Kosli

Test Driven Development

Jon Jagger

jon@kosli.com

- Husband, dad, and grandad
- Head of software at Kosli
- Coding & testing for 30* years
- Designed and built cyber-dojo
- Love fishing



*in-hex

Kosli

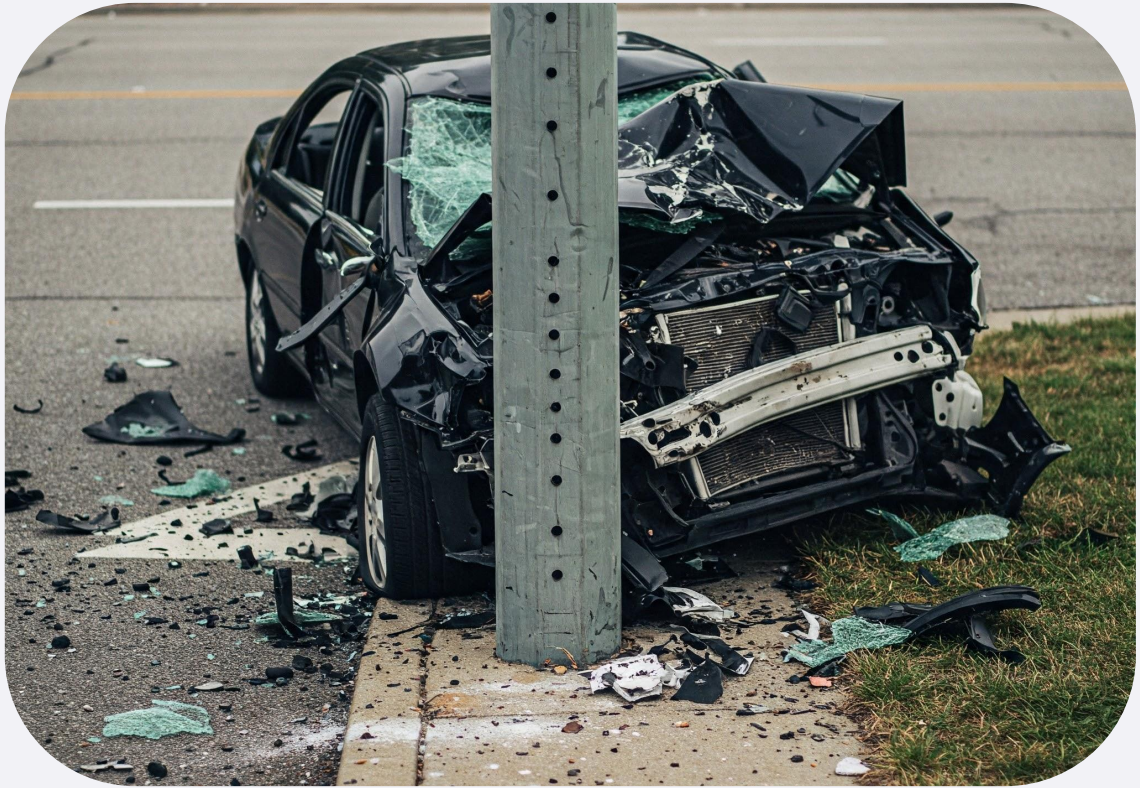
Test Driven Development

- Testing Philosophy
- Testing at Kosli
- Any Questions?
- Testing Dojo



*in-hex

Why do cars have brakes?

