

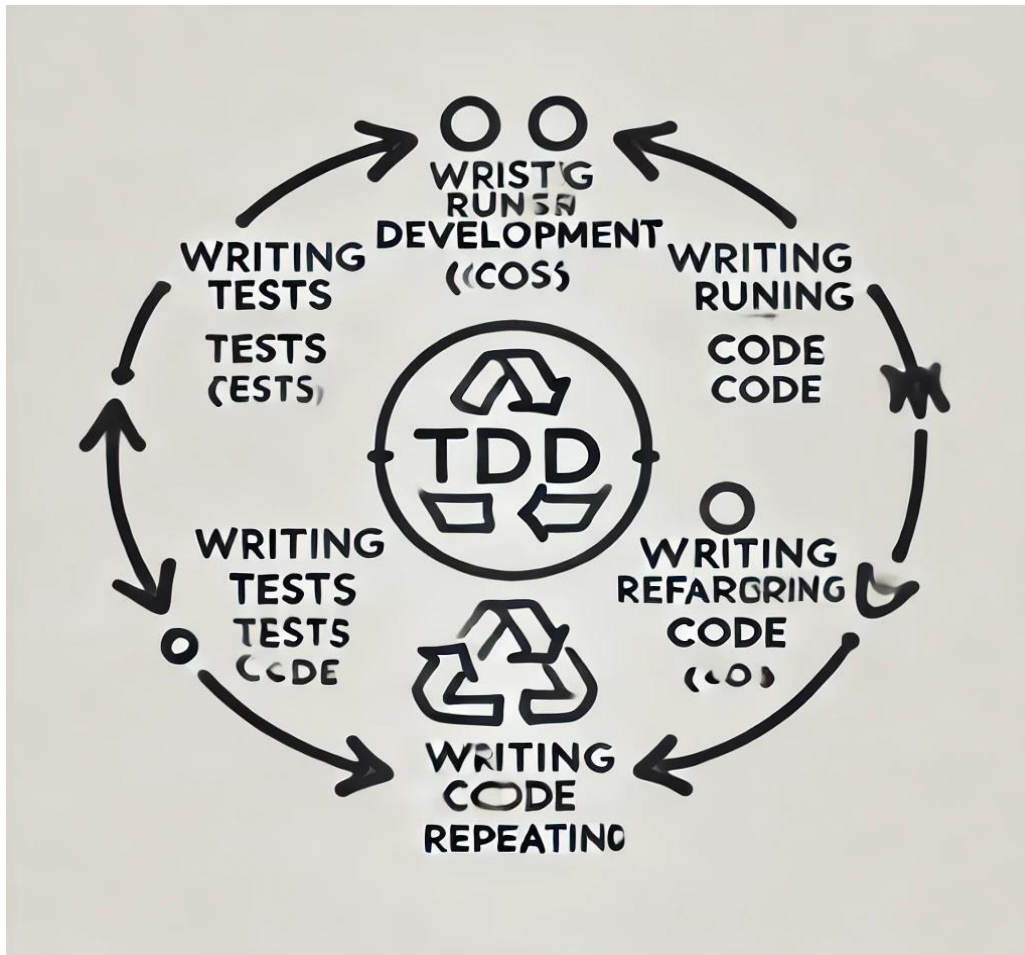
Assignment-1

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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.

Test-Driven Development (TDD) Process:



Steps:

1. Write a Test

- Begin by writing a test for the functionality you plan to implement.
- Tests define the requirements of your code.

2. Run the Test

- Execute the test to ensure it fails initially (as the functionality is not yet implemented).

3. Write Code to Pass the Test

- Develop the minimal amount of code required to make the test pass.

4. Refactor the Code

- Improve the code structure while ensuring it continues to pass all tests.

5. Repeat the Cycle

- Iterate for each new feature or functionality.

Benefits of TDD:

- **Bug Reduction:**
 - Catch and resolve bugs early in the development cycle.
- **Improved Software Reliability:**
 - Create software that is robust and behaves as expected.
- **Better Code Maintainability:**
 - Refactored code is cleaner and easier to understand.
- **Clear Documentation:**
 - Tests serve as documentation for the code's intended behavior.