**Assignment-3 day-3 05-06-2024**

**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.**

**3.2-**TDD:- test driven development.

1. Write a test
2. Write a code
3. Refactor the code

Benefits:-

* Ensure code quality
* Simplifies code debugging
* Encourages simple designs

Suitability:-

* High reliability
* Complex logic
* Frequent refactoring

BDD:- behaviour driven development

1. Define behaviour in plain language
2. Write tests based on behaviour
3. Develop code to pass the tests

Benefits:-

* Enhaces collaboration
* Clear sepcifications
* Ensures it reaches client and bussines needs

Suitability:-

* Project focus on user experience
* Need clear communication
* Frequent client interaction

FDD:- feature driven development

1. Develop total model
2. Build feature list
3. Plan feature ist
4. Design by feature
5. Build by feature

Benefits:-

* focus on delivering value
* improved project tracking
* scalable for large projects.

Suitability:-

* large scale projects.
* Project needs frequent releases
* Teams with mixed expertise

TTD:- write test

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Write code to pass test cases -------pass-----create new tests again

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Not passed refactor

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Repeat

BDD:-

Explain behaviour in plain language

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Create test based on defined behaviour

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Develop code to pass the tests

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Run al the tests

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Repeat

FDD:-

Develop overall model

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Build a feature list

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Plan by feature

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Design by feature

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Build by feature

**Assignment 3.1: 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.**

**Flowchart:-**

Write test

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Write code

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Test should pass or else refactor it

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Run

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Repeat

TDD:- Test drive development

* First five a test
* Then write a code to pass the test
* If not pass, refactor it
* Repeat the process, create the tests and pass it.
* Good Quality code bcoz test done until it pass(ensure code quality)
* Used for small projects
* Reduce bugs
* Writing tests first ensure better design