

Assignment :2

Task 2: Produce a comparative infographic of TDD, BDD, and FDD methodologies. Illustrate their unique approaches, benefits, and suitability for different software development contexts. Use visuals to enhance understanding.

1. Test-Driven Development (TDD)

-Approach:

- Write tests before writing the actual code.
- Focuses on creating test cases for every small functionality.

Steps:

- Write a test.
- Run the test and see it fail.
- Write the minimum code to pass the test.
- Run all tests to confirm.
- Refactor the code.
- Repeat.

Benefits:

- Early bug detection.
- High code quality and maintainability.
- Ensures all functionalities are tested.

Suitability:

- Projects requiring high reliability.
- Complex systems with a need for continuous integration.

2. Behavior-Driven Development (BDD)

Approach:

- Write tests based on the expected behavior of the software.
- Uses natural language constructs (Given-When-Then).
- Encourages collaboration between developers, testers, and non-technical stakeholders.

Steps:

- Define a feature using a story format.
- Write scenarios based on behavior.
- Implement steps to pass the scenarios.
- Run the scenarios to validate behavior.

Benefits:

- Ensures software meets business requirements.
- Improves communication among stakeholders.
- Facilitates user-centric development.

Suitability:

- Projects with clear business requirements.
- Agile environments with frequent iterations.
- Teams with diverse technical and non-technical members.

3.Feature-Driven Development (FDD)**

Approach:

- Develops software by focusing on features.
- Iterative and incremental process.
- Emphasizes client-valued functionality.

Steps:

- Develop an overall model.
- Build a feature list.
- Plan by feature.
- Design by feature.
- Build by feature.

Benefits:

- Clear focus on delivering client-valued features.
- Scalable for large teams.
- Efficient for projects with well-defined features.

Suitability:

- Large-scale projects.
- Teams requiring clear feature prioritization.
- Environments needing predictable delivery timelines.

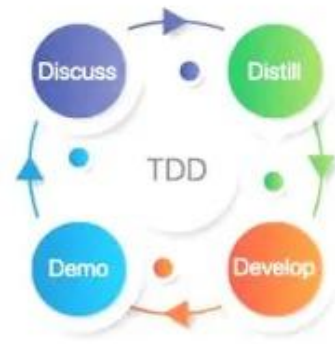
Comparative Analysis



TDD



BDD



ATDD