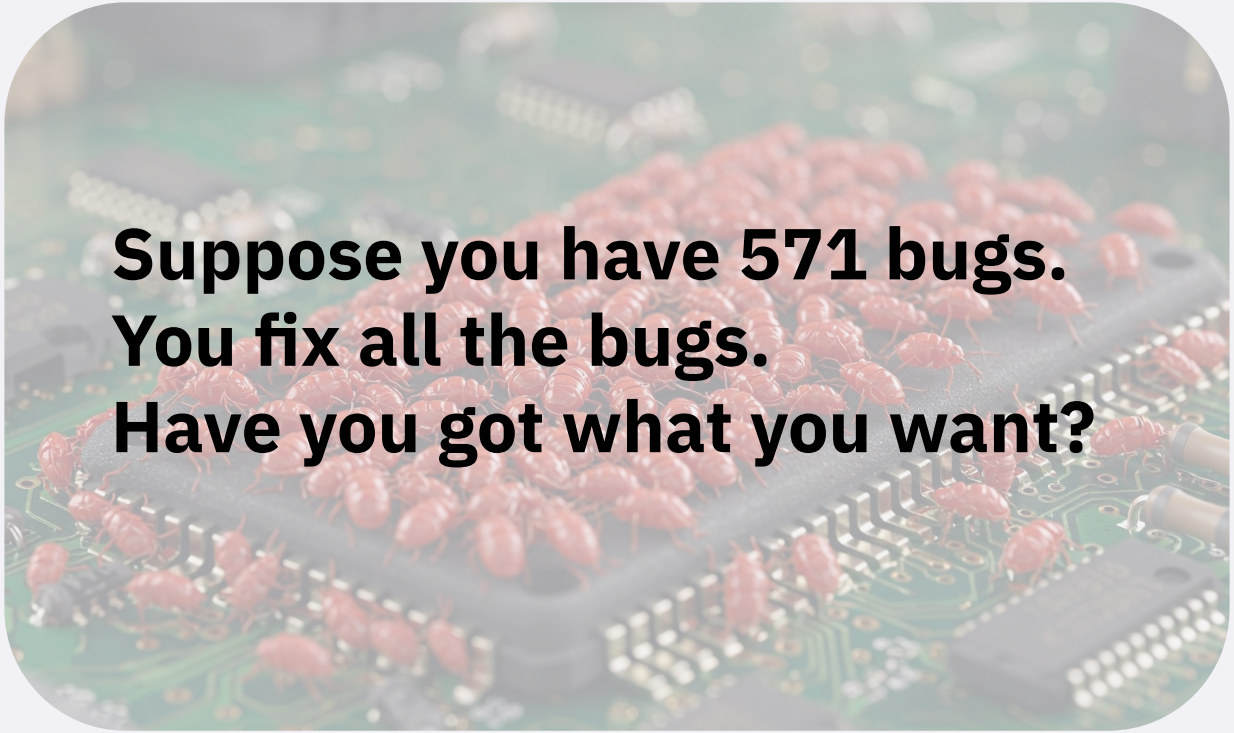


Kosli | kosli.com

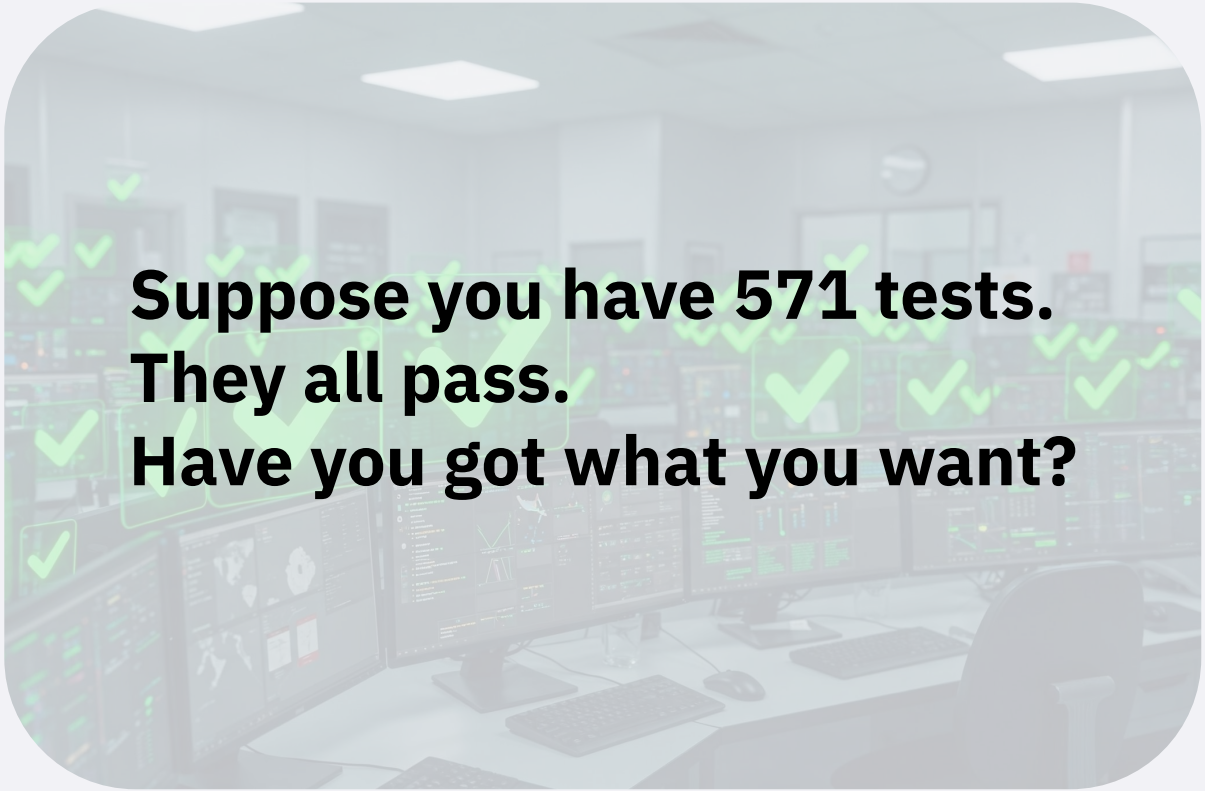
How do you make toast?



Test Driven Development?

