

Development Tips

Software Architecture

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Question

What did we *learn* from the cloud assignment?

Question

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Answer

Cloud development is *painful*?

Question

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

\S *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

Question

Do you have to use TDD to get these benefits?

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Answer

No.

Question

Do you have to use TDD to get these benefits?

Answer

No. But it can make it easier.

Question

When should you write a test?

Question

When should you write a test?

Answer

Whenever you are manually checking something often.

Examples

- Checking the endpoints your API.

Examples

- Checking the endpoints your API.
- Checking a feature in the frontend of your interface.

§ Automation

Examples

- Running tests.

Examples

- Running tests.
- Starting locally and running tests locally.

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- Running tests.
- Starting locally and running tests locally.
- Deployment (`deploy.sh`).

Examples

- Running tests.
- Starting locally and running tests locally.
- Deployment (**deploy.sh**).
- Deployment and running tests.

Tighten feedback loop as much as possible

\S *Feedback Loops*

Examples

- Containers

Examples

- Containers
- Local database (docker-compose)

Examples

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

Log and monitor what you can

§ Log and Monitor

Refer to week 9 content

Tip

Enable CloudWatch on EC2

Aside

Environment variables

References

[Marsner, 2019] Marsner (2019).

Why test-driven development (tdd).

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