What’s that smell?

by Bjarte Sværen

What is a code smell?

- Characteristic/trait in source code
- Can be used as a driver for refactoring
- Should be considered on a case by case basis
- “Rules are for the guidance of the wise and the obedience of fools.“
  – Douglas Bader

What we want?

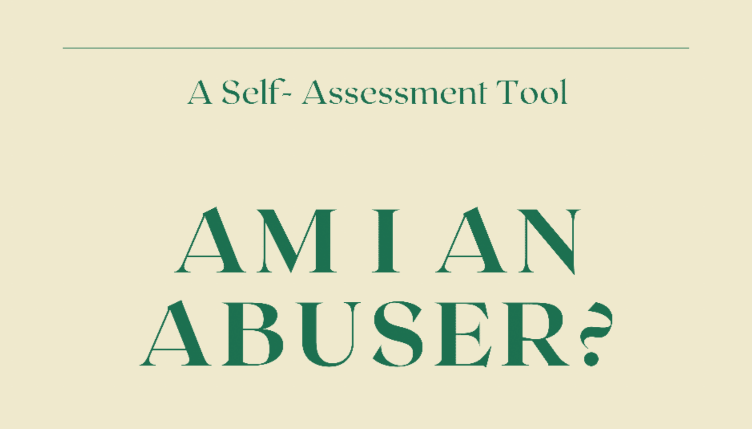
- Maximize cohesion
- Minimize coupling
- Within reason…some coupling is unavoidable

Coupling

Cohesion

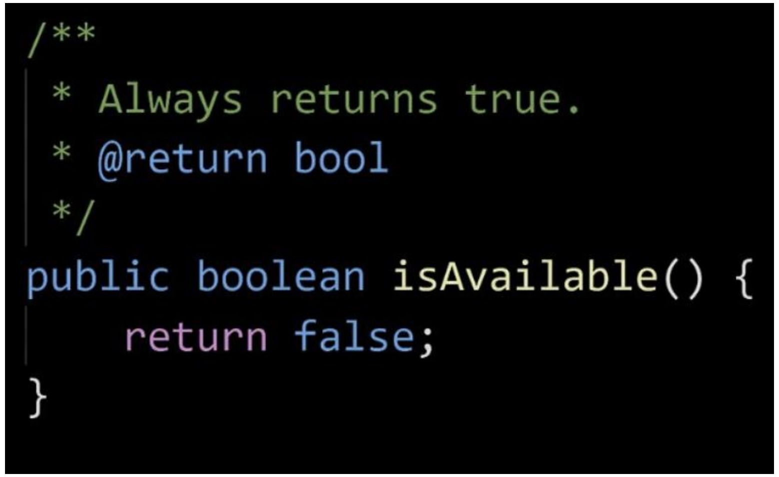
Categories

- Bloaters
- Change Preventers
- Object-Orientation Abusers
- Dispensables
- Couplers



A Self- Assessment Tool

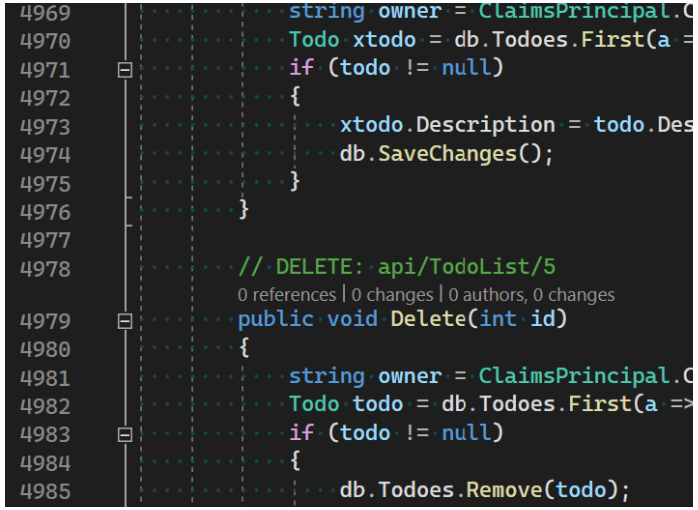
AM I AN ABUSER?



```
/**
 * Always returns true.
 * @return bool
 */
public boolean isAvailable() {
    return false;
}
```

