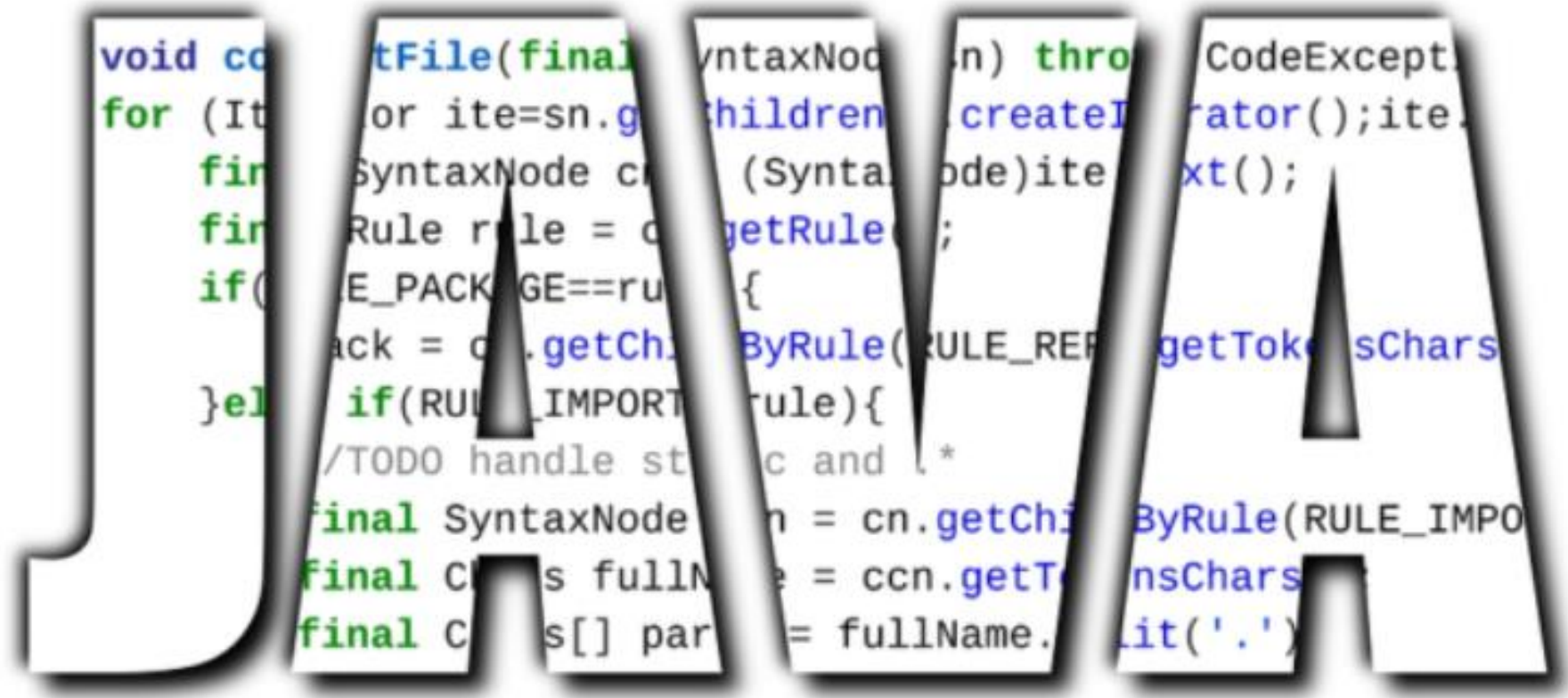# ПРИЛОЖНО ПРОГРАМИРАНЕ на JAVA

лектор: доц. д-р Мария Маринова

- Java е обектно-ориентиран
- работи чрез виртуална машина
- има широко приложение и развитие на Android
- предлага достъпни "open source" библиотеки за девелопъри, които се нуждаят от готови кодове или допълнителна информация

Какво е Java ?

