

Tutorial 1 Introduction to Java technology

I. Instructions

Reading the provided slides for understanding about Java Virtual Machine (JVM). From then (1) to know how give java program with extensions (kind of library to share between programs), (2) to understand ClassLoader, when & how to custom it (step Loading – in Program execution life cycle).

1. Read the following sections of the Java tutorial trail “[The extension mechanism](#)” and complete the RectangleArea code example.
 - (a) Creating and using extensions
 - i. Installed extensions

Note: you can create a .jar file containing the code example using the regular zip compression tool. For example, to create the area.jar file of the example in the same directory as the RectangleArea.class file, on the Linux command line type:

```
zip cvf area.jar RectangleArea.class
```

2. Read the technical paper titled “Understanding the Java ClassLoader” by Greg Travis on IBM developerWorks to understand in more detail the role of Java's class loader. Follow the instructions to create the CompilingClassLoader and test it with the example classes given in the paper.

Don't worry if you don't fully understand the source code!

Note: make some changes to the console outputs that are produced by the test classes and run them again directly through the CCLRun class (i.e. without first re-compiling)

Answer these questions:

- (a) What are the features of the Java class loader?
- (b) Under what situations would we need to write a custom class loader?
- (c) List the main steps that need to be carried out in order to implement a custom class loader?
- (d) How is the CompilingClassLoader used? Why?