

Code Smells

DÁNIEL POLGÁR







Possible problems with a software

Bad
design

Bugs

Failures



A code smell is a surface indication that usually corresponds to a deeper problem in the system.
- Martin Fowler

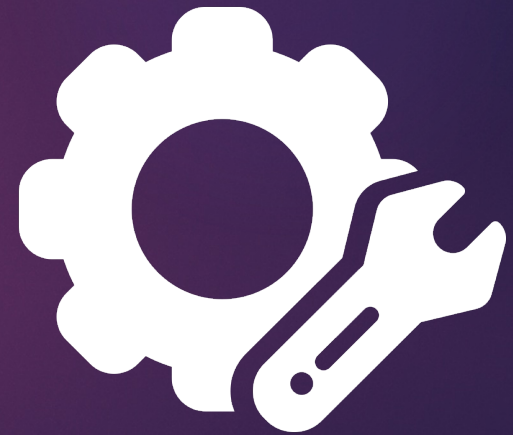
Mostly simpler

- ▶ Found by simple code review/IDE
- ▶ Examples:
 - ▶ Duplicated code
 - ▶ Large class
 - ▶ Primitive obsession
 - ▶ Refused Bequest



How to fix them?

- ▶ Duplicated code: extract to a method in a safe and reasonable place & remove the duplication
- ▶ Large class: cut in peaces
- ▶ Primitive obsession: wrap to objects
- ▶ Refused bequest: Split the interface



Difficult

- ▶ Found by review with deeper domain knowledge
- ▶ Examples:
 - ▶ Feature envy
 - ▶ Shotgun surgery
 - ▶ Divergent change



How to fix them?

- ▶ Feature envy: parallel change
- ▶ Shotgun surgery: merge the many uses
- ▶ Divergent change: extract class



Tipps & Tricks

- ▶ Fix asap
- ▶ Use IDE
 - ▶ Extract
 - ▶ Safe delete
 - ▶ Inline
- ▶ Plugins

Conclusion

- ▶ Reduce bugs count
- ▶ Increase lifetime
- ▶ Better design
- ▶ Ease the development



QUESTIONS?



THANK YOU!

daniel.polgar@css.ch

References

- ▶ Kitchen: <https://blog.kitchenmagic.com/hs-fs/hubfs/Toms%20River-1.jpg?width=5123&name=Toms%20River-1.jpg>
- ▶ Smelly fridge: <https://cdn.shopify.com/s/files/1/2459/1583/articles/Orient-Refrigerators.jpg?v=1515663297>
- ▶ Clean the fridge: <https://food.unl.edu/newsletters/images/cleaning-refrigerator.jpg>
- ▶ Tachometer: <https://image.shutterstock.com/image-vector/color-speedometer-icons-set-colorful-260nw-1822575392.jpg>
- ▶ Gear: https://aptira.com/wp-content/uploads/2016/09/settings_fix.png