



Development

**Oracle® Certified Professional,
Java® SE 7 Programmer**

Java 7 Exam Requirements



- ✓ This module partially covers requirements:
 - ✓ Programmer Level I Exam
 - ✓ 1.2 Define the structure of a Java class
 - ✓ 1.3 Create executable Java applications with a main method
 - ✓ *1.4 Creating and using packages*
 - ✓ *1.4 Using package members*
 - ✓ Programmer Level II Exam
 - ✓ *1.7 Creating and using packages*
 - ✓ *1.7 Using package members*

javac

- ✓ The default compilation results in the class files being output to the same directory as the source.
- ✓ -d is used to specify an alternate root directory for the compiled code to output.
- ✓ If the directory specified with the -d option does not exist, an exception is thrown.

javac

- ✓ -classpath (-cp) may be used to add additional locations for the compiler to look for class files.
- ✓ -g option adds debugging information to the generated output.
- ✓ -source sets the code to a specific version for backwards compatibility
- ✓ -target generates class code for a specific VM version

java



- ✓ There are two items of interest for the exam: -classpath (-cp) and -Dprop=val.
- ✓ -classpath (-cp) is used to specify additional paths to search for classes, or indicate the root of our compiled bytecode.
- ✓ -Dprop=value is used to specify properties to be passed to the JVM for the invocation of the application.

\$CLASSPATH



- ✓ Search path for Java® classes
- ✓ Classpaths declared as command line options override the declared environment variable, but persist only for the length of the invocation.
- ✓ Searches for the first class that meets the criteria. If more than one class is found with the same fully qualified name, the first one found is used.

\$CLASSPATH



- ✓ `jre/lib/ext` is always included in the classpath. Do not put jars in here.
- ✓ `jre/lib/endorsed` is used to override classes in the default installation such as JAX-WS which updates more frequently than the JRE. Do not put jars in here unless you know what you are doing.
- ✓ Classpath values are separated by colons (:) on UNIX, and semi-colons (;) on Windows® platforms.

jar



- ✓ JavaARchiver packages class files into compressed zip files with a .jar extension.
- ✓ The default jar command will automatically create the /META-INF directory and a MANIFEST.MF file.

jar



- ✓ A jar file represents a file structure.
- ✓ A jar file is a zip file with additional structure.
- ✓ **-m** option is used to specify your own manifest file.
- ✓ **-M** does not create a manifest, nor a META-INF directory.

Static Imports



- ✓ Used to simplify code where appropriate by removing the class prefix from static members of a class
- ✓ Declared using the `import static` syntax.
- ✓ Only for static variables and methods.
- ✓ Ambiguously defined values cause compile time errors.

References



- ✓ Java™ Language Specification, Java SE 7 Edition, James Gosling, Bill Joy, Guy Steele, Gilad Bracha, and Alex Buckley.
- ✓ Sun® Certified Java™ Programmer for Java™ 6 Study Guide, Kathy Sierra, and Bert Bates
- ✓ Java Endorsed Standards Override Mechanism□
- ✓ Preparation for Java Programmer Language Certification