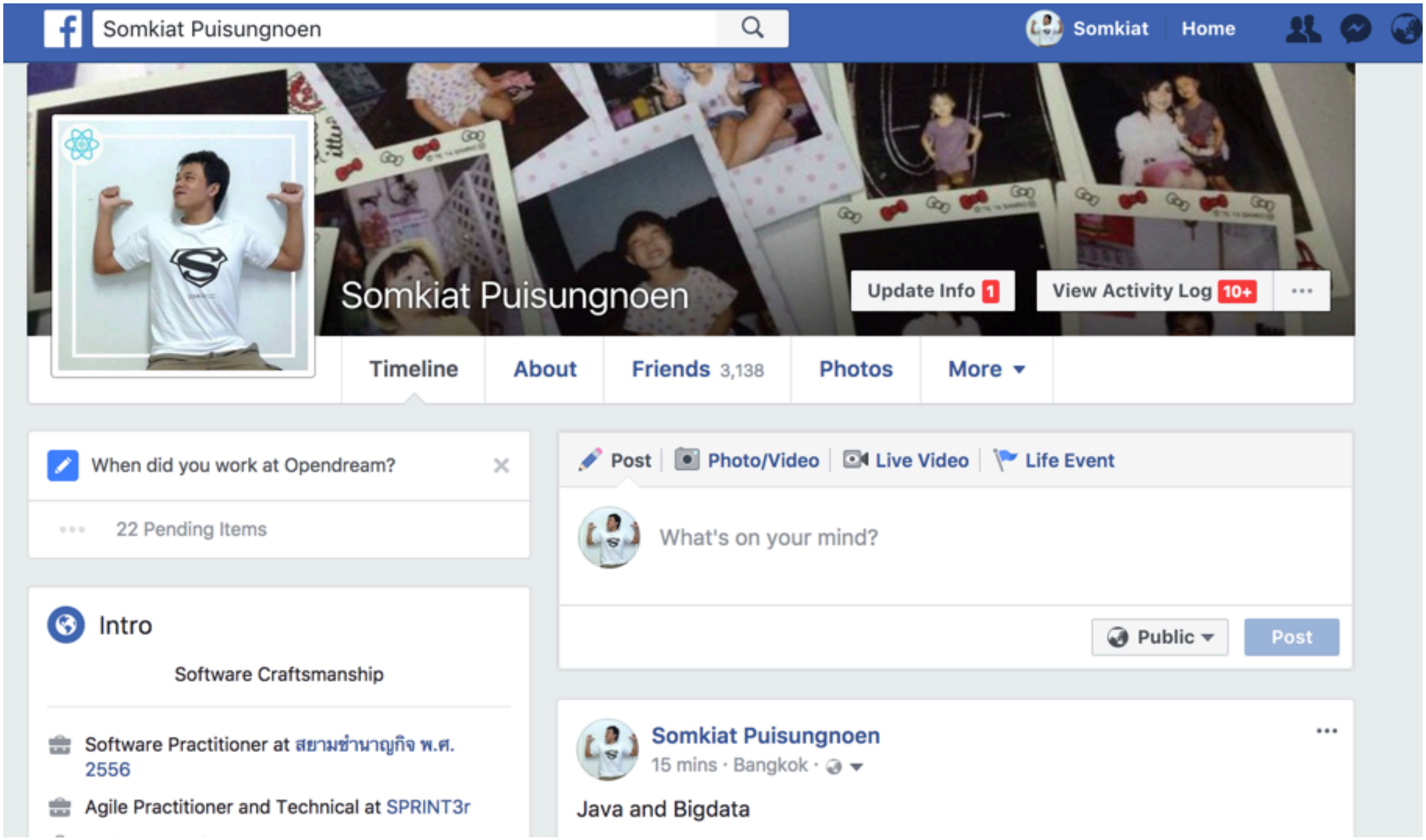
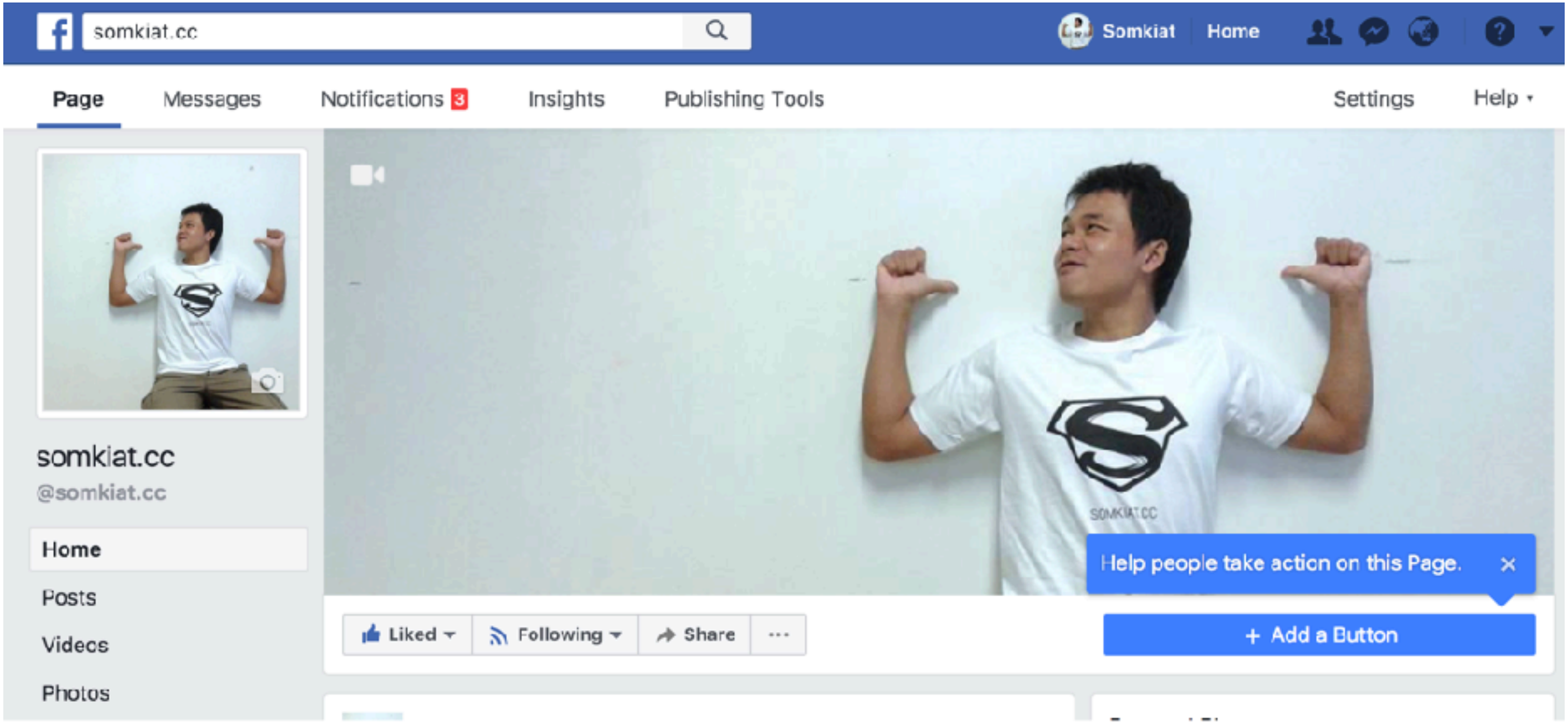
สยามชำนาญกิจ
SIAM CHAMNAN KIT

