# **Refactoring**

Makes code understandable and easy to extend

Makes it quicker to create complicated system

You remove excess code so it is easier to understand & modify

By refactoring code you can better understand other codes

You eliminate the having to remember what old code does

You can write code quicker

Bad smells are common design problem

Bad design is normally unclear, complicated or duplicated

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| What are bad smells | |
| Duplicated codes | Alternative classes with different interfaces |
| Long methods | Lazy classes |
| Complex conditional statement | Large classes |
| Primitive obsession وسواس اولیه | Switch statement |
| Indecent exposure | Combinatorial explosions انفجار ترکیبی |
| Solution sprawl | Oddball solution |

More constructors -> more problems

General purpose constructors save the day.

If you have to change the class to add features your design is bad.