Assignment 1:

Create an infographic illustrating the Test-Driven Development (TDD) process. Highlight steps like writing tests before code, benefits such as bug reduction, and how it fosters software reliability.

Title: The Test-Driven Development (TDD) Process

What is TDD?

Test-Driven Development (TDD) is a software development process that emphasizes writing tests before writing the actual code.

Step 1: Write Tests

1. Identify the functionality to be implemented.
2. Write a test that defines an expected outcome.
3. Run the test (it should fail since the code hasn't been written yet).

Step 2: Write Code

1. Write the minimum amount of code necessary to pass the test.
2. Run the test again (it should pass this time).
3. Refactor the code for clarity and efficiency.

Step 3: Run Tests

1. Run all tests to ensure new code didn't break existing functionality.
2. If any test fails, fix the code and rerun tests.

By Abhishek Kumar

Benefits of TDD:

1. **Bug Reduction:** By catching bugs early in the development process, TDD reduces the number of bugs in the final product.

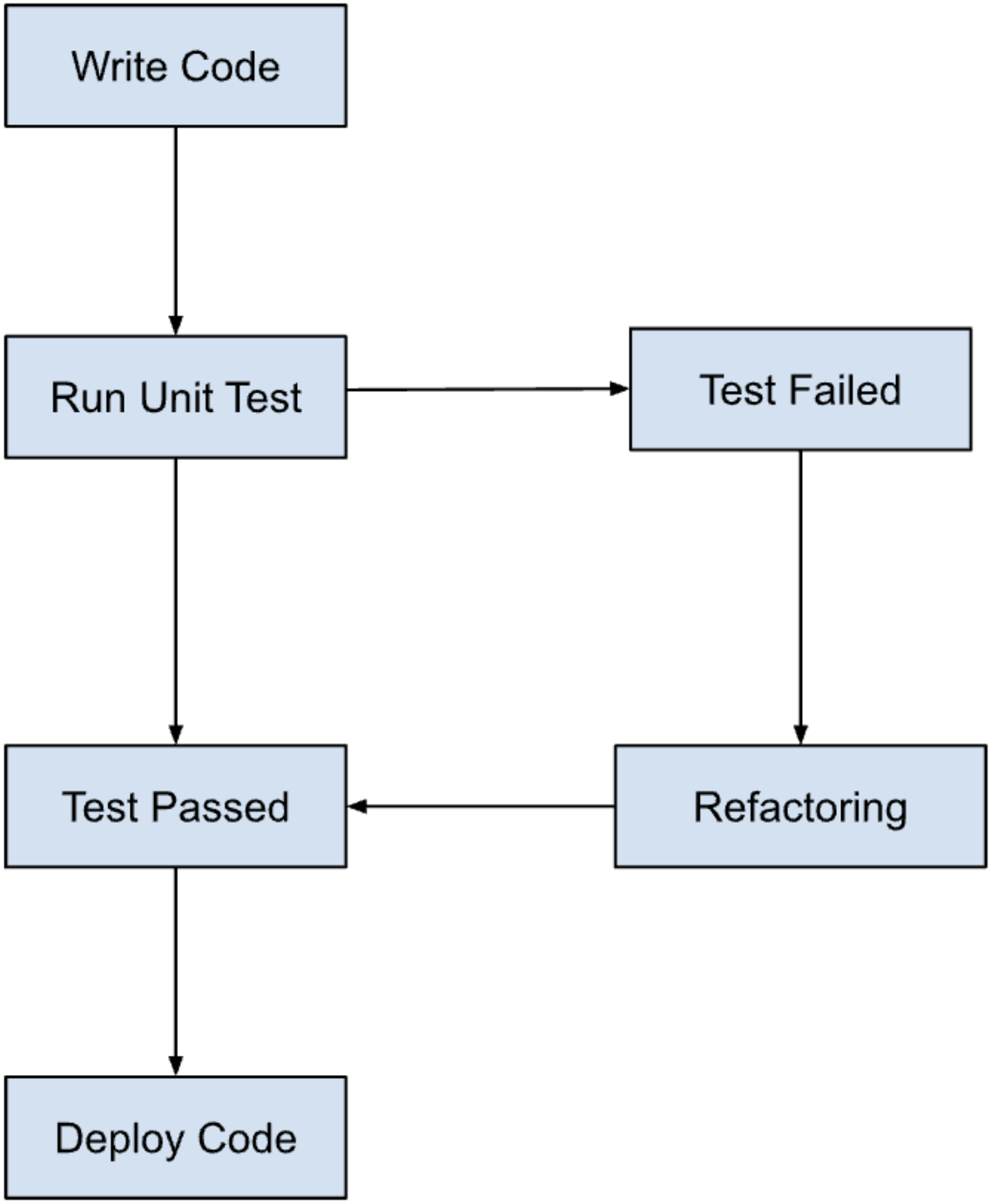
2. **Improved Software Reliability:** TDD leads to more reliable software as it ensures that each piece of code is thoroughly tested.

3. **Faster Development:** While it may seem slower at first, TDD often leads to faster development in the long run due to fewer bugs and easier debugging.

4. **Better Code Design:** TDD encourages modular and loosely coupled code, leading to better overall design and maintainability.

Test-Driven Development (TDD) is a powerful methodology that not only reduces bugs but also leads to more reliable, maintainable, and well-designed software.

By Abhishek Kumar


Write Code
Run Unit Test
Test Failed
Test Passed
Refactoring
Deploy Code