiency.

DEFINITION

> Flaky tests are automated tests that produce inconsistent results, sometimes passing and sometimes failing without code changes. They create confusion and can undermine the testing process.

KEY CONCEPTS

Causes of Flakiness

Flakiness can arise from various factors such as timing issues, environmental dependencies, or unstable test data.

Impact on Development

Flaky tests can slow down development cycles, as developers may spend time investigating false failures instead of fixing real issues.

Identifying Flaky Tests

Monitoring test results over time can help identify flaky tests, which may show inconsistent results across multiple runs.

Strategies to Mitigate

Improving test stability can involve addressing environmental issues, using retries, or refactoring tests to reduce dependencies.

Test Reliability

Reliable tests are crucial for effective QA automation, ensuring that they consistently reflect the quality of the software.

EXAMPLES

→ A test that passes on one run but fails on another due to timing issues.

→ Tests failing intermittently due to network latency affecting API calls.

→ A UI test that fails because of slight changes in the layout or rendering.

MEMORY TIPS

★ Think of 'flaky' like a 'flaky pastry'—unpredictable and inconsistent.

★ Remember 'F.A.I.L.'—Flaky Automated Inconsistent Tests Lead to confusion.

★ Visualize a traffic light: green for pass, red for fail, but yellow for flaky.

COMMON MISTAKES

✗ Ignoring flaky tests and allowing them to persist in the test suite.

✗ Assuming a test is reliable without analyzing its history of results.

✗ Failing to document flaky tests, leading to repeated confusion in the team.

QUICK RECAP

Flaky tests are unreliable and can hinder the QA process by producing inconsistent results. Identifying and addressing the causes of flakiness is essential for maintaining test reliability and efficiency in automation.