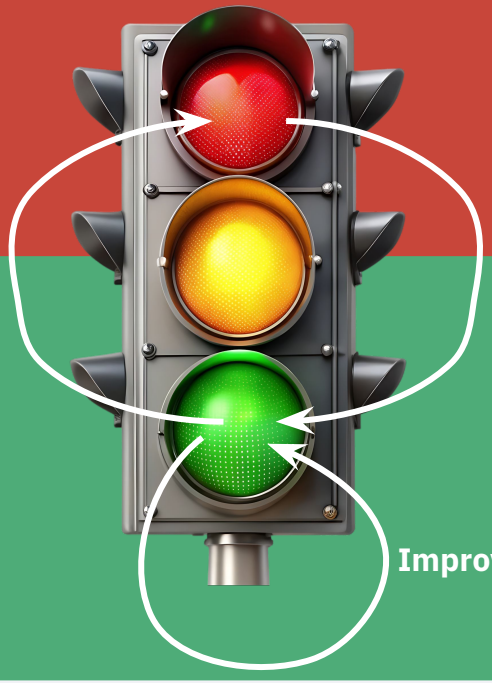


Test *Driven* Development



Red, green, refactor

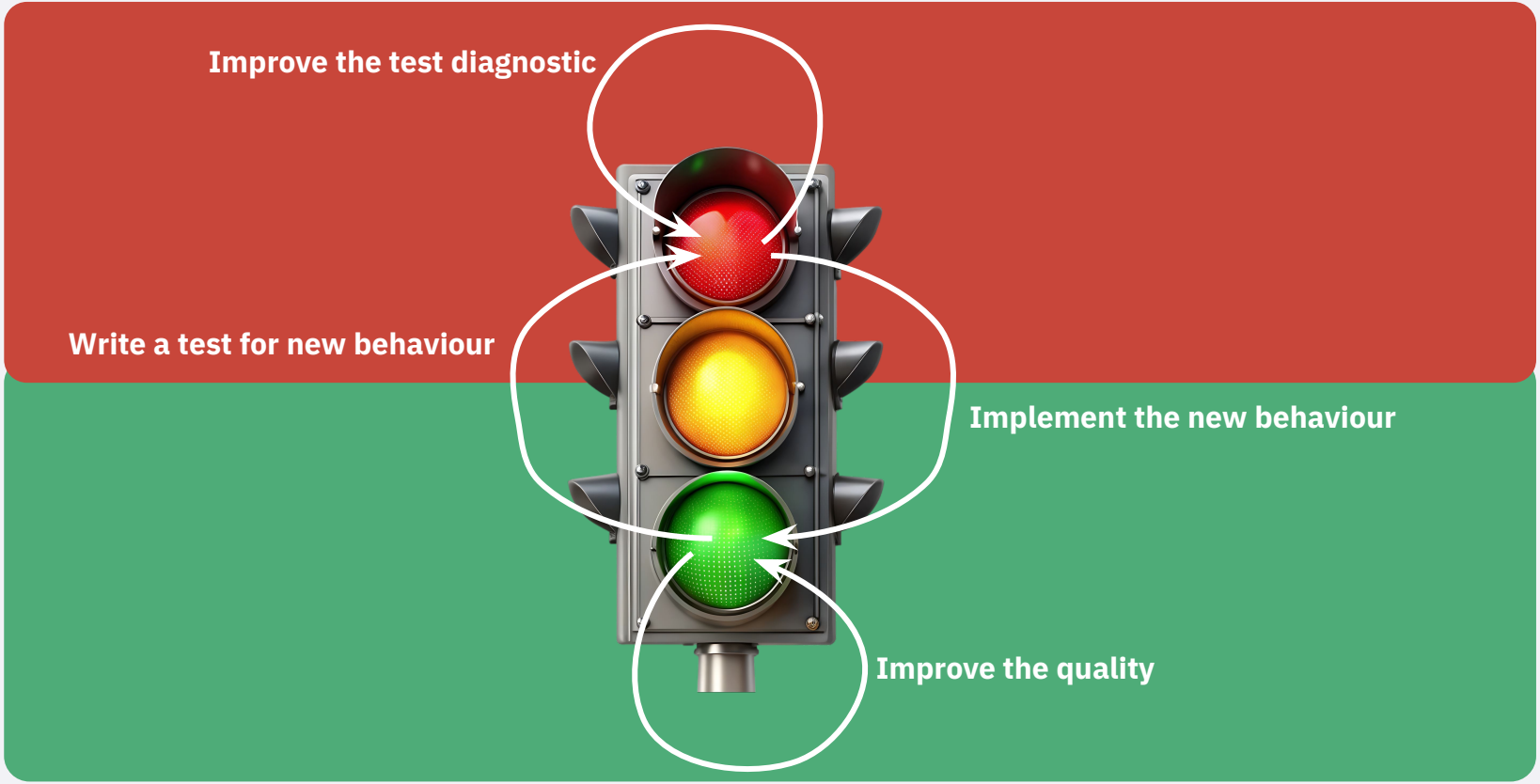
Write a test for new behaviour



Implement the new behaviour

Improve the quality

Red, *prefactor*, green, refactor



Code Style vs Test Style





Complexity?