Bloaters

- Long Method
- Large Class
- Primitive Obsession
- Long Parameter List
- Data Clumps



```
            string owner = ClaimsPrincipal.C
            Todo xtodo = db.Todoes.First(a =
            if (todo != null)
            {
                xtodo.Description = todo.Des
                db.SaveChanges();
            }
        }

        // DELETE: api/TodoList/5
        0 references | 0 changes | 0 authors, 0 changes
        public void Delete(int id)
        {
            string owner = ClaimsPrincipal.C
            Todo todo = db.Todoes.First(a =>
            if (todo != null)
            {
                db.Todoes.Remove(todo);
```

Change Preventers

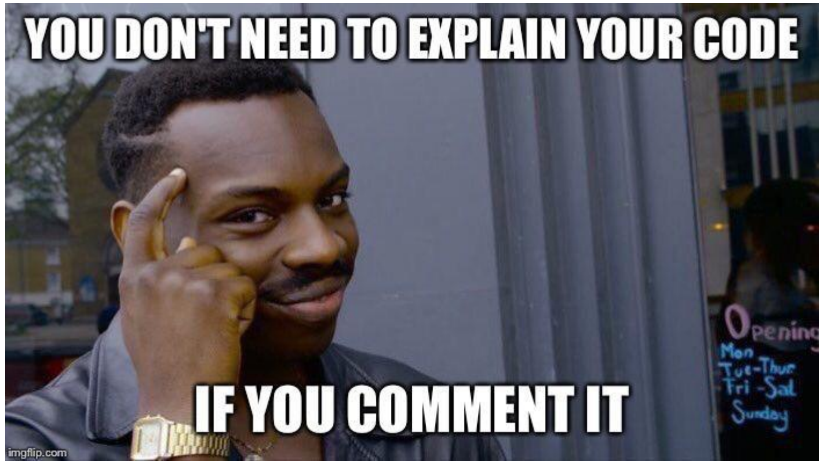
- Divergent Change
- Shotgun Surgery
- Parallel Inheritance Hierarchies

Object-Orientation Abusers

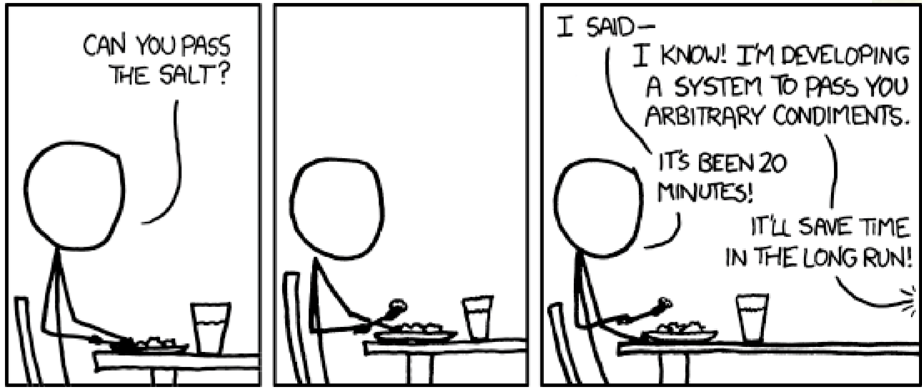
- Switch Statements
- Temporary Field
- Refused Bequest
- Alternative Classes with Different Interfaces

