

# Development Tips

*Software Architecture*

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*Question*

What did we *learn* from the cloud assignment?

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*Answer*

Cloud development is *painful*?

*Question*

How can we make this *less* painful?

*Some ideas*

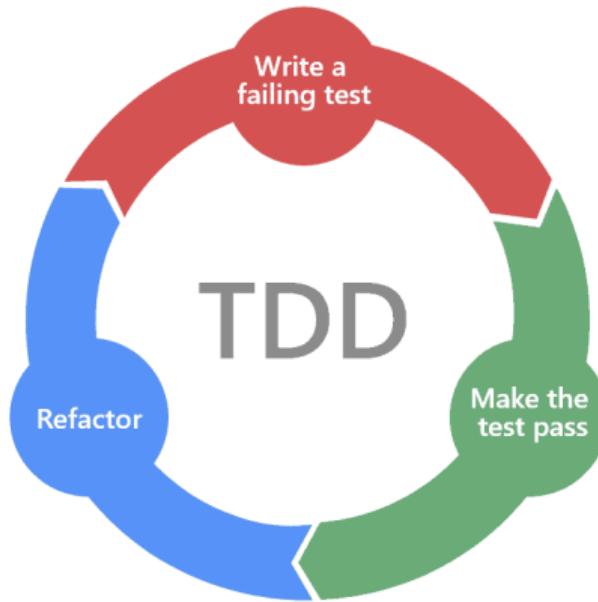
1. Gain confidence through *testing*
2. *Automate* what you're repeating
3. *Tighten feedback loop* as much as possible
4. *Log and monitor* what you can

# *§ 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

# *§ 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/>.