

Voortgezet Programmeren

Lecture 7: Overview

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L1 Introduction, elementary concepts in OOP

- Practicalities
- Objects and classes
- Memory allocation and garbage collection
- Packages, arrays, ArrayList

L2 Errors, exceptions and streams

- Error handling
- Exception hierarchy
- Streams

L3 Programming by contract

- Data hiding
- Contract documentation
- Unit testing
- Class invariants
- Static variables and methods

L4 Interfaces and polymorphism

- Interfaces
- Casting
- Polymorphism
- Inner classes

L5 Inheritance

- Inheritance hierarchies
- Overriding
- Subclass construction
- Polymorphism and inheritance

L6 Java Collections Framework

- Object identity
- Generics
- Collections, Lists, Sets, Maps
- Iterators

What next?

- Design patterns (Gamma et al.)
- More tools of the trade (git(hub), mvn)
- Agile development (e.g. XP / Beck)
- Data structures & algorithms (Cormen et al., Knuth)

Donald Knuth's advice to young
people