Tests: 14



Code: 7



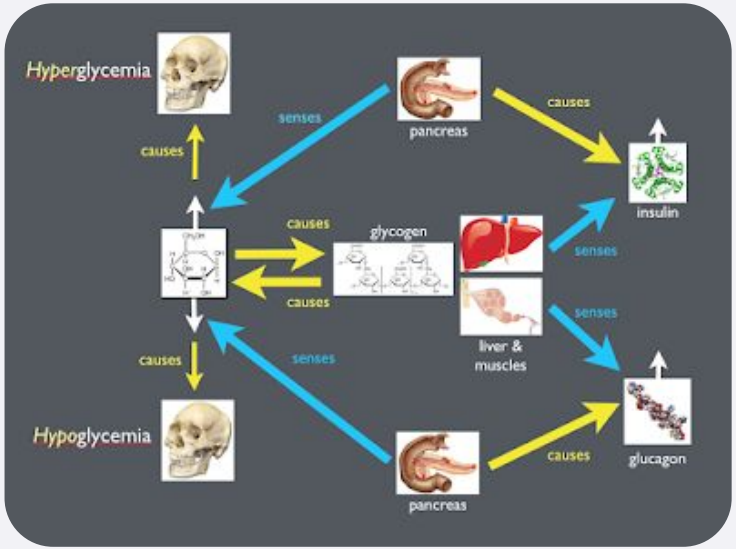
Tests: 1



Code: 14

Regulation

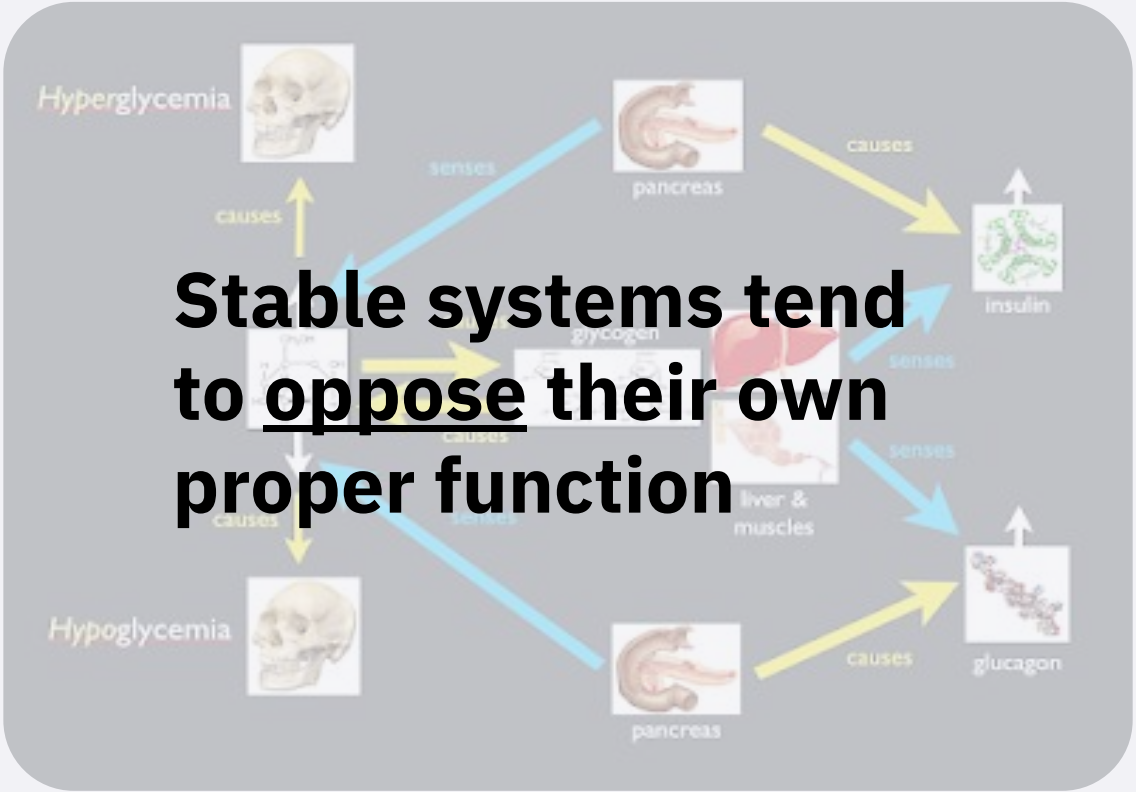






Kosli | kosli.com

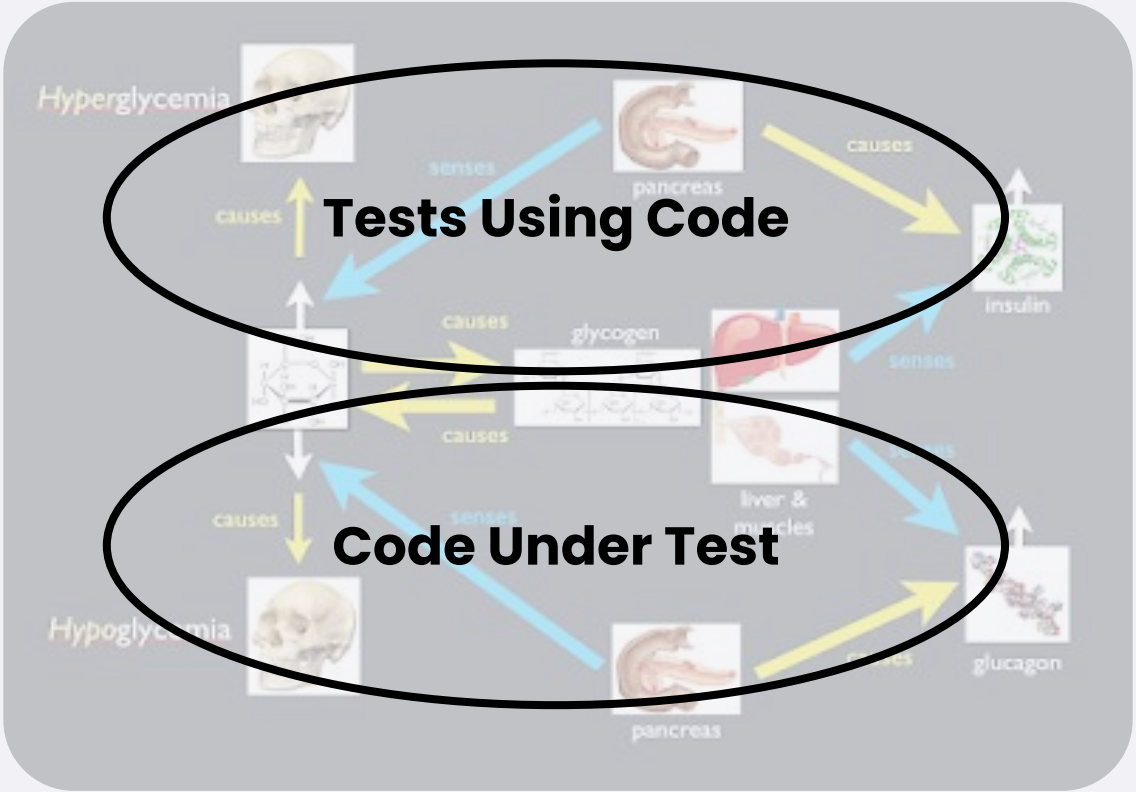
The Equilibrium Law



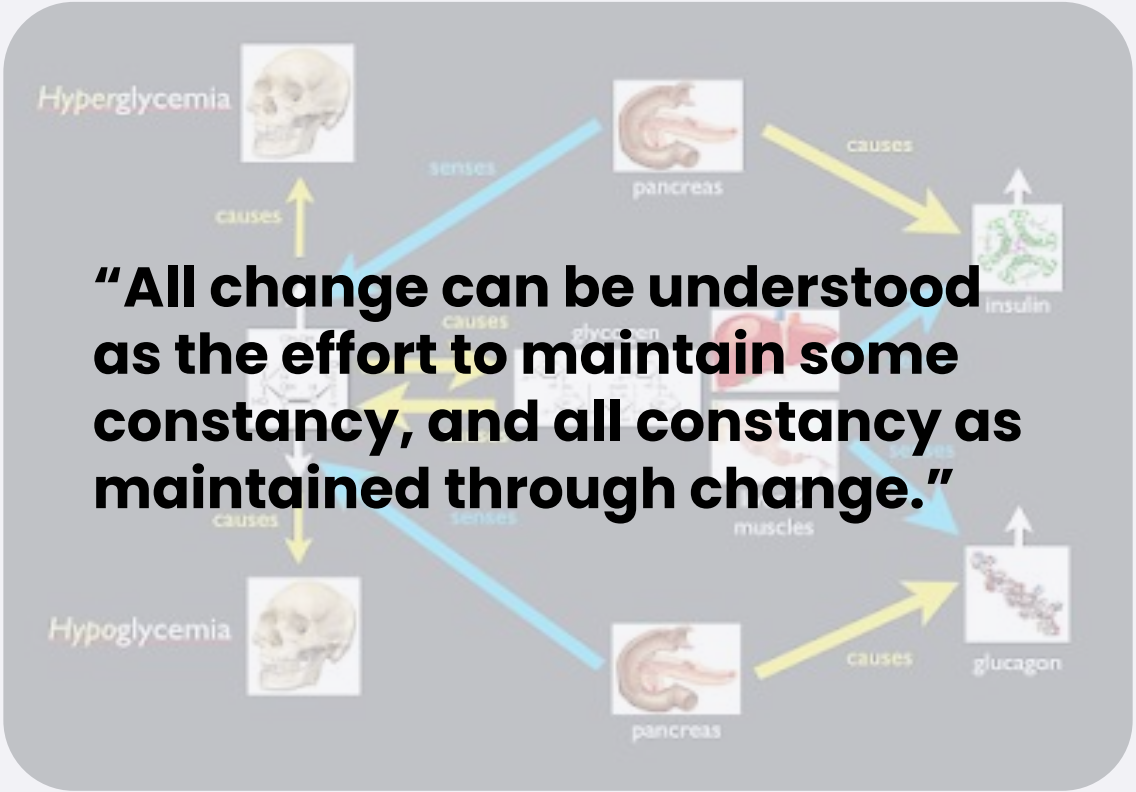
Stable systems tend to <u>oppose</u> their own proper function

