Development Tips

Software Architecture

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What did we *learn* from the cloud assignment?

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Answer

Cloud development is *painful*?

How can we make this *less* painful?

Some ideas

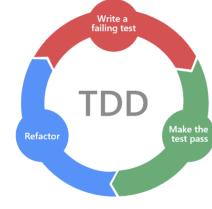
- 1. Gain confidence through *testing*
- 2. Automate what you're repeating
- 3. Tighten feedback loop as much as possible
- 4. Log and monitor what you can

§ Testing

The testing elephant in the room

Test-driven development

TDD in theory



 $[Marsner,\ 2019]$

What do you primarily get from TDD?

1. Regression tests (confidence)

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- 1. Regression tests (confidence)
- 2. Small isolated components

Do you have to use TDD to get these benefits?

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Answer

No.

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Answer

No. But it can make it easier.

When should you write a test?

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Answer

Whenever you are checking manually something often

• Checking the endpoints your API.

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- Checking a feature in the frontend of your

 - interface.

§ Automation

• Running tests.

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- Deployment and running tests.

$Tighten\ feedback\ loop\ as\ much\ as\ possible$

§ Feedback Loops

ExamplesContainers

- Containers
- Local database (docker-compose)

- Containers
- Local database (docker-compose) • Local cloud services (e.g. S3)

Log and monitor what you can

§ Log and Monitor



Enable CloudWatch on EC2

Aside

Environment variables

References

[Marsner, 2019] Marsner (2019).

11e1 (2019).

Why test-driven development (tdd).

https://marsner.com/blog/why-test-driven-development-tdd/.