

# Exercise 1

1. Create a bookmark to the course homepage:

`http://sct.inf.ethz.ch/teaching/ws2006/KOOP/index.html`

2. Install the Java SDK that you can get from:

`http://java.sun.com/`  
`http://java.sun.com/j2se/1.5.0/download.jsp`

In addition an IDE is helpful:

`http://www.netbeans.org/`  
`http://www.emacswiki.org/`  
`http://www.vim.org/`  
`http://www.eclipse.org/`

3. Make yourself familiar with the online-documentation:

`http://java.sun.com/docs/index.html`  
`http://java.sun.com/j2se/1.5.0/docs/index.html`  
`http://java.sun.com/j2se/1.5.0/docs/api/`  
`http://java.sun.com/docs/books/tutorial/index.html`  
`http://javadocs.org/`

4. Get familiar with the command line tools `java`, `javac` and `javap`.
5. Develop a sample program, which prints out "Hello World!" on the console.
6. What is the name of the root class in the class hierarchy?
7. Is there multiple inheritance in Java?
8. What is the difference between classes and interfaces?
9. What is the difference between `int` and `Integer`?
10. What is the difference between overriding and overloading? Which one corresponds to redefine in Eiffel?
11. What does exception handling mean?
12. Is a `String` array a subtype of an `Object` array? Do you need any dynamic checks? What about Eiffel? Write down an example program in Java and Eiffel.
13. What is the Java Virtual Machine (JVM) and for what is it used?