Kosli | kosli.com

A co-evolving system



Aesthetics of Change*



"All change can be understood as the effort to maintain some constancy, and all constancy as maintained through change."

*by Bradford Keeney

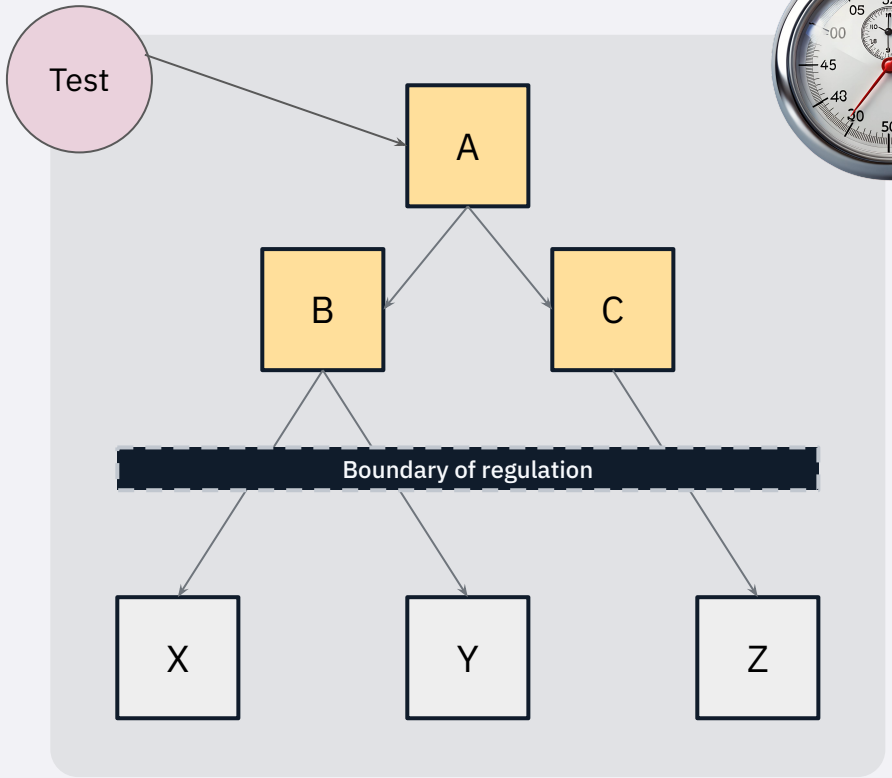
Kosli | kosli.com

Equal rights for tests!



