



Java and C# in depth

Carlo A. Furia, Marco Piccioni, Bertrand Meyer

Overview and
organizational issues



- Illustrate the Java and C# languages
 - Focus on language features
 - E.g., type system, inheritance, genericity, ...
 - Also some additional topics
 - E.g., concurrent programming, GUI, persistence, ...
- Highlight the key differences and similarities between Java and C#
- Illustrate some dark corners
- Practice (exercise sessions & project)

Course Approach



- Not a comprehensive language tutorial
 - Combines two “in depth” courses into one
 - Focus on key features
- Not an object-oriented programming introduction
- A side by side presentation of the various features without forcing symmetry at all costs
- Importance of hands-on experience
 - During exercise sessions (case study)
 - On your own, working on the project
 - On you own, experimenting with topics not covered in class

Prerequisites



- Some programming experience
- Familiarity with basic object-oriented concepts
 - You don't have to be an expert but need some previous exposure
 - We will do a very concise review of the key concepts before starting with Java and C#
- If you know already some Java or C#, some of the classes may be a bit of a repetition



- Language framework overview
- Basic types
- In-the-small features
- O-O features
 - encapsulation, inheritance, polymorphism, constructors, ...
 - genericity
 - exceptions
- Reflection mechanisms
- GUI programming
- Threads and concurrency
- Persistence
- Web services
- Java, C#, and Eiffel: an objective personal assessment (Bertrand Meyer)

Useful info



Lectures: Mondays, 13:15-15:00 (starting from today!)
Room IFW A 36

Assistants

- Group 1: Christian Estler (A-Fa), Room RZ F 21
- Group 2: Max (Yu) Pei (Fr-Kon), Room IFW C 31
- Group 3: Alexey Kolesnichenko and
Julian Tschannen (Kos-Z), Room IFW A 36

Exercise sessions: Mondays, 15:15-16:00

- Exercises will be corrected, not graded
- Please go to your group according to your last name

Final exam: 27th May 2013

- 50% grade: written exam (**yes** books/notes, **no** electronic devices)
- 50% grade: project



Slides

- Lecture slides
- Exercise sessions slides

Course webpage

- http://se.inf.ethz.ch/courses/2013a_spring/JavaCSharp/
- (with links to reading material)

Course forum

- Please sign up at piazza.com/ethz.ch/spring2013/252028400l
- Q & A
- Project-related material
 - Will come later in the semester