Basic of Java





Agenda Day 1

- All about Java Programmer mistakes
- Object-Oriented Design
- SOLID
- Workshop

Mistake of Java Programmer

Set JAVA_HOME

How to build and compile ?

Compile and Run

$javac -version
$java -version

How to read the Java document ?

https://docs.oracle.com/javase/8/docs/

Build tools

IDE WARs

Trust in your code ?

Your code not break anything ?

Write Unit tests

Hello with Unit testing

Basic of Java

Basic of Java

Working with String
if-else statement
Looping => for/for each, while and do-while

Basic of Java

if-else statement
Looping => for/for each, while and do-while

Workshop online

CyberDojo

http://www.cyber-dojo.org/

Day 2

Run your code/test in command line

Check before run !!

For Windows OS

$echo %JAVA_HOME%

For Mac/Linux

$echo $JAVA_HOME

Run test with maven

$mvnw clean test

Build JAR file with maven

$mvnw clean package

Try to compile and win without Apache Maven

Compile

$javac **-s** src/main/java **-d** your_target src/main/java/com/example/demo/HelloDay2.java

-s = folder of source code

-d = folder of class files (destination)

Run

$java **-cp** your_target
com.example.demo.HelloDay2

-cp = classpath of class/JAR files

Code Smell & Refactoring

https://sourcemaking.com/refactoring/smells

Code Smell

Code Smell

Code Smell Workshop

https://github.com/emilybache/Tennis-Refactoring-Kata

Composition over Inheritance

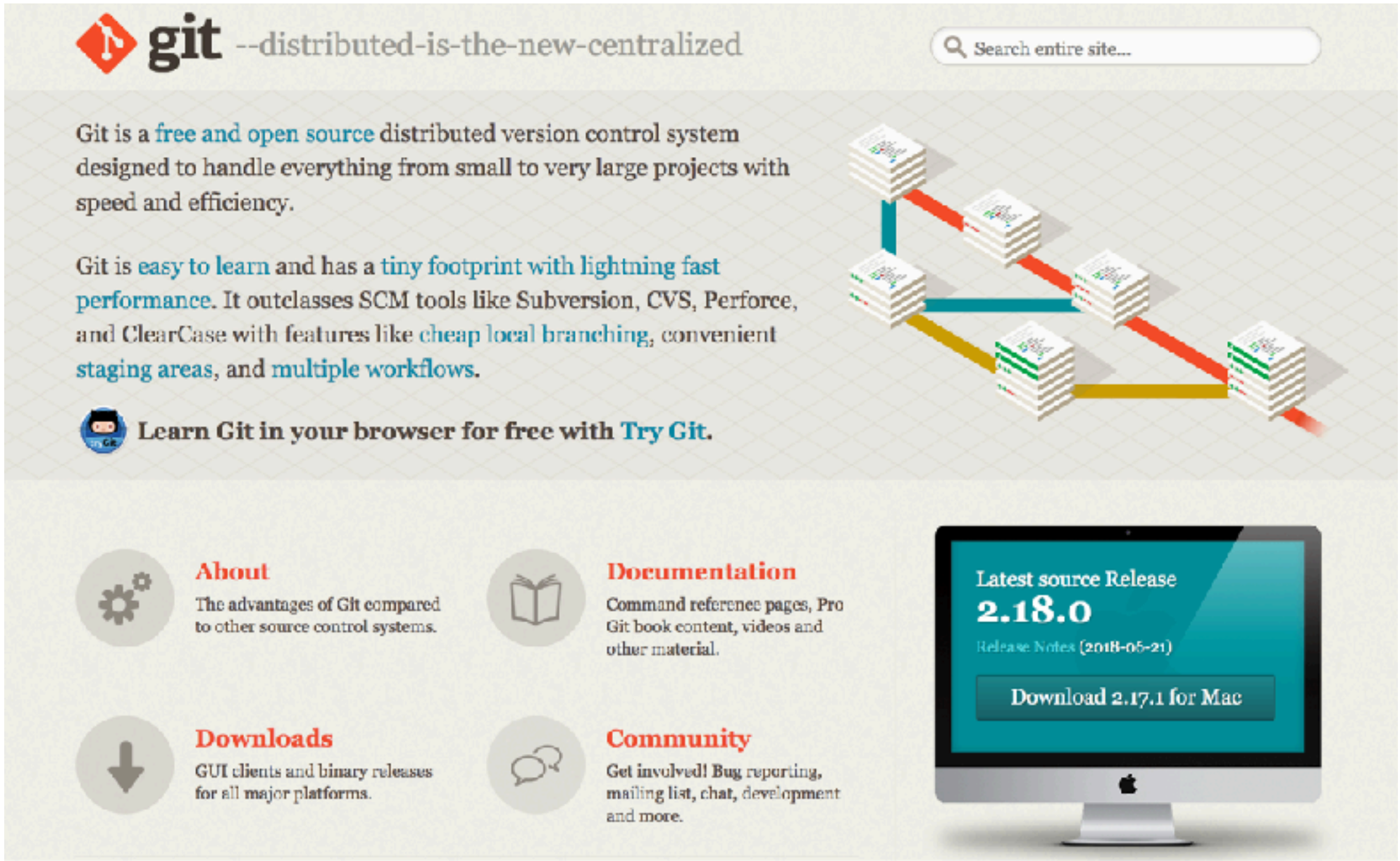
https://en.wikipedia.org/wiki/Composition_over_inheritance