Kosli | kosli.com

Seams

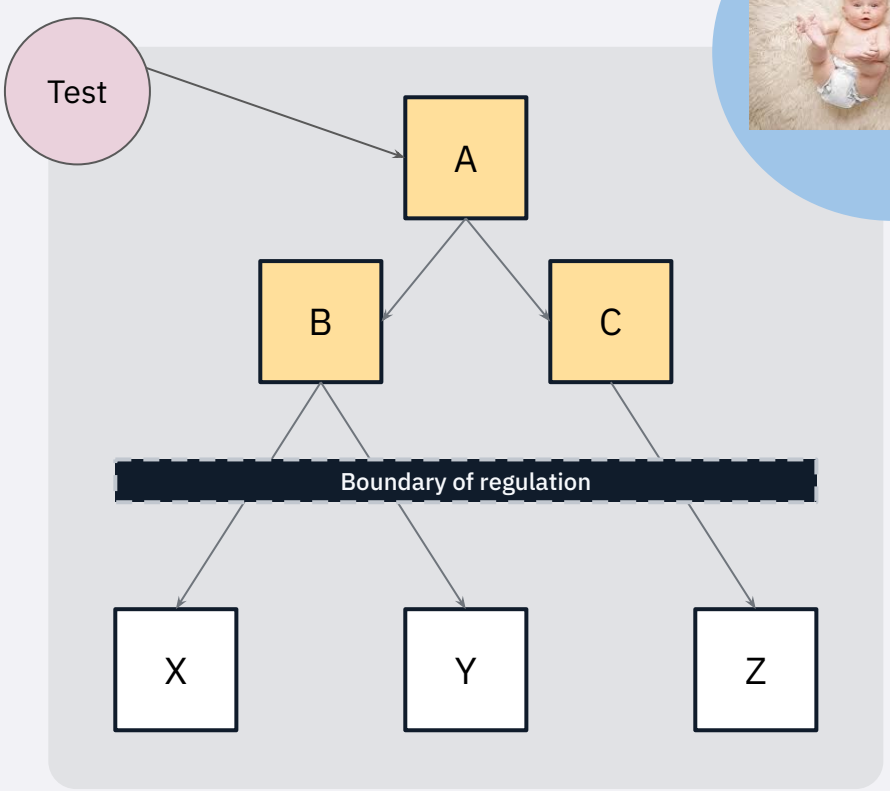


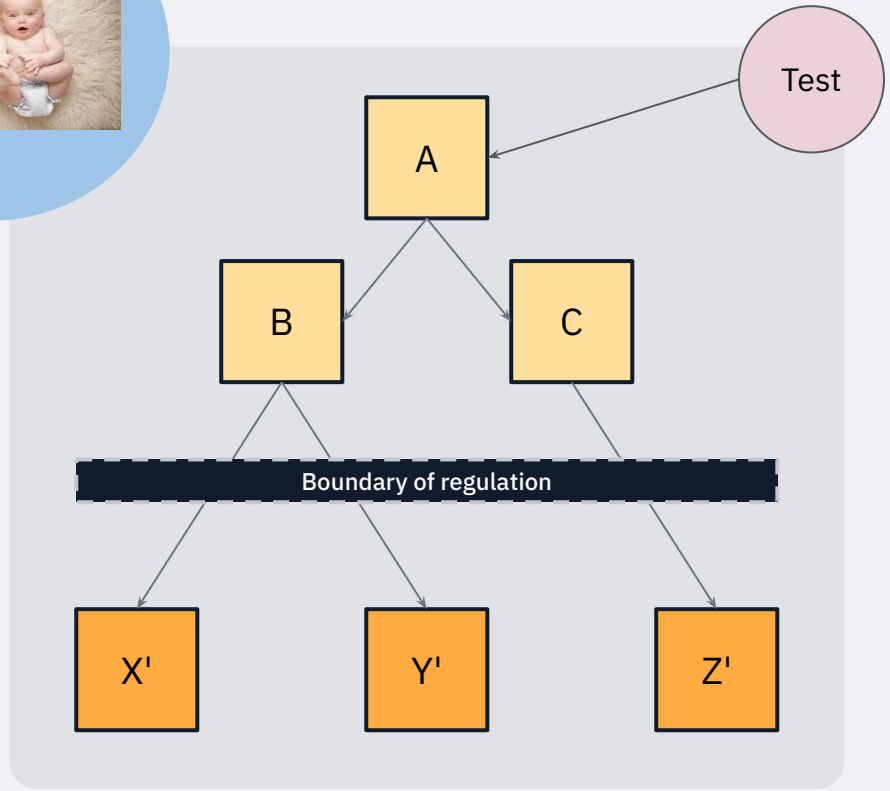




Doubles

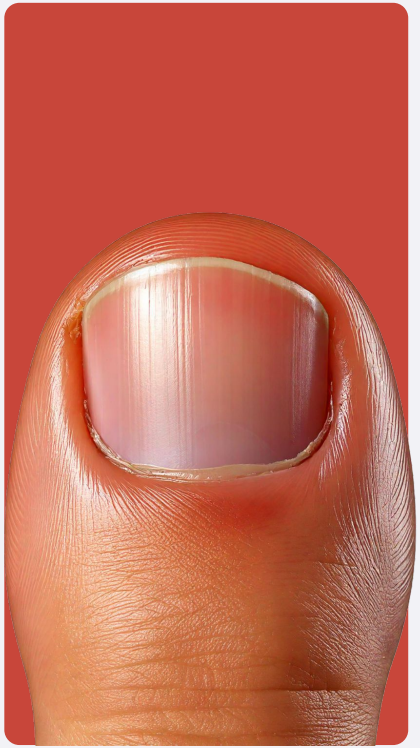



Test
A
B
C
Boundary of regulation
X
Y
Z


Test
A
B
C
Boundary of regulation
X'
Y'
Z'

Stubs, Spies, Mocks, Fakes (Dummies, Caches)

