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Introduction to API Testing

Master the essentials of API Testing for reliable software integration.

DEFINITION

> API testing is the process of verifying that an application programming interface meets expectations for functionality, reliability, and performance. It ensures that APIs work as intended and can handle various scenarios.

KEY CONCEPTS

Types of Testing

API testing includes functional, load, security, and integration testing to cover all aspects.

HTTP Methods

Common HTTP methods like GET, POST, PUT, and DELETE define how to interact with APIs.

Response Codes

Understanding HTTP response codes (e.g., 200, 404, 500) helps assess API behavior.

Automation Tools

Tools like Postman, SoapUI, and JMeter automate API testing for efficiency and accuracy.

Test Cases

Creating detailed test cases ensures comprehensive coverage of all API functionalities.

EXAMPLES

→ Testing a login API with valid and invalid credentials.

→ Verifying data retrieval from a weather API for specific locations.

→ Checking response time for an API under heavy load.

MEMORY TIPS

★ Remember 'CRUD' for Create, Read, Update, Delete operations in APIs.

★ Use '200 OK' to recall successful API responses.

★ Think of 'Postman' as your delivery service for API requests.

COMMON MISTAKES

✗ Neglecting to test edge cases and error responses.

✗ Overlooking security aspects like authentication and authorization.

✗ Failing to document test cases and results properly.

QUICK RECAP

API testing is crucial for ensuring that APIs function correctly and securely. Focus on various testing types, understand HTTP methods and response codes, and utilize automation tools for effective testing.