Composition over Inheritance

HAS-A
IS-A

Source code management

Download and Install Git



https://git-scm.com/

Git command line

$git status

$git init

$git add <file>

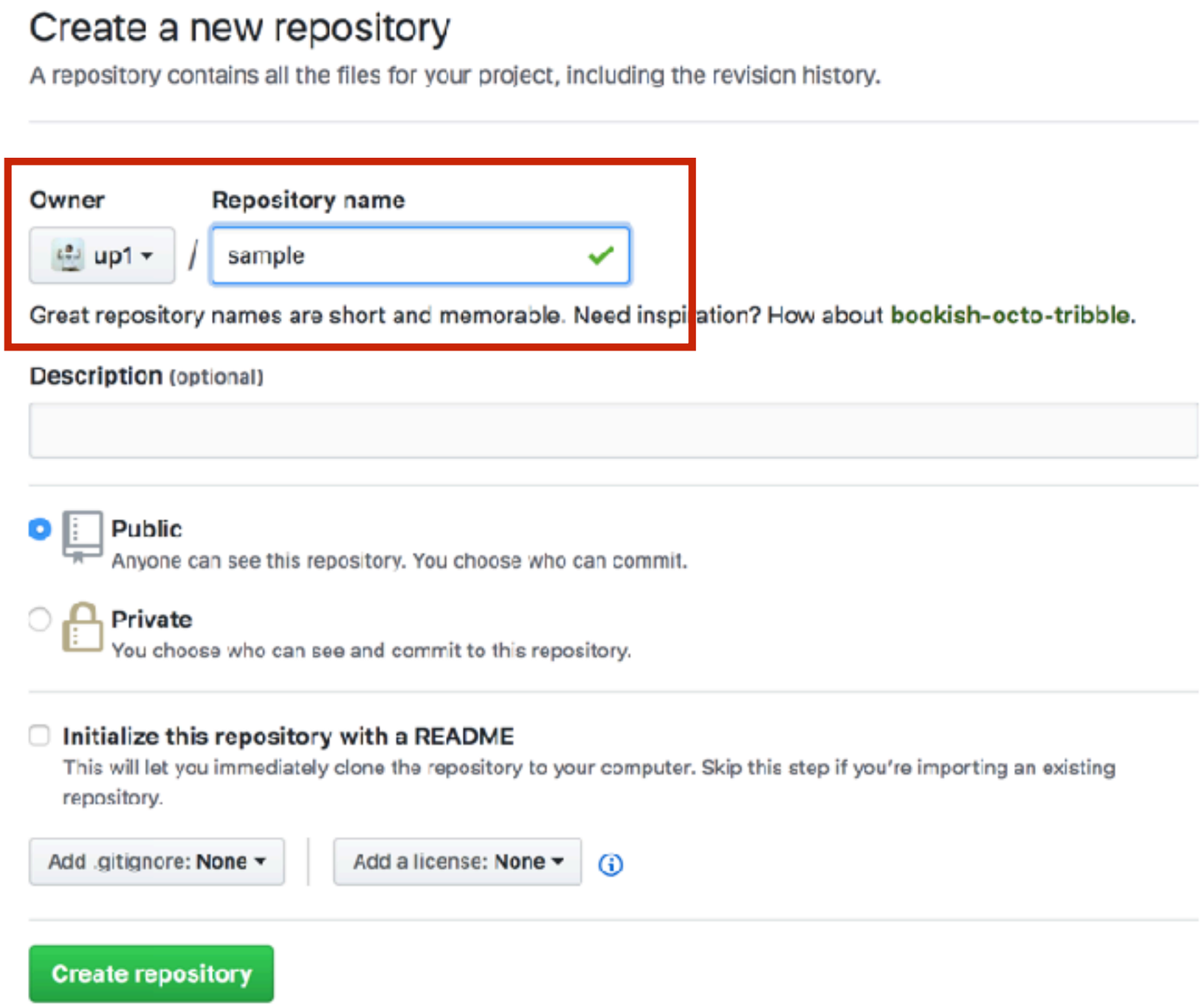
$git commit -m “Reason to commit”

$git push <remote> <local branch>

$git pull <remote> <local branch>

$git remote add <name> <url>

Create repository at Github



Create already

up1 / sample

Unwatch 1

Code | Issues 0 | Pull requests 0 | Projects 0 | Wiki | Insights | Settings

Quick setup — if you've done this kind of thing before

Set up in Desktop or HTTPS SSH https://github.com/up1/sample.git

We recommend every repository include a README, LICENSE, and .gitignore.

