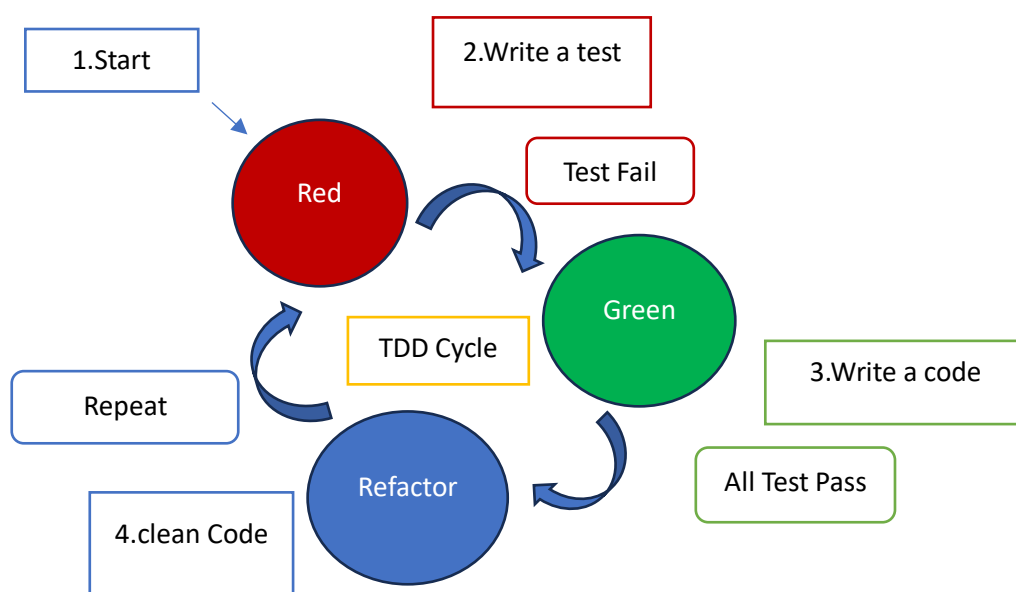Assignment 2: Produce a comparative infographic of TDD, BDD, and FDD methodologies. Illustrate their unique approaches, benefits, and suitability for different software development contexts. Use visuals to enhance understanding?

Infographic: Comparing TDD, BDD, and FDD Methodologies

1. **TDD (Test-Driven Development)**:
   Infographic: TDD

TDD Cycle:

- Red represents write a failing test, Green represents write a code to pass the test, Refactor improves the code while keeping test green.

TDD Approach:

- Test-Driven Development is a software development approach where tests are written before the actual code.
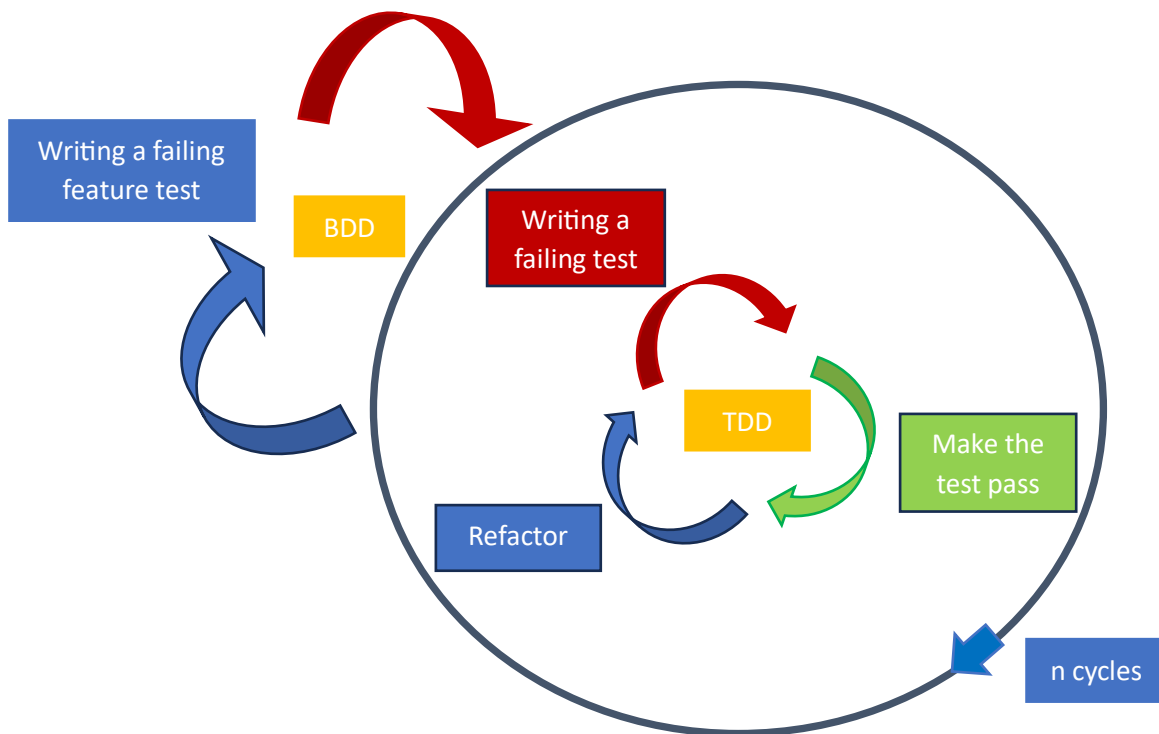- It mainly focuses on Incremental test and coding.