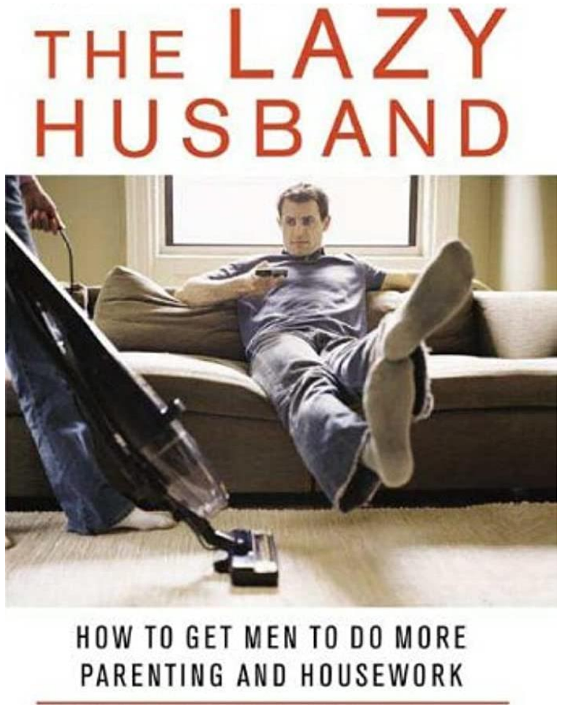
Dispensables

- Comments
- Duplicate Code
- Lazy Class
- Dead Code
- Speculative Generality

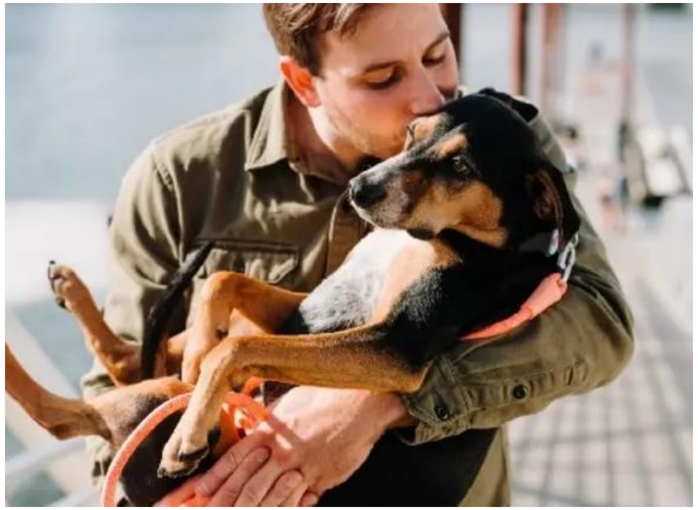


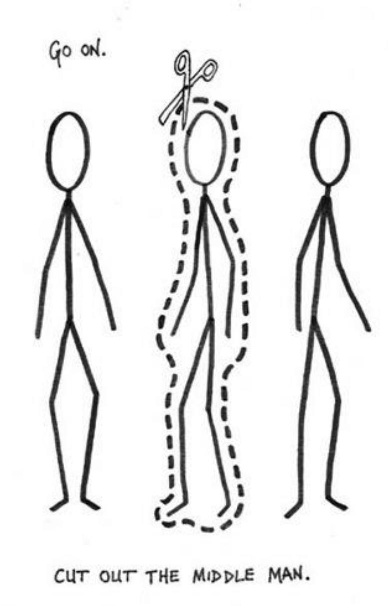
I COPIED AND PASTED MY FUNCTION THROUGHOUT YOUR CODE
NOW IT'LL ALWAYS BE WITH YOU
makeameme.org


CAN YOU PASS THE SALT?
I SAID—
I KNOW! I'M DEVELOPING A SYSTEM TO PASS YOU ARBITRARY CONDIMENTS.
IT'S BEEN 20 MINUTES!
IT'LL SAVE TIME IN THE LONG RUN!



FEATURE ENVY CLASS
OTHER CLASSES
CLASS WITH ACTUAL METHOD





Couplers

- Feature Envy
- Inappropriate Intimacy
- Message Chains
- Middle Man

Thank you