Balancing from Alcor code renovation course to work

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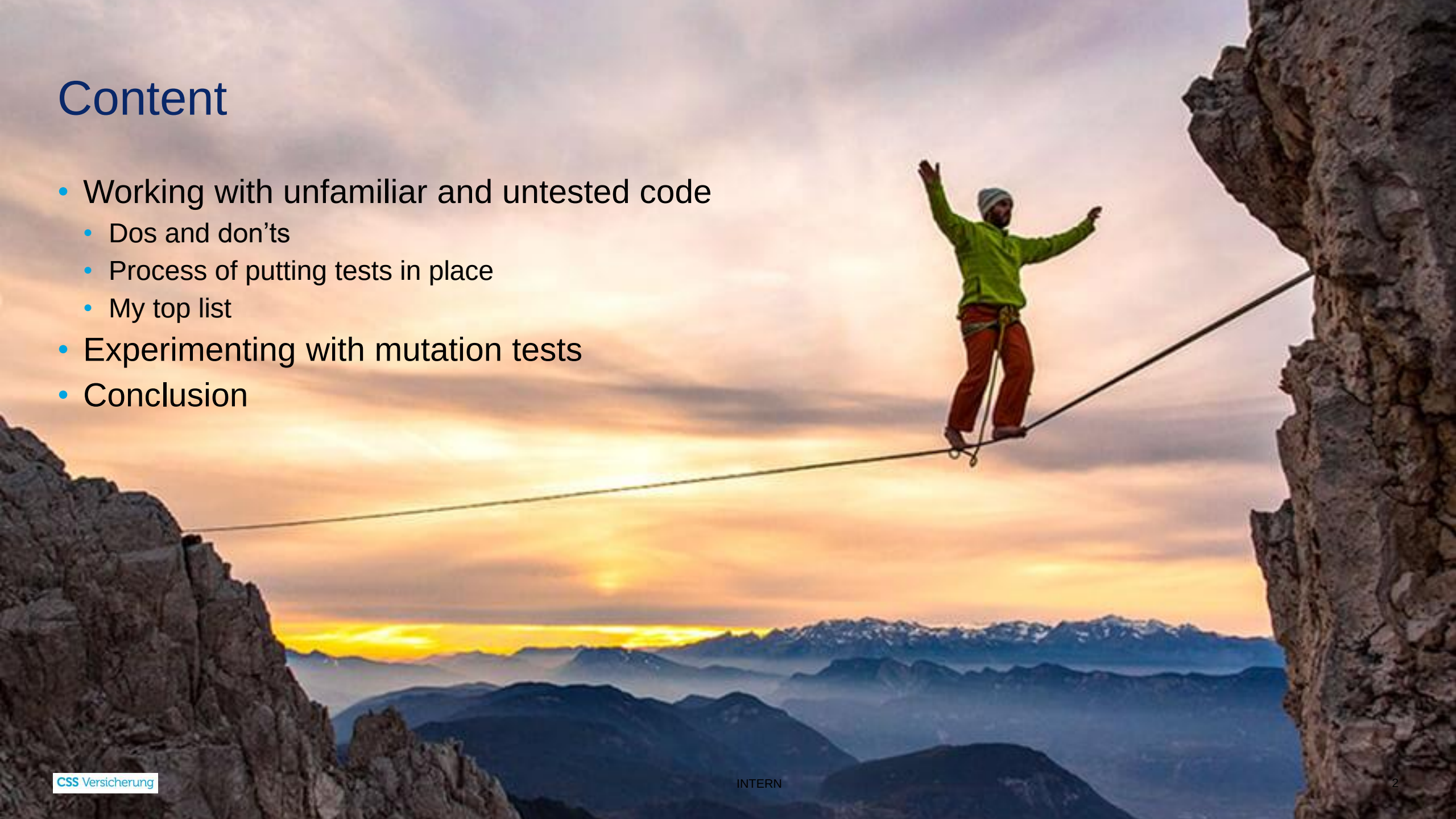
Content



