Testing-III

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Testing

- Manual Testing: This involves manually running the code through various scenarios to identify issues. It's good for user interface (UI) testing
- Automated Testing: Here, you write scripts or use tools to automate test cases, saving time and effort during regression testing (re-running tests after code changes)
    - Unit Testing
    - Integration Testing
    - System Testing
    - End-to-End Testing (E2E Testing): Tests the entire user flow from start to finish, often involving UI automation tools like Selenium

Testing

- Static Code Analysis: Uses tools to analyze the code without running it, identifying potential issues like security vulnerabilities or coding standard violations. Some popular tools include Fortify and ESLint
- pytest (Python), Jasmine (JavaScript)
- UI Automation Tools: Selenium, Cypress

pytest

Installing pytest: pip install -U pytest (for conda it will be different)

- Pytest is a popular testing framework specifically designed for writing Python code tests
- Writing Tests: Pytest allows you to write clear and concise test cases using Python functions with names starting with test_
- Automatic Discovery: Pytest automatically discovers test files and functions by convention (usually starting with test_)
- Scalable: Pytest can handle complex testing scenarios effectively, making it suitable for large-scale projects
- Cross-Platform Support: Pytest runs on various operating systems (Windows, macOS, Linux) making it a versatile testing tool