Java Crash Course
Part III

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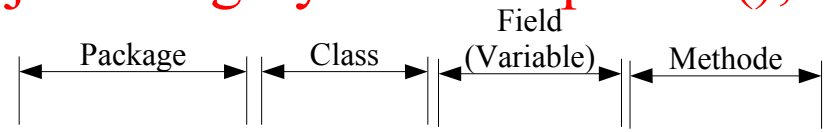
What you should know so far

- How to compile and start a Java application
- Java-Syntax and concepts
  - Variables
  - Operators
  - Control structures (if-then-else, different loops)
  - Conventions in Java
    (capital letter for classes, lowercase letter for methods,...)
  - Modifiers for classes, variables and methods
    (public, protected, private, static)
- Classes and objects
  - General idea
  - Java Syntax

Predefined functions in Java

- Java brings a huge database of predefined functions in several libraries
- Hierarchical organisation

java.lang.System.out.println();



- Classes with: `java.[..]` belong to the standard Java SDK package
- Using other packages as java.lang requires import of package: `import java.util.*;`

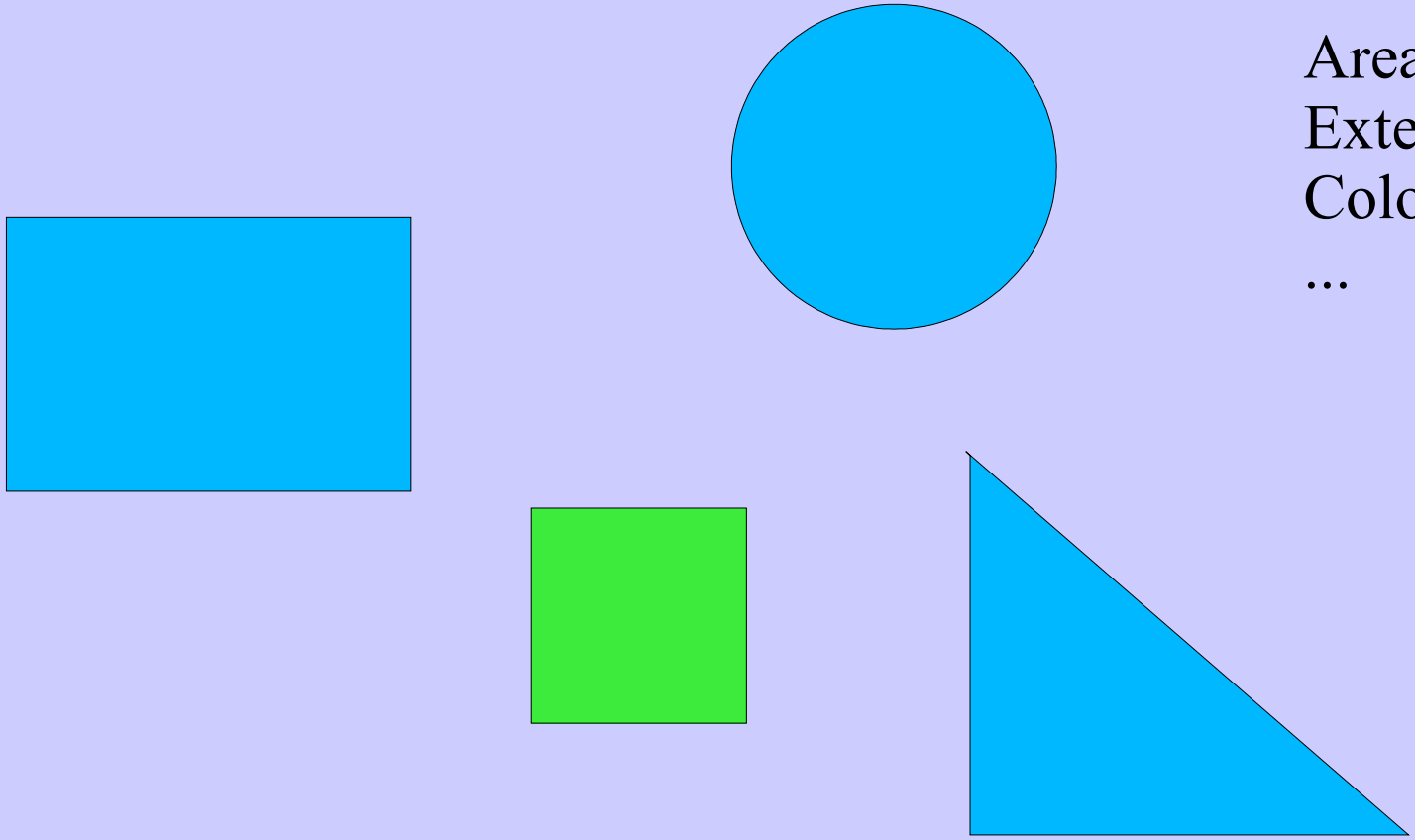
- See Java-Documentation
  http://coltrane.wiwi.hu-berlin.de/lehre/2004w/isi/javaDoku/api/index.html

Inheritance

- A subclass inherits behavior (variables and methods) from its ancestors
- From the subclass point of view the ancestors are called superclasses
- Advantages:
  - reusing of code
  - cleaner design
- Disadvantages:
  - sometimes more code to write
  - complex structures are hardly to understand
    -> **USE COMMENTS & document your program**

A more complex example

Think about geometric figures...



Area
Extend
Color
...

They all have things in common...
and other things uncommon

Creating hierarchies