- Working with unfamiliar and untested code
  - Dos and don’ts
  - Process of putting tests in place
  - My top list
- Experimenting with mutation tests
- Conclusion

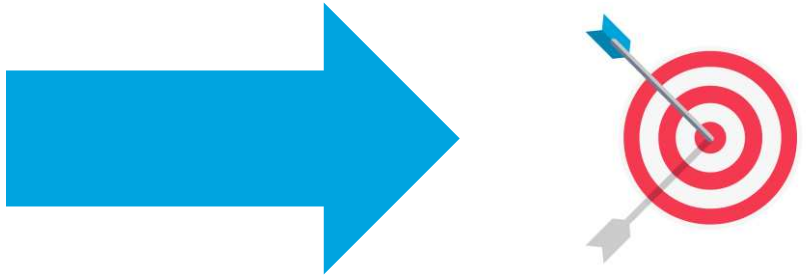
Dos and don’ts

- You should…
  - use the IDE for refactorings as often as possible
  - remember that legacy code «pays the bills»
  - know that every code without tests, is (kind of) legacy code

- You shouldn’t…
  - change the public signature
  - don’t fix a bug while refactoring

Process of putting tests in place

- Where is data read?
- Where is data transformed?
- Where is data sended?



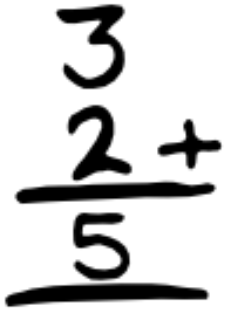
There is no magic, but sometimes it feels that way!

My top list

1. break out method object or primitivize parameter
   - smaller chunks are easier to test
2. extract and override factory method
   - hardcoded dependency pattern is often used
3. peel and slice functional parameter
   - «elegant» way to solve, but need’s more practice

Experimenting with mutation tests

- Goal
  - PiTest, how easy to enable?
  - Are the results help to find gaps?



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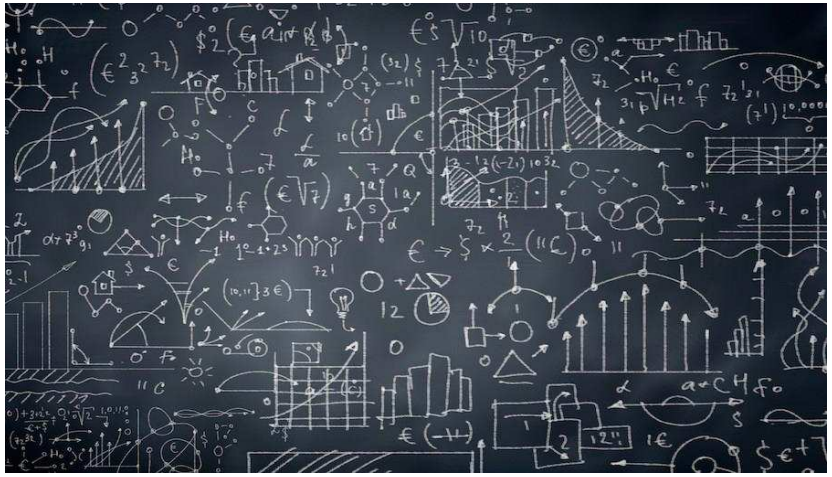

- PiTest on simple «only mapping» service (deckungssuche)
- Result:
  - found mutation problems on producer class

- PiTest on aggregat class with complex time range calculation and state (G365)
- Result:
  - found many mutation problems (>300 for 4 classes)

- I don’t recommend to use PiTest to find gaps in tests
- In my opinion it’s too difficult to find conclusions
- There is more effect, if you and your team think together about edge cases
- What are your experiences and recommendations?

Conclusion / Learning

- We are often focused on using mockito and blind something else
  - I’ll try to use the new technics, must be aware of patterns
  - before writing massive mocks, maybe separation of concerns makes your life easier
- Functional parameters are a nice solution.
  - I definitively need more experience
- We should more often lock behaviour before refactoring
- Don’t fear any beast

Thank you!

Literature & References

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