...or create a new repository on the command line

```
echo "# sample" >> README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/up1/sample.git
git push -u origin master
```

Working with Git

1. Create repos on your folder

$git init

2. Add file/folder to git repos

$git add <filename>

$git add <folder>

3. Commit your change

$git commit -m “<message>”

4. Add remote repository

$git remote add <name> <remote url>

$git remote add **origin** **https://github.com/up1/sample.git**

5. Push your change to remote repos

$git push origin master

And check your code at github.com

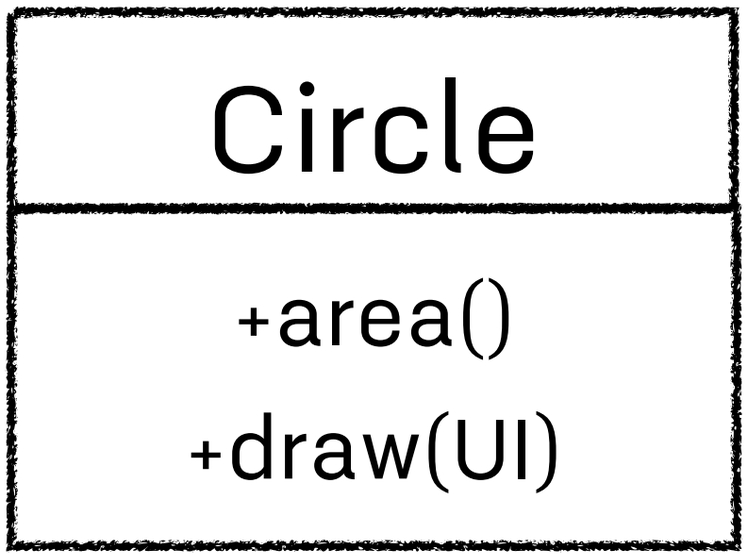
Day 3

SOLID principle

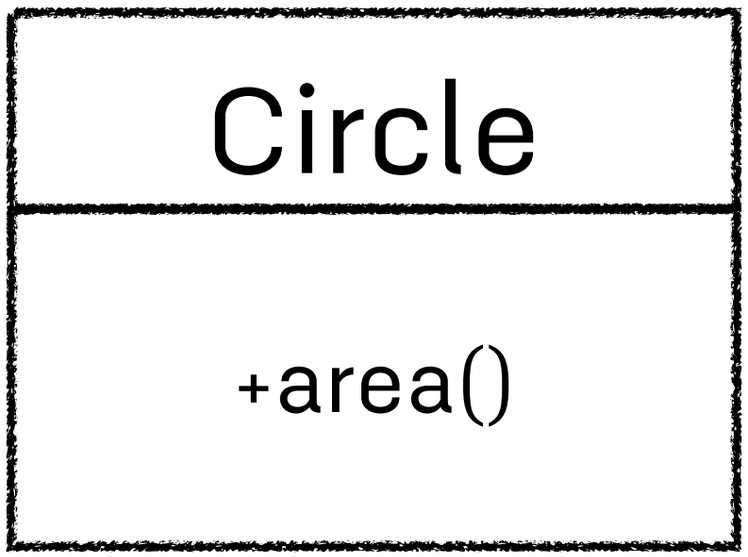
SOLID principle

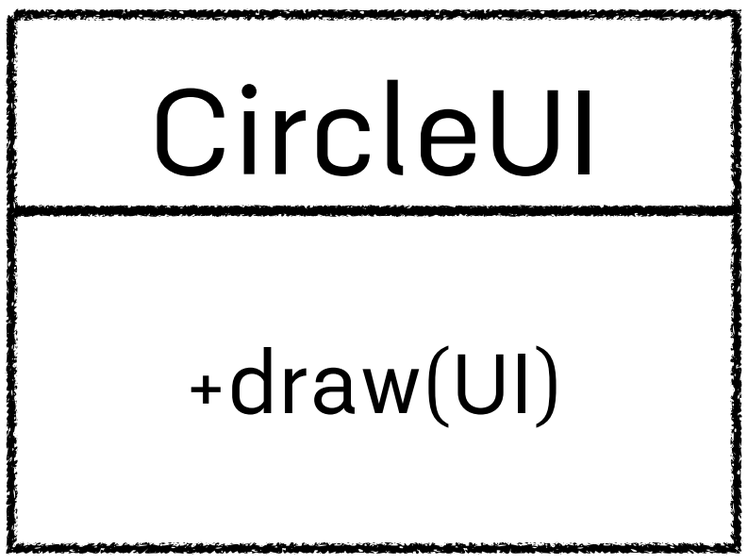