TDD Benefits:

- Bug Reduction
- Improve code quality
- Fast Development
- Software Reliability

TDD Suitability:

- Suitable for complex application.
- Project requiring high reliability.

2. **BDD (Behaviour-Driven Development):**

Infographic: BDD

BDD Cycle:

- Given when and then format for scenarios.

BDD Approach:

- BDD is a development technique that focuses on system behaviour.
- It uses Gherkin language to describe test.
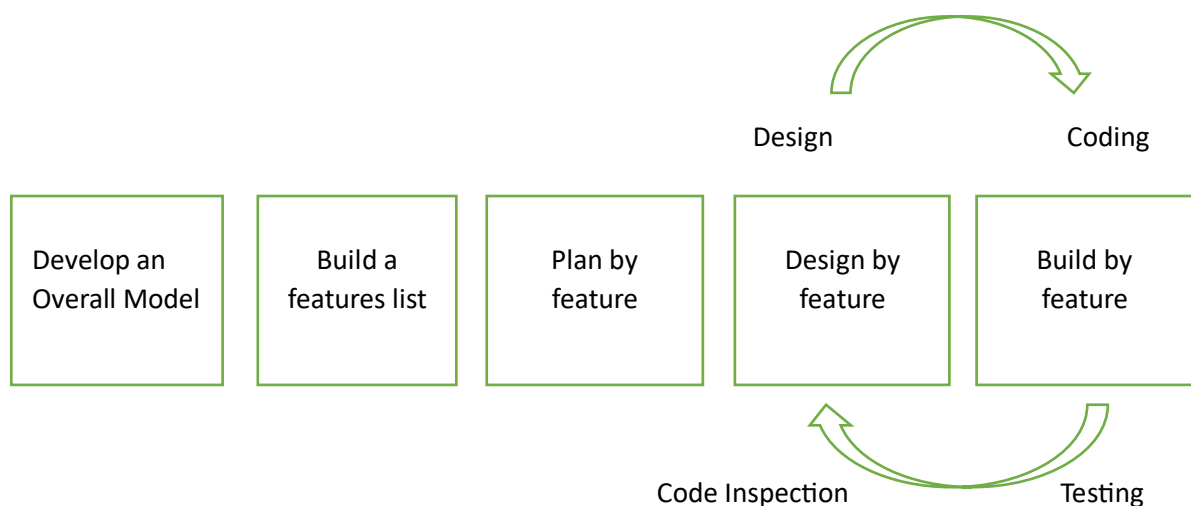
BDD Benefits:

- Clear requirement and less ambiguity.
- Aligns development with business goals.
- Code Reuse and Adaptability.

BDD Suitability:

- Project with strong business stakeholder.
- Best for user behaviour is crucial.

3. **FDD (Feature-Driven Development)**:

Infographic: FDD

FDD Approach:

- Develop features in short iterative cycles.
- Organizes Software development around making progress on features.

FDD Benefits:

- Its breakdown large project into smaller.
- High adaptability to changes.
- Progress tracking was clear.

FDD Suitability:

- Suitable for teams with a need for rapid feature delivery.
- Suitable for long-term projects.

Comparing TDD, BDD, FDD:

Focusing:

TDD - It focus more on the code correctness.

BDD - It focus on the System behaviour.

FDD - It focus on feature completion.

Communication:

TDD - Communicate with Developer.

BDD - Communicate with Business and Developer.

FDD - Communicate with Developer and Stakeholder.

Tool Used:

TDD - unit testing frameworks.

BDD - Cucumber

FDD - Feature Tracking.

Duration:

TDD - Short.

BDD - Medium.

FDD - Long.