Java Platform Standard Edition 7 Documentation

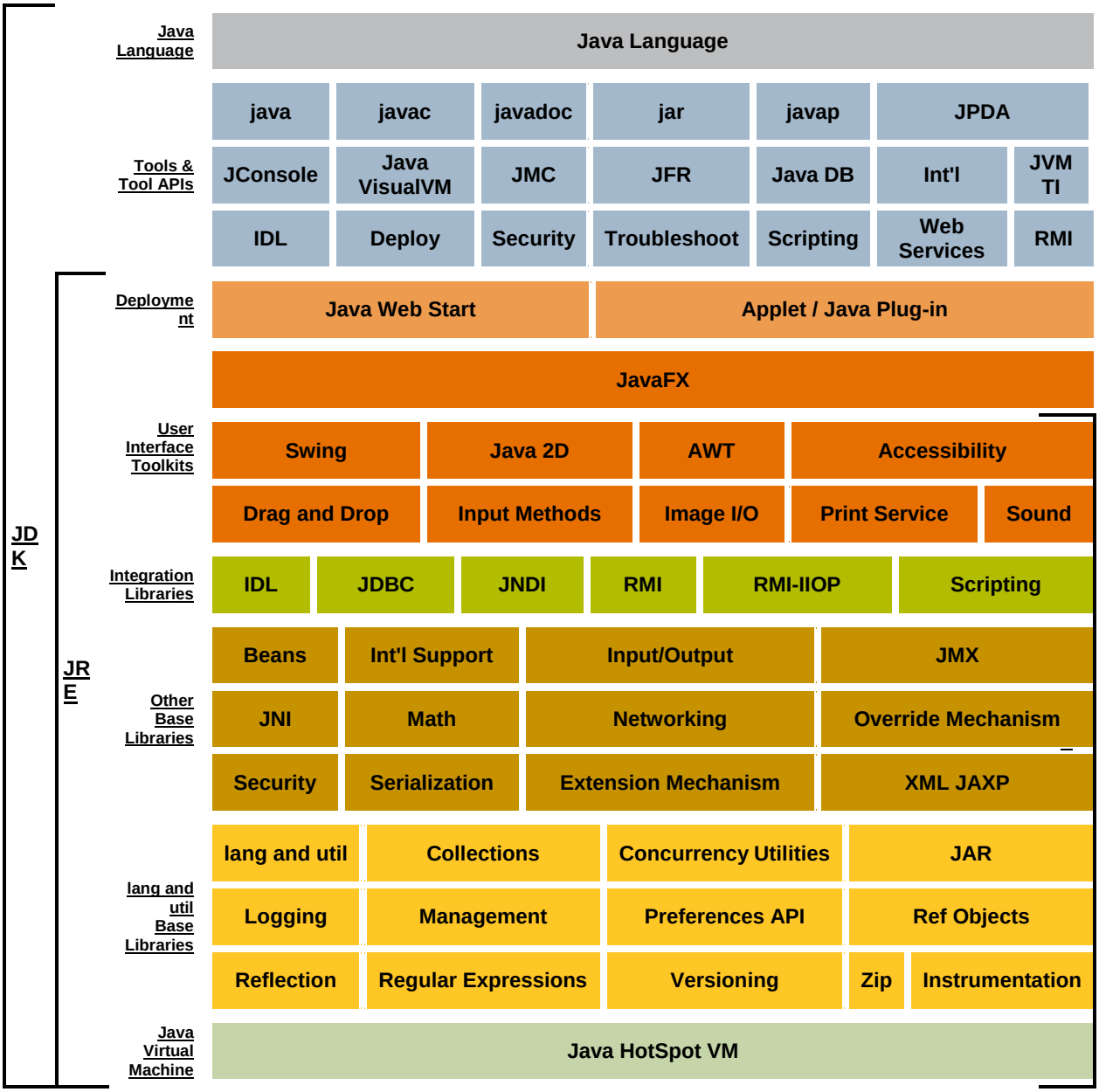
https://docs.oracle.com/javase/tutorial/

Oracle has two products that implement Java Platform Standard Edition (Java SE) 7: Java SE Development Kit (JDK) 7 and Java SE Runtime Environment (JRE) 7.

