

Week 8: Web Testing

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Web Applications



There are about 1.09 billion websites on the internet in 2024



A new website is built every three seconds

Web Users



Users form an opinion about a website
in 0.05 seconds



47% of users won't wait longer than
two seconds for a website to load



88% of online users won't return
to a site after a bad experience

Web Testing

Web testing is the process of evaluating a web application's functionality, usability, compatibility, performance, and security to ensure it works as intended for end-users.

Functional Testing: Verifies that each feature works according to requirements. Example: Testing form submissions, login processes, and user interactions.

Usability Testing: Evaluates how intuitive and user-friendly the application is. Example: Is the navigation easy? Can users complete key tasks quickly?

Compatibility Testing: Ensures the application functions consistently across browsers (Chrome, Firefox, Safari), devices (mobile, desktop), and operating systems.

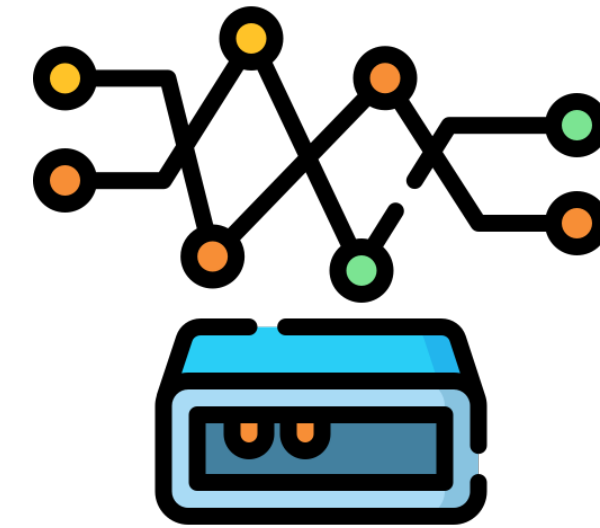
Performance Testing: Tests the app's speed and responsiveness, especially under various loads (simulating many users or heavy data usage).

Security Testing: Identifies vulnerabilities to protect against attacks, data breaches, and unauthorised access.

Challenges in Web Testing



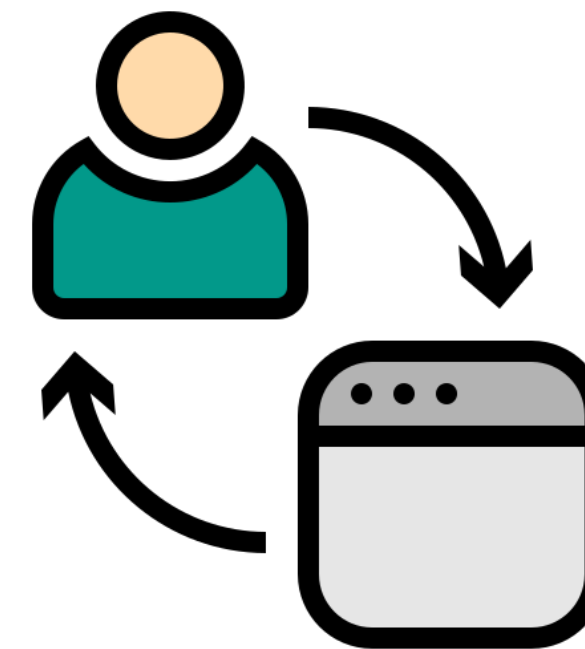
Browser and device
compatibility



Internet connection
variability



Dynamic and Responsive
Interfaces



User Interaction
Patterns

Automated vs. Manual Web Testing

	Automated Testing	Manual Testing
Execution Speed	Faster execution of test cases	Slower due to manual intervention
Reusability	Highly reusable test scripts	Tests need to be manually re-executed
Accuracy	Reduces human error, consistent results	Prone to human error and oversight
Initial Setup Cost	Higher due to tool and script creation	Lower, requires only human testers
Best Use Cases	Regression, load, performance testing	Exploratory, usability, ad-hoc testing

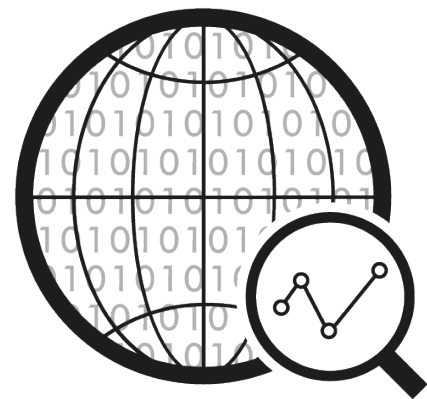
CrowdTesting

Crowd testing is a method of software testing that leverages a large, distributed group of testers from diverse backgrounds, locations, and device types to evaluate an application in real-world conditions.



Scalability and Flexibility

Ideal for testing across many devices and platforms simultaneously, especially useful in cross-platform web apps.



Real-world Conditions

Helps identify issues that may only surface under certain conditions, such as low internet connectivity, specific device models, or regional settings



Quick Feedback

Provides rapid insights, making it well-suited for tight development timelines or continuous integration pipelines.

CrowdTesting Platforms



<https://www.testbirds.com>



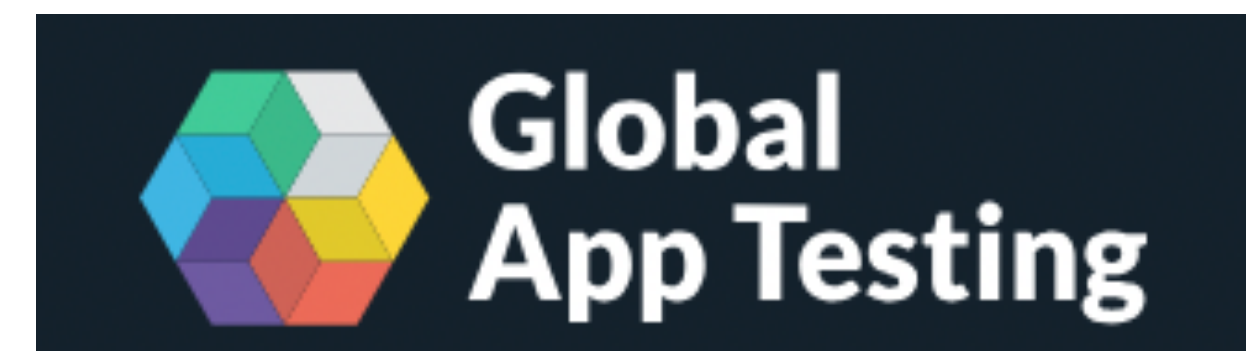
<https://www.testlio.com>



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