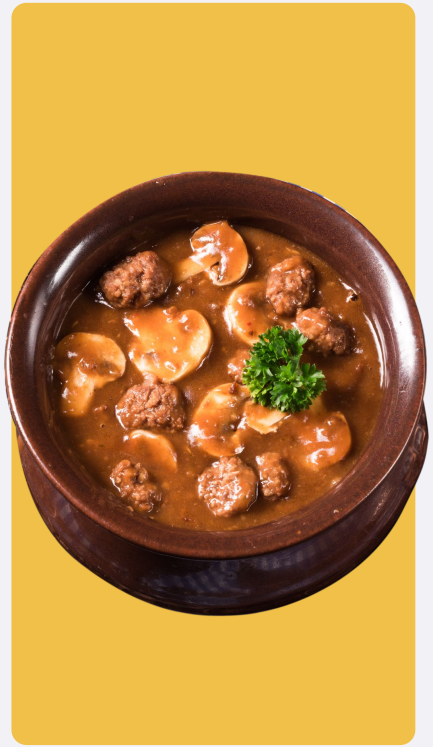
Boundary of regulation



Boundary of regulation



Boundary of regulation



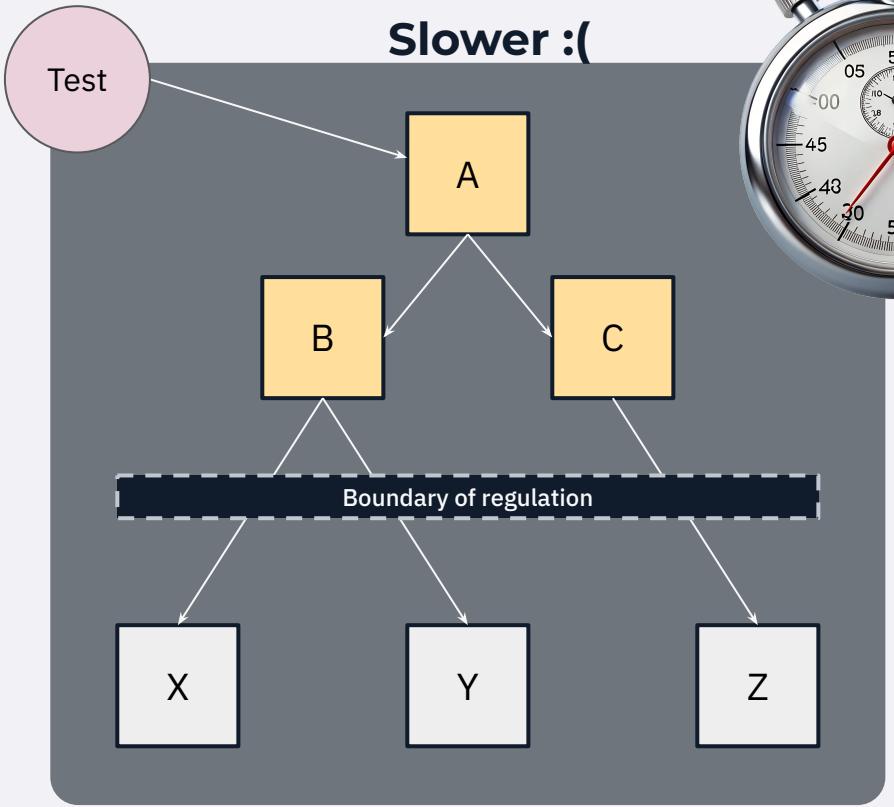
Boundary of regulation



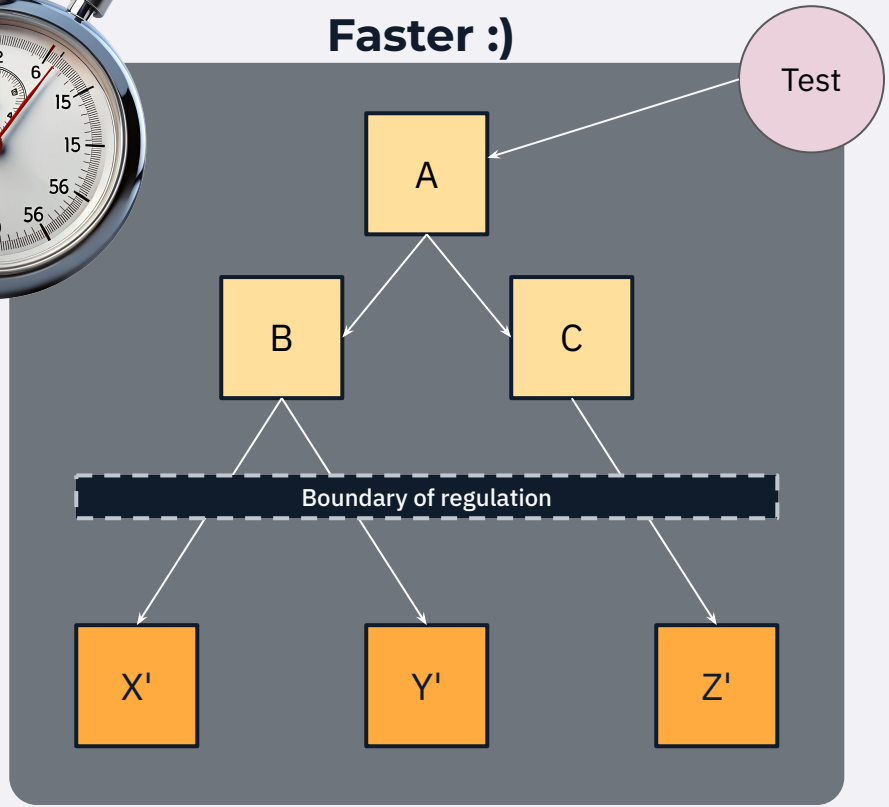
Speed?



Slower :(

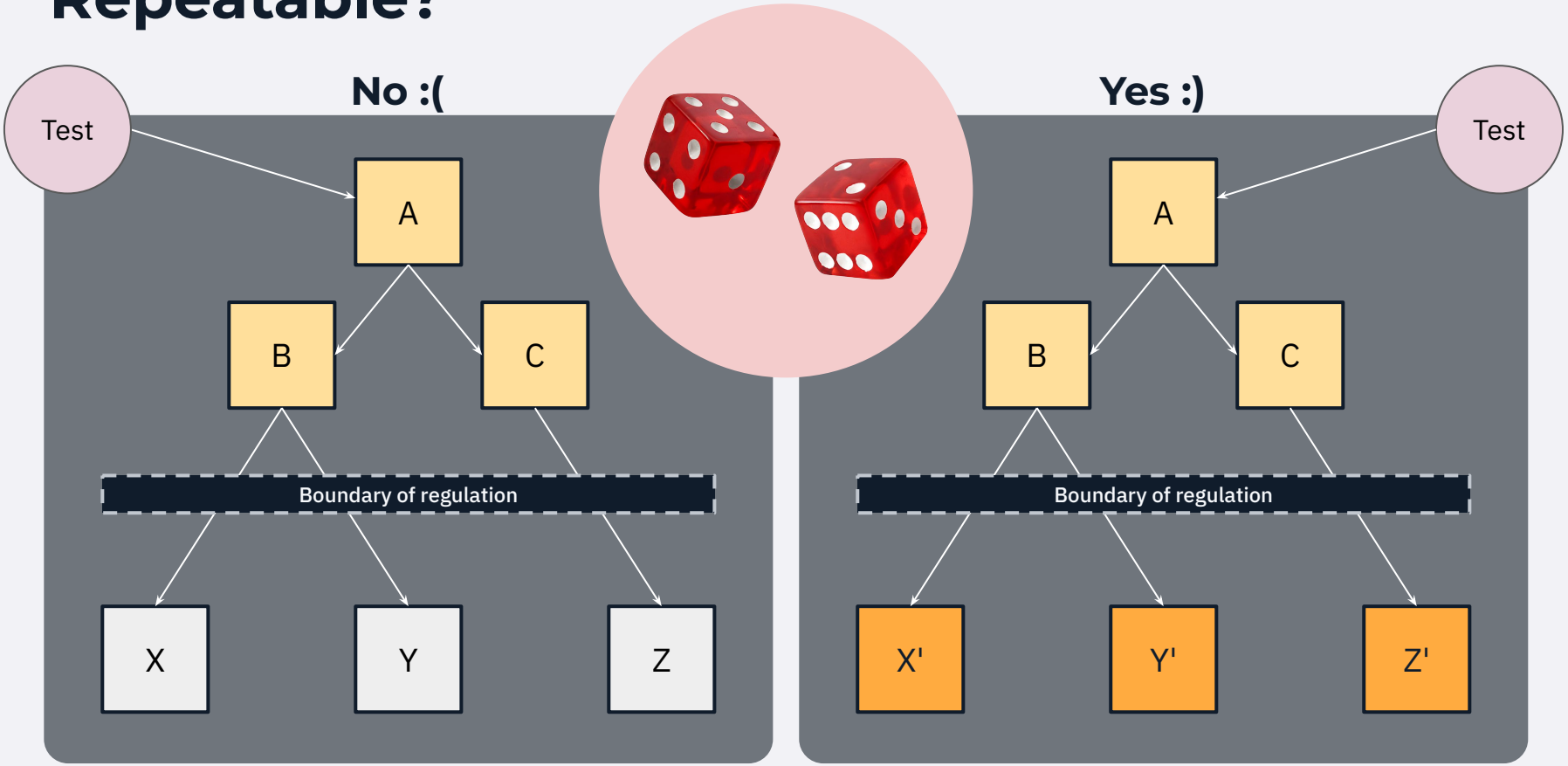


Faster :)



Kosli | kosli.com

Repeatable?

