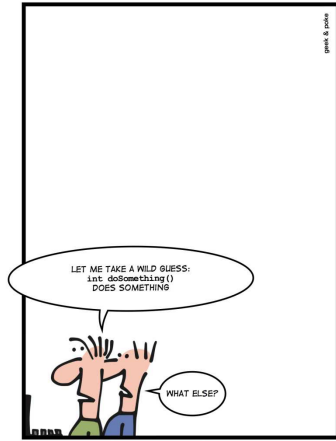


SIMPLY EXPLAINED



SELF DOCUMENTING CODE

Interfaces

www.cs.uoi.gr/~zarras/soft-devII.htm

Sources: M. Fowler Refactorings Catalog
W. Wake Refactoring Workbook

Incomplete Library Class

Incomplete Library Class

Symptoms

You're using a library class, and there's a feature you wish were on that class, but it's not. If it were a "normal" class, you'd modify it, but since somebody else owns the library, you can't change it.

Causes

The author of the library class didn't anticipate your need.

Incomplete Library Class

What to Do

See if the owner of the class or library will consider adding the support you want.

If it's just one or two methods, *Introduce Foreign Method on a client of the library class*. (This is still Feature Envy, but what can you do?)

Introduce Foreign Method

A server class you are using needs an additional method, but you can't modify the class.

Create a method in the client class with an instance of the server class as its first argument.

```
Date newStart = new Date (previousEnd.getYear(),
previousEnd.getMonth(), previousEnd.getDate() + 1);
```



```
Date newStart = nextDay(previousEnd);

private static Date nextDay(Date arg) {
    return new Date (arg.getYear(),arg.getMonth(), arg.getDate() + 1);
}
```

Incomplete Library Class

What to Do

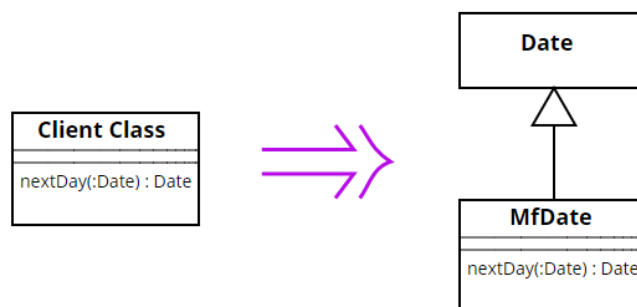
If you have several methods, **Introduce Local Extension** (adding a new pseudolibrary class).

You may decide to introduce a layer “covering” the library.

Introduce Local Extension

A server class you are using needs several additional methods, but you can't modify the class.

Create a new class that contains these extra methods. Make this extension class a subclass or a wrapper of the original.



Refuse Bequest

Refuse Bequest

Symptoms

A class inherits from a parent, but just throws an exception instead of supporting a method (honest refusal).

A class inherits from a parent, but an inherited routine just doesn't work when called on the class (implicit refusal),.

Inheritance doesn't really make sense; the subclass just isn't an example of the parent.

Causes

Perhaps someone inherited from a class just for implementation convenience without really intending the class to be substitutable for the parent.

Refuse Bequest

What to Do

1. If the parent-child relationship does make sense, you can create a new child class via *Extract Subclass, Push Down Field, and Push Down Method*; let this class holds the non-refused behavior, and change clients of the parent to be clients of the new class. (Then the parent need not mention the feature.)
2. If there's no reason to share a class relationship, then *Replace Inheritance with Delegation*.

Slide 10

- z1** in other words make a parent with 2 children. The first is the original child while the second holds the pushed down behavior refused by the first child!!
zarras, 07/12/2017

Replace Inheritance with Delegation (association, aggregation, or composition)

A subclass uses only part of a superclasses interface or does not want to inherit data.

Create a field for the superclass, adjust methods to delegate to the superclass, and remove the subclassing.

