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.

Objective:

- Objective: The objective of this assignment is to create an informative infographic that visually illustrates the Test-Driven Development (TDD) process, its key steps, benefits, and its significance in software development.

Introduction to TDD:

Provide a brief introduction to Test-Driven Development, explaining its concept and significance in modern software development practices.

Key Steps of TDD:

Write a Test: Illustrate the first step of TDD, which involves writing a test case before writing any production code. Visualize this process to show how developers begin by defining the expected behavior of the code

Run the Test:

Show the next step where developers run the test, highlighting how it initially fails as there's no corresponding code to satisfy it.Write Code: Visualize how developers then write the simplest code to make the test pass, emphasizing the focus on meeting only the requirements defined by the test.

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Visualize how developers then write the simplest code to make the test pass, emphasizing the focus on meeting only the requirements defined by the test.

Run All Tests:

Illustrate the step where developers run all the tests to ensure that the new code didn't break any existing functionality.

Refactor Code:

Show how developers refactor the code to improve its structure and maintainability while keeping all tests passing.

Benefits of TDD:

Bug Reduction:

Visualize how TDD helps in reducing bugs by catching them early in the development process through automated tests.

Improved Software Reliability:

Highlight how TDD contributes to the overall reliability of software by continuously testing for expected behavior.

Enhanced Code Quality:

Illustrate how TDD leads to cleaner and more maintainable code by encouraging modular design and frequent refactoring.