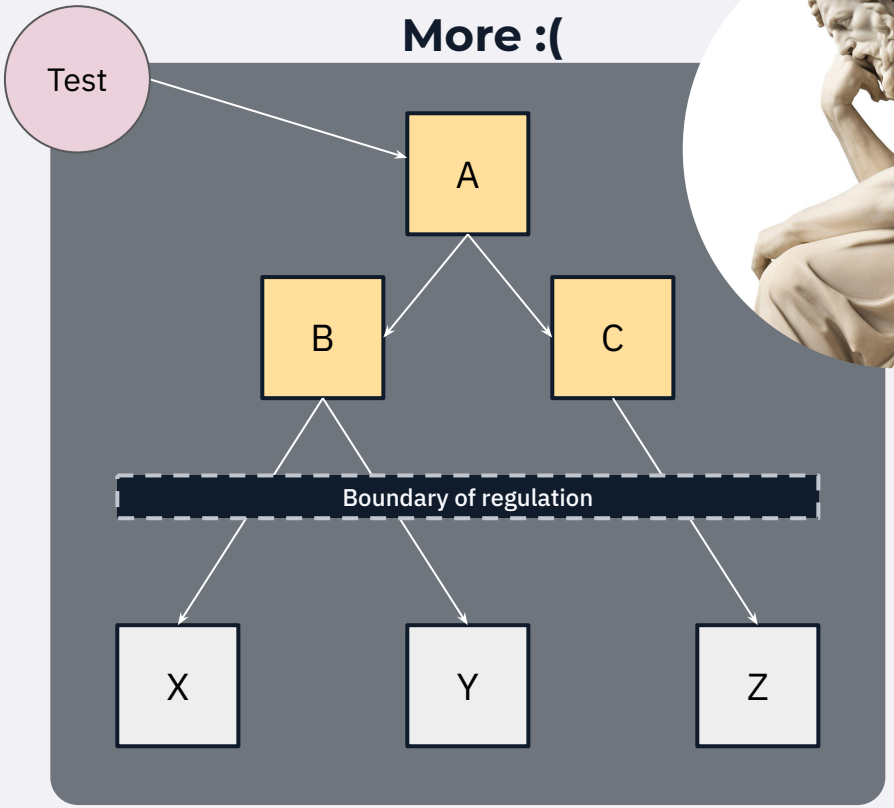


Kosli | kosli.com

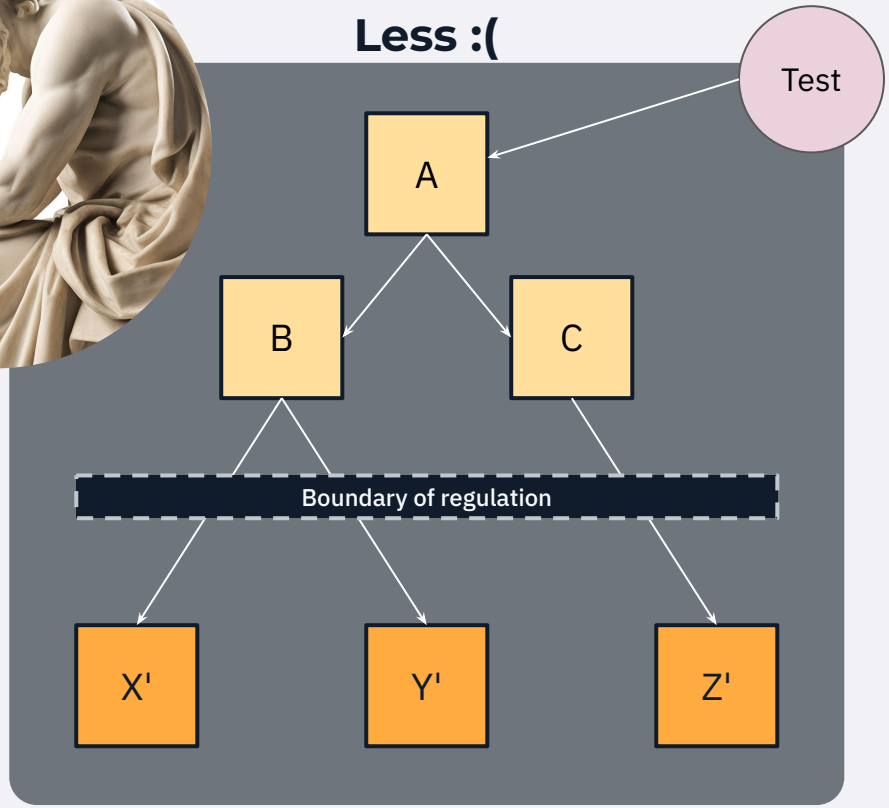
Confidence?



More :(



Less :(



Kosli | kosli.com

Testing at Kosli

```
def test_5b3a0102(modulr_prod, modulr_flow_customer_portals, andrew):
    """
    When a snapshot has an artifact that is compliant
    in the sense of having all evidence named in the template as compliant
    BUT it has evidence NOT in the template that is NOT compliant
    then the safest thing to do is to report the artifact as being NOT compliant
    and hence the overall compliance of the snapshot is NOT compliant
    """
```

```
$ etuk 5b3a0102
```

Questions?



Coding Dojos



https://cyber-dojo.org



Kosli | kosli.com