Test Driven Development

Process

Benefits

Write a Test

Write a complete test case describing the function. To make the test cases the developer must understand the features and requirements using user stories and use cases. This test should fail initially because the code doesn't exist yet.

Run the Test

Execute the test to confirm that it fails, as expected. This step ensures that the test is correctly assessing the absence of the desired functionality.

Write the Code

Now, write the minimum amount of code necessary to make the test pass. This means implementing the functionality required by the test.

Run All Tests

After writing the code, run all tests, not just the one you just wrote. This ensures that the new code didn't break any existing functionality.

Refactor Code

Once all tests pass, refactor the code to improve its design, readability, or performance. Refactoring ensures that the code remains clean and maintainable without altering its external behavior.

Repeat

Repeat this process for each new piece of functionality or enhancement, writing tests first, then code, and finally refactoring as needed.

- Early Bug Detection
- Improved Code Quality
- Faster Debugging
- Facilitates Collaboration
- Customer Satisfaction
- Faster Development
- and more...