1. Single Responsibility Principle

Example



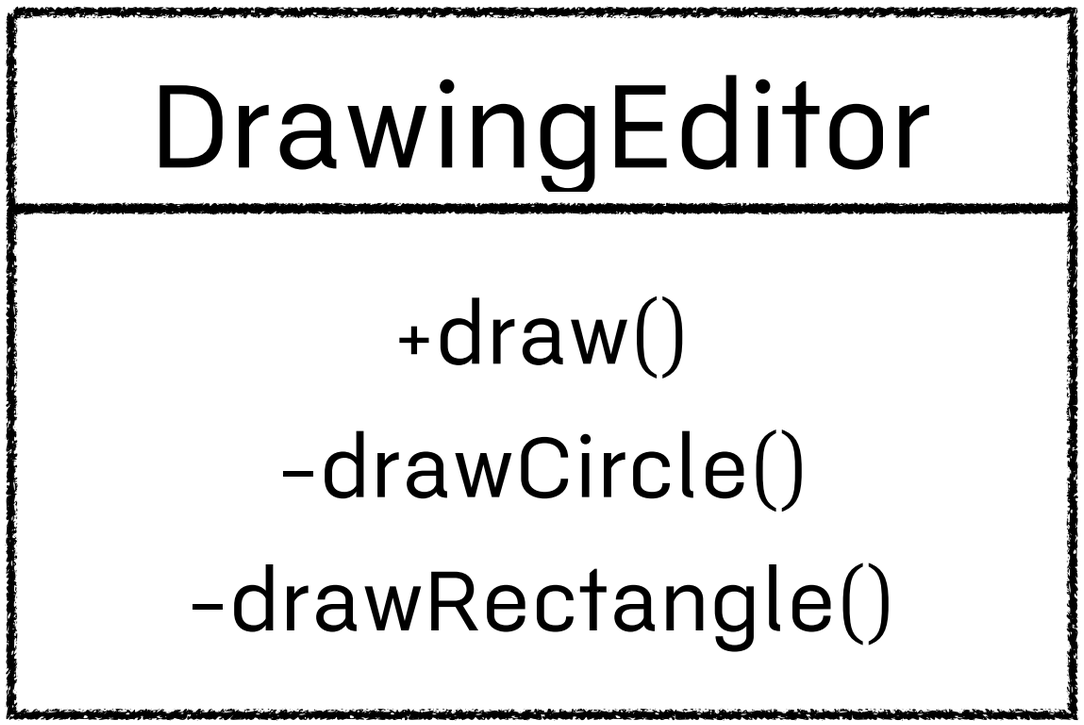
Example



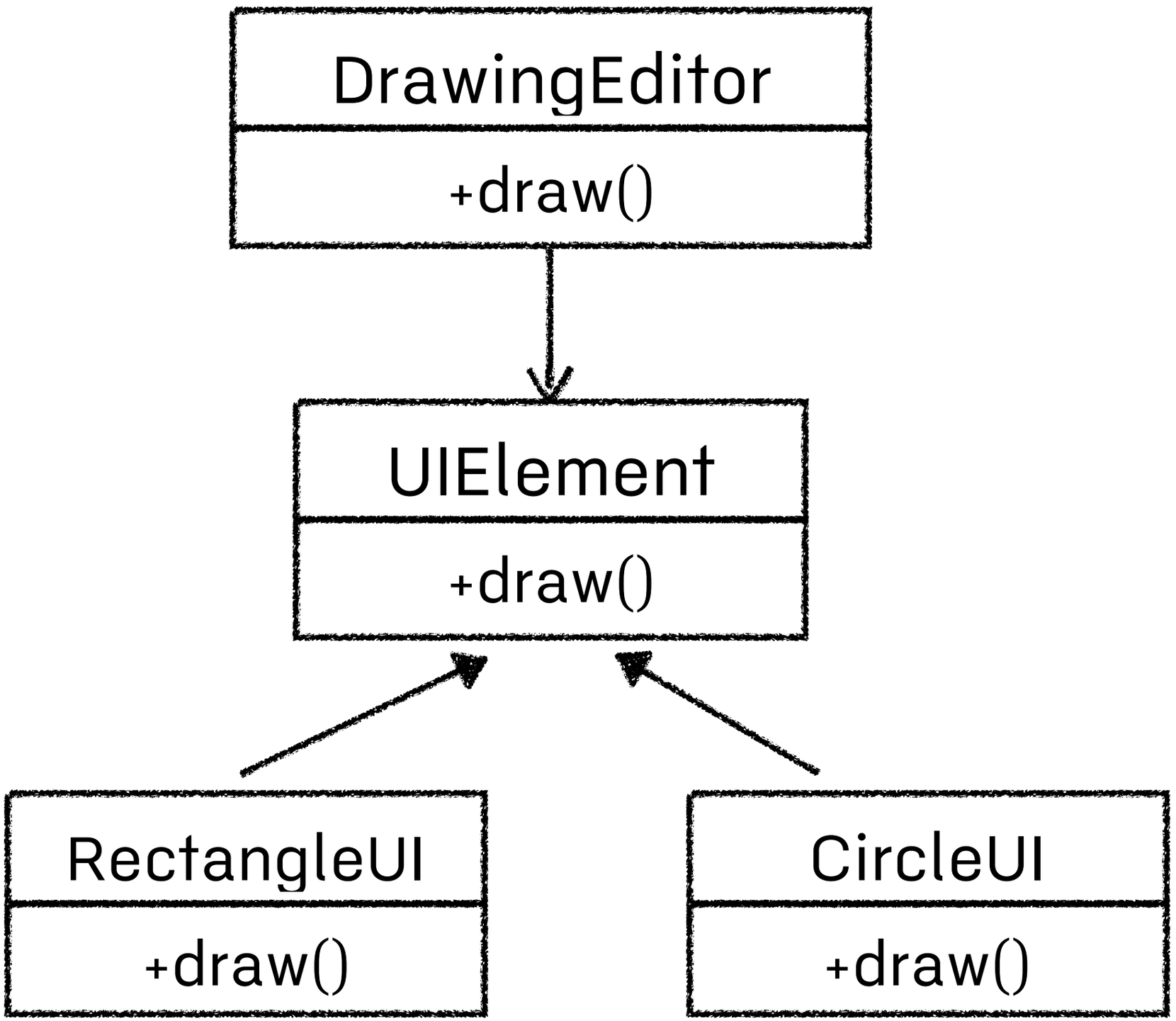


2. Open-Closed Principle

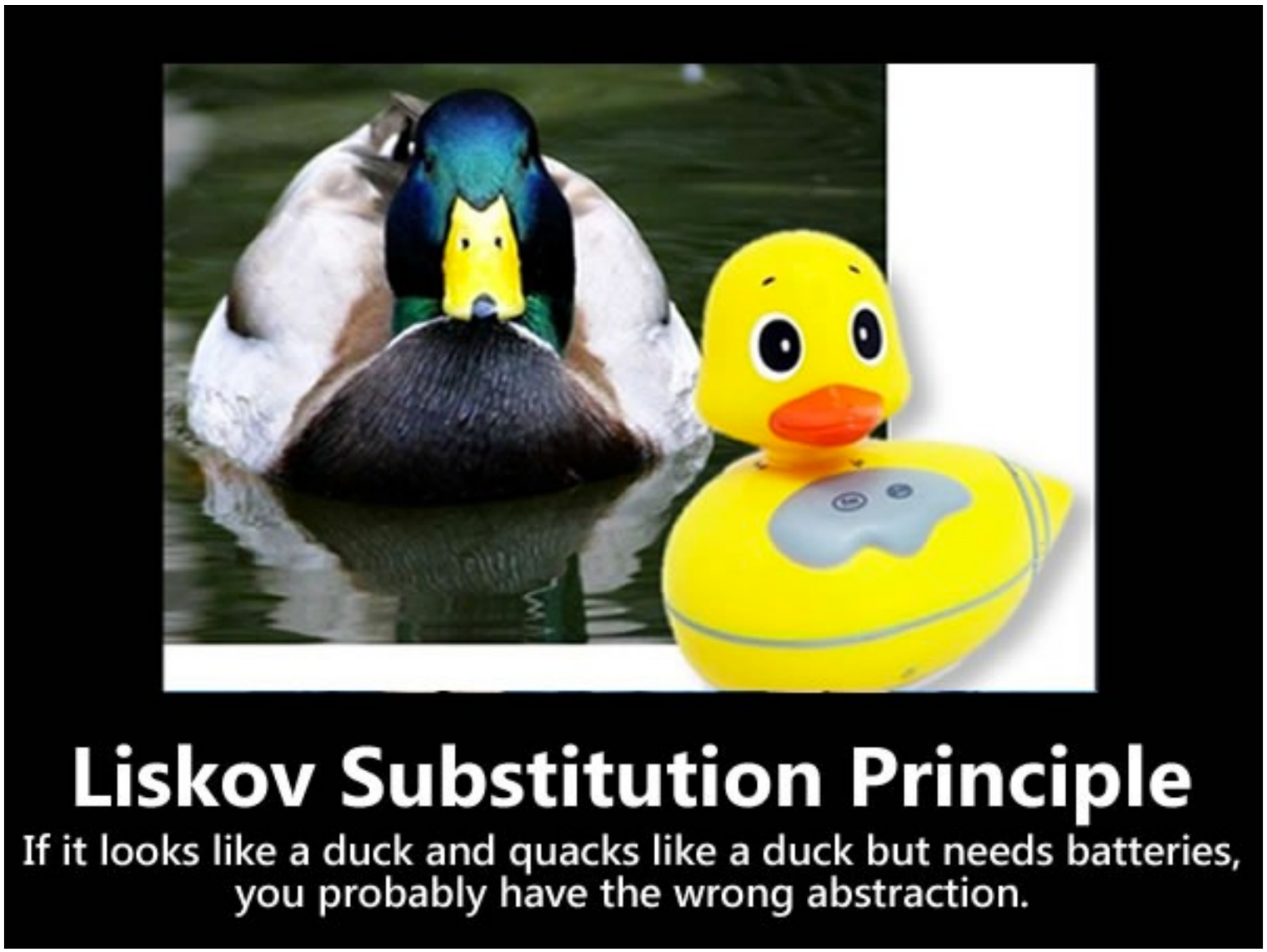
Example



Example

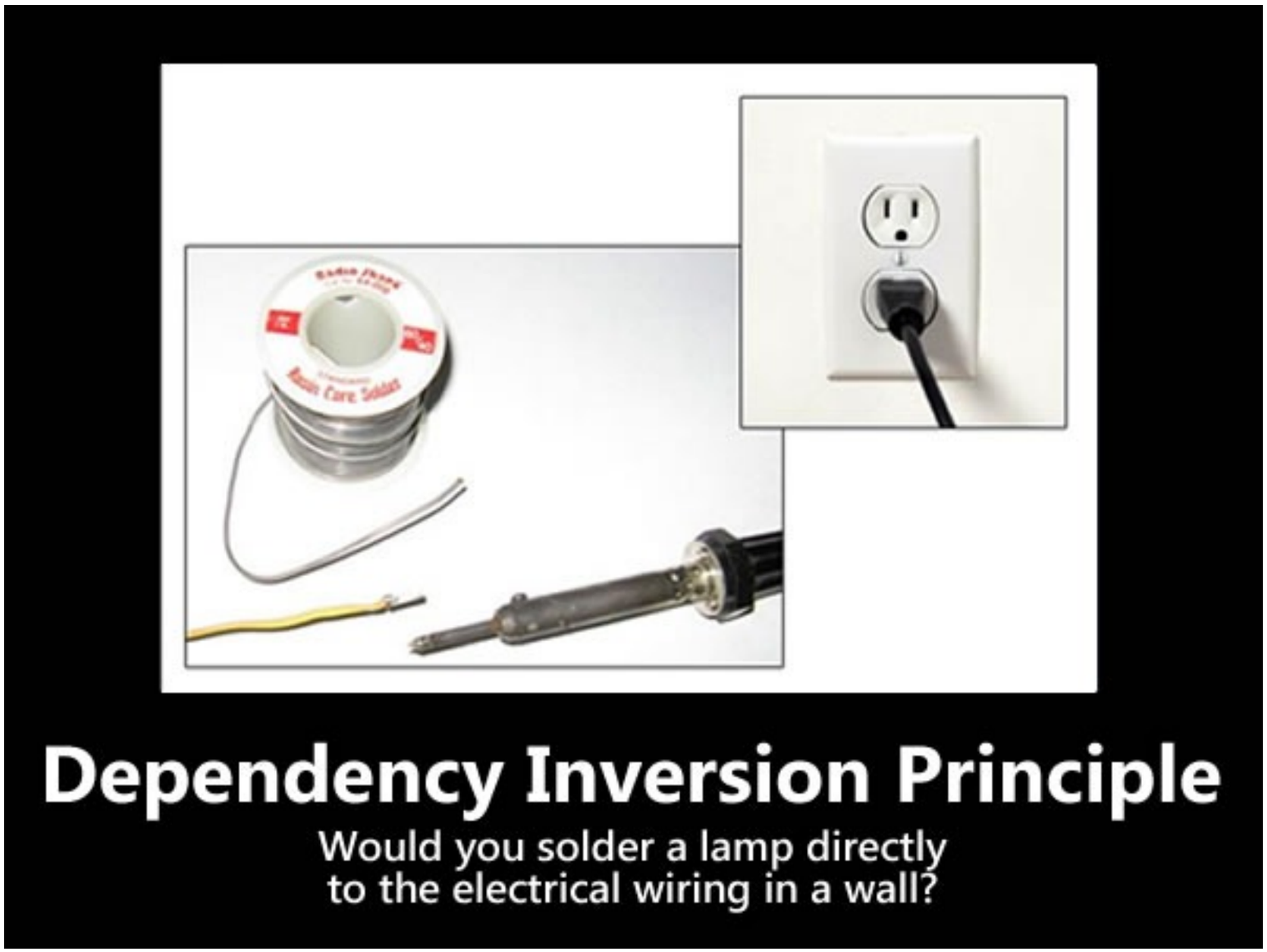


3. Liskov Substitution Principle



4. Interface Segregation Principle

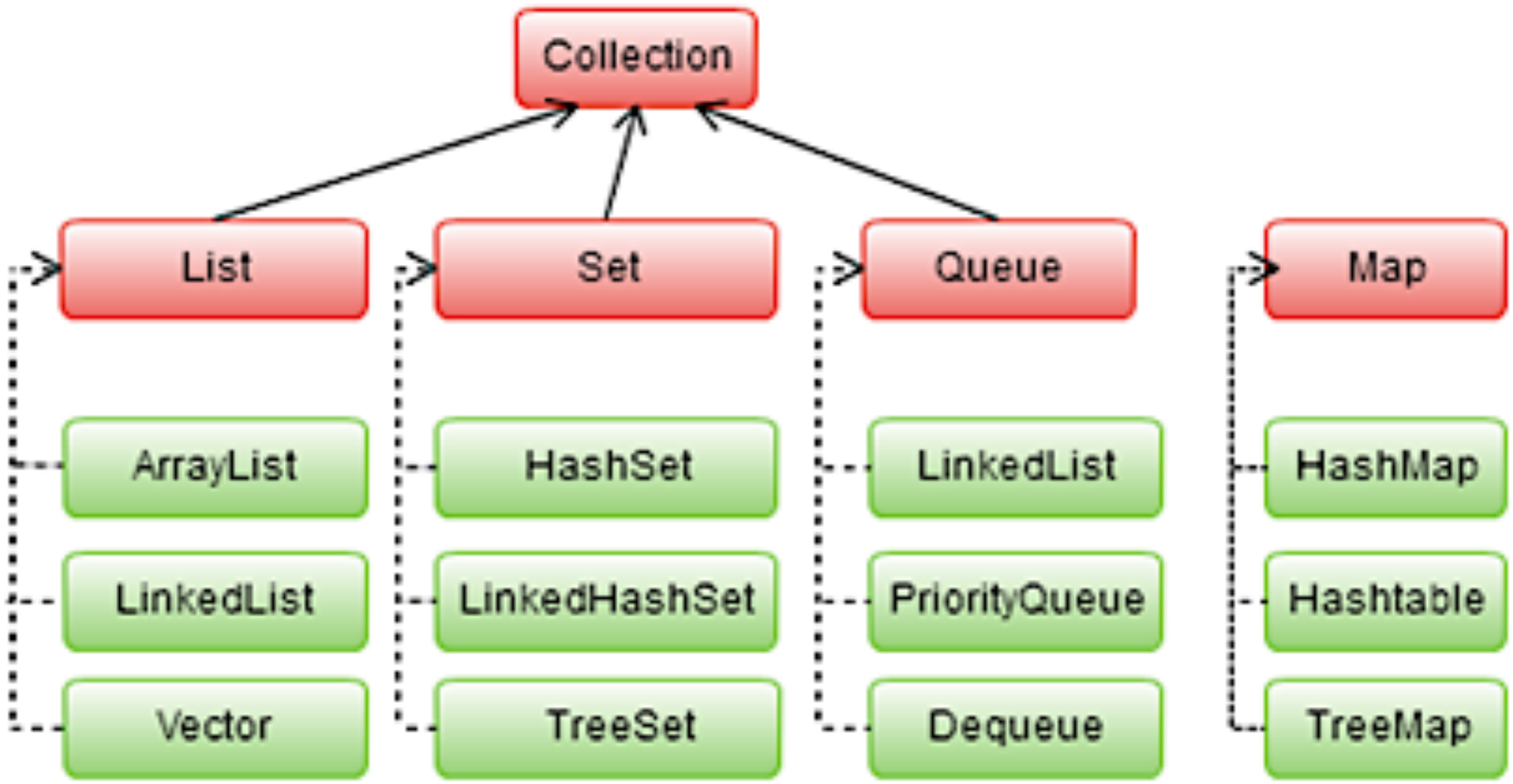
