Assignment 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.

TDD (Test-Driven Development)

* Write tests before writing code. Focus on unit tests.

Steps:

Write a failing test.

Write code to pass the test.

Refactor the code.

Icon: Test-first coding.

BDD (Behavior-Driven Development)

* Extend TDD by writing tests in natural language to describe behavior. Focus on user stories and scenarios.

Steps:

Define scenarios in Gherkin language.

Write failing behavior tests.

Implement code to pass the tests.

Refactor.

Icon: Behavior scenarios and user stories.

FDD (Feature-Driven Development)

* Develop features in an incremental, iterative way. Focus on delivering working software features.

Steps:

Develop an overall model.

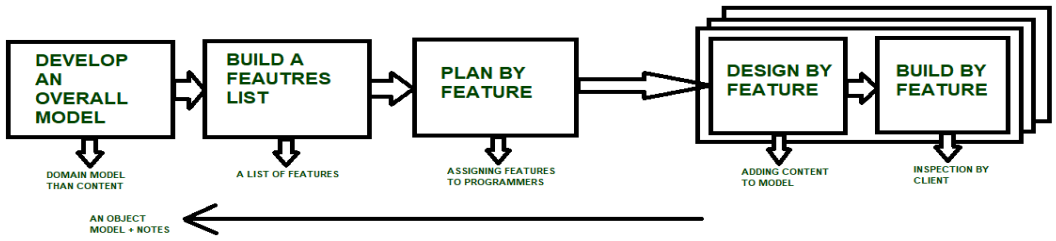
Build a feature list.

Plan by feature.

Design by feature.

Build by feature.

Icon: Feature-centric development.



Benefits

TDD

Bug Reduction: Catch bugs early with unit tests.

Icon: Bug with a cross-out symbol.

Code Quality: Encourage clean, maintainable code.

Icon: Quality badge.

Fast Debugging: Easier to pinpoint issues.

Icon: Stopwatch.

BDD

Enhanced Collaboration: Better communication between developers, testers, and non-technical stakeholders.

Icon: Collaboration symbol (e.g., handshake).

Clear Requirements: Define clear, testable requirements.

Icon: Document or checklist.

User-Centric: Focus on user behavior and needs.

Icon: User icon.

FDD

Scalable: Suitable for large projects with many features.

Icon: Building blocks or layers.

Incremental Progress: Regular delivery of tangible progress.

Icon: Progress bar.

Feature Focused: Ensures that critical features are developed and functional.

Icon: Feature list.

Best Fit for Different Contexts

TDD

Context: Ideal for projects needing robust unit testing and high code quality.

Icon: Code window with tests.

BDD

Context: Best for projects requiring close collaboration with stakeholders and clear behavioral specifications.

Icon: Team collaboration or user story board.

FDD

Context: Suitable for large-scale projects where incremental feature delivery is crucial.

Icon: Large project diagram or feature tree.

Section 5: Conclusion

Header: Choosing the Right Methodology