JDK 7 is a superset of JRE 7, and contains everything that is in JRE 7, plus tools such as the compilers and debuggers necessary for developing applets and applications. JRE 7 provides the libraries, the Java Virtual Machine (JVM), and other components to run applets and applications written in the Java programming language. Note that the JRE includes components not required by the Java SE specification, including both standard and non-standard Java components.

The following conceptual diagram illustrates the components of Oracle's Java SE products:

Description of Java Conceptual Diagram



The Java™ Tutorials

https://docs.oracle.com/javase/tutorial/

The Java Tutorials have been written for JDK 8. Examples and practices described in this page don't take advantage of improvements introduced in later releases and might use technology no longer available.
See Java Language Changes for a summary of updated language features in Java SE 9 and subsequent releases.
See JDK Release Notes for information about new features, enhancements, and removed or deprecated options for all JDK releases.

The Java Tutorials are practical guides for programmers who want to use the Java programming language to create applications. They include hundreds of complete, working examples, and dozens of lessons. Groups of related lessons are organized into "trails".

Trails Covering the Basics

These trails are available in book form as *The Java Tutorial, Sixth Edition*. To buy this book, refer to the box to the right.

- Getting Started — An introduction to Java technology and lessons on installing Java development software and using it to create a simple program.
- Learning the Java Language — Lessons describing the essential concepts and features of the Java Programming Language.
- Essential Java Classes — Lessons on exceptions, basic input/output, concurrency, regular expressions, and the platform environment.
- Collections — Lessons on using and extending the Java Collections Framework.
- Date-Time APIs — How to use the `java.time` pages to write date and time code.
- Deployment — How to package applications and applets using JAR files, and deploy them using Java Web Start and Java Plug-in.
- Preparation for Java Programming Language Certification — List of available training and tutorial resources.

Creating Graphical User Interfaces

- Creating a GUI with Swing — A comprehensive introduction to GUI creation on the Java platform.
- Creating a JavaFX GUI — A collection of JavaFX tutorials.

Specialized Trails and Lessons

These trails and lessons are only available as web pages.

- Custom Networking — An introduction to the Java platform's powerful networking features.
- The Extension Mechanism — How to make custom APIs available to all applications running on the Java platform.
- Full-Screen Exclusive Mode API — How to write applications that more fully utilize the user's graphics hardware.
- Generics — An enhancement to the type system that supports operations on objects of various types while providing compile-time type safety. Note that this lesson is for advanced users. The Java Language trail contains a Generics lesson that is suitable for beginners.

- Internationalization — An introduction to designing software so that it can be easily adapted (localized) to various languages and regions.
- JavaBeans — The Java platform's component technology.
- JAXB — Introduces the Java architecture for XML Binding (JAXB) technology.
- JAXP — Introduces the Java API for XML Processing (JAXP) technology.
- JDBC Database Access — Introduces an API for connectivity between the Java applications and a wide range of databases and data sources.
- JMX— Java Management Extensions provides a standard way of managing resources such as applications, devices, and services.
- JNDI— Java Naming and Directory Interface enables accessing the Naming and Directory Service such as DNS and LDAP.
- Reflection — An API that represents ("reflects") the classes, interfaces, and objects in the current Java Virtual Machine.
- RMI — The Remote Method Invocation API allows an object to invoke methods of an object running on another Java Virtual Machine.
- Security — Java platform features that help protect applications from malicious software.
- Sockets Direct Protocol — How to enable the Sockets Direct Protocol to take advantage of InfiniBand.
- Sound — An API for playing sound data from applications.
- 2D Graphics — How to display and print 2D graphics in applications.