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

# § Feedback Loops

Containers

- Containers
- Local database (docker-compose)

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- 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/.