5. Dependency Inversion Principle



Java Collection Framework

https://docs.oracle.com/javase/8/docs/technotes/guides/collections/overview.html

Java Collection Framework



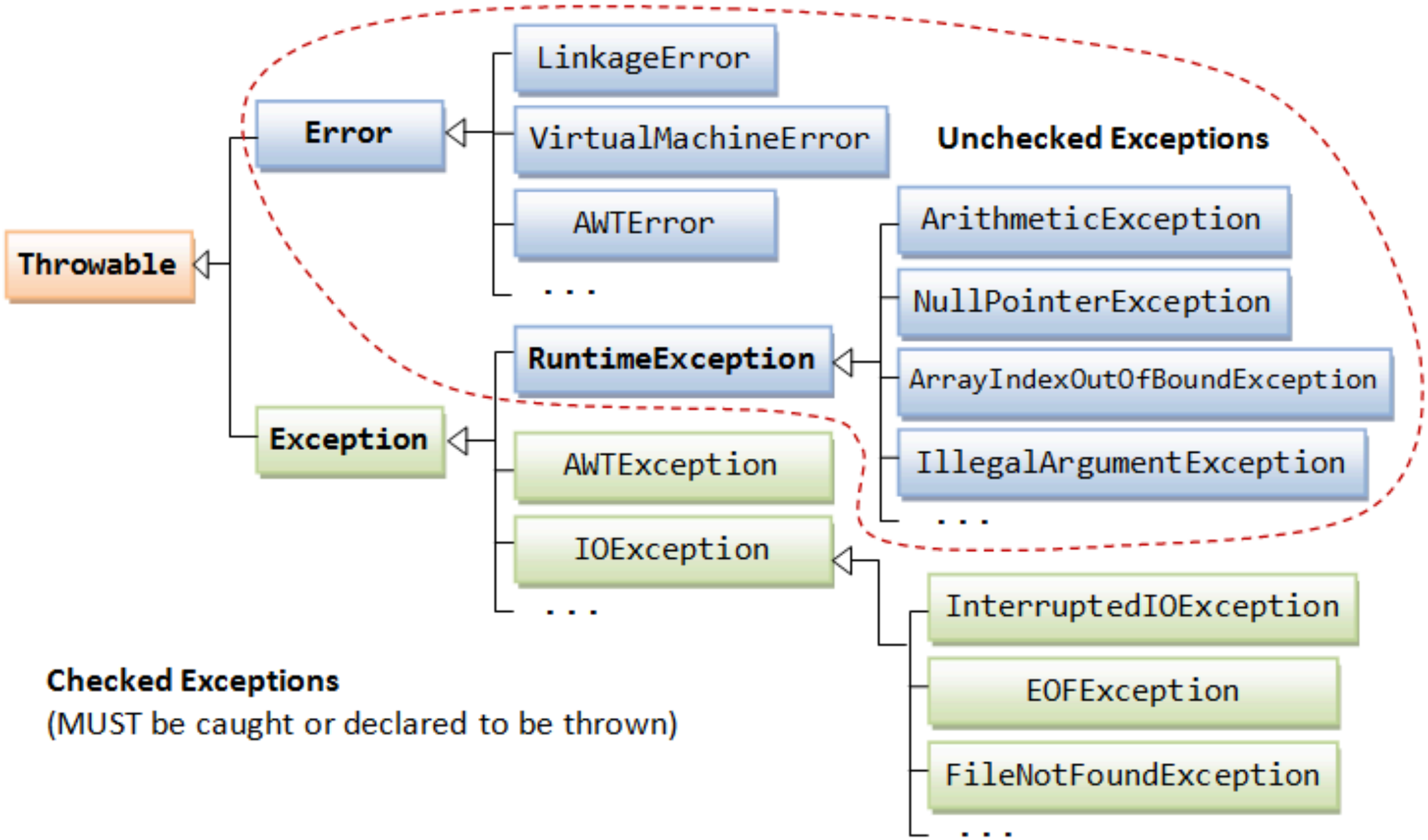
Java 8 working with Stream

Types of Error in Java

Types of Errors

- Compile-time errors
- Runtime errors
- Logical errors

Exception classes



Checked Exceptions
(MUST be caught or declared to be thrown)

Java Developer should learn 2018

https://dzone.com/articles/5-things-java-programmer-should-learn-in-2018

Coding everyday (2 hours)

Participate coding challenges

Try new version of Java

Learn Java performance tuning

Learn Spring Framework

Write Unit tests

Profiling your app once a month

Learn new JVM languages