- **General-purpose**
- **Object-oriented**
- **Platform independent**   **Write Once Run Anywhere (WORA)**
- **Concurrent**
- **Very fast**

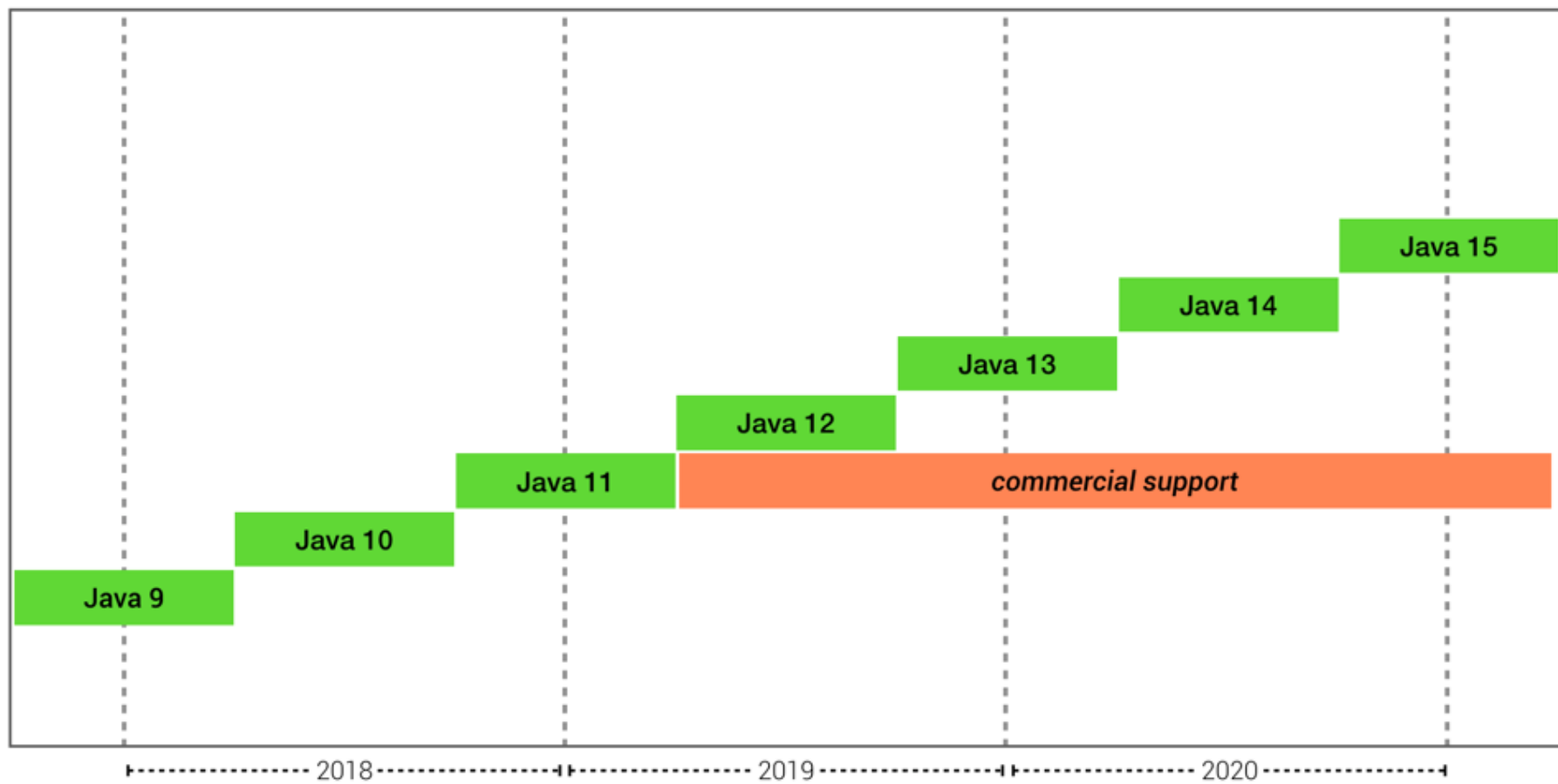http://liveexample.pearsoncmg.com/etc/JavaCharacteristics.pdf

Предимства на е Java?

- Използва вече познатия синтаксис от други езици;
- Изчистен и лесен за използване:
  - Автоматично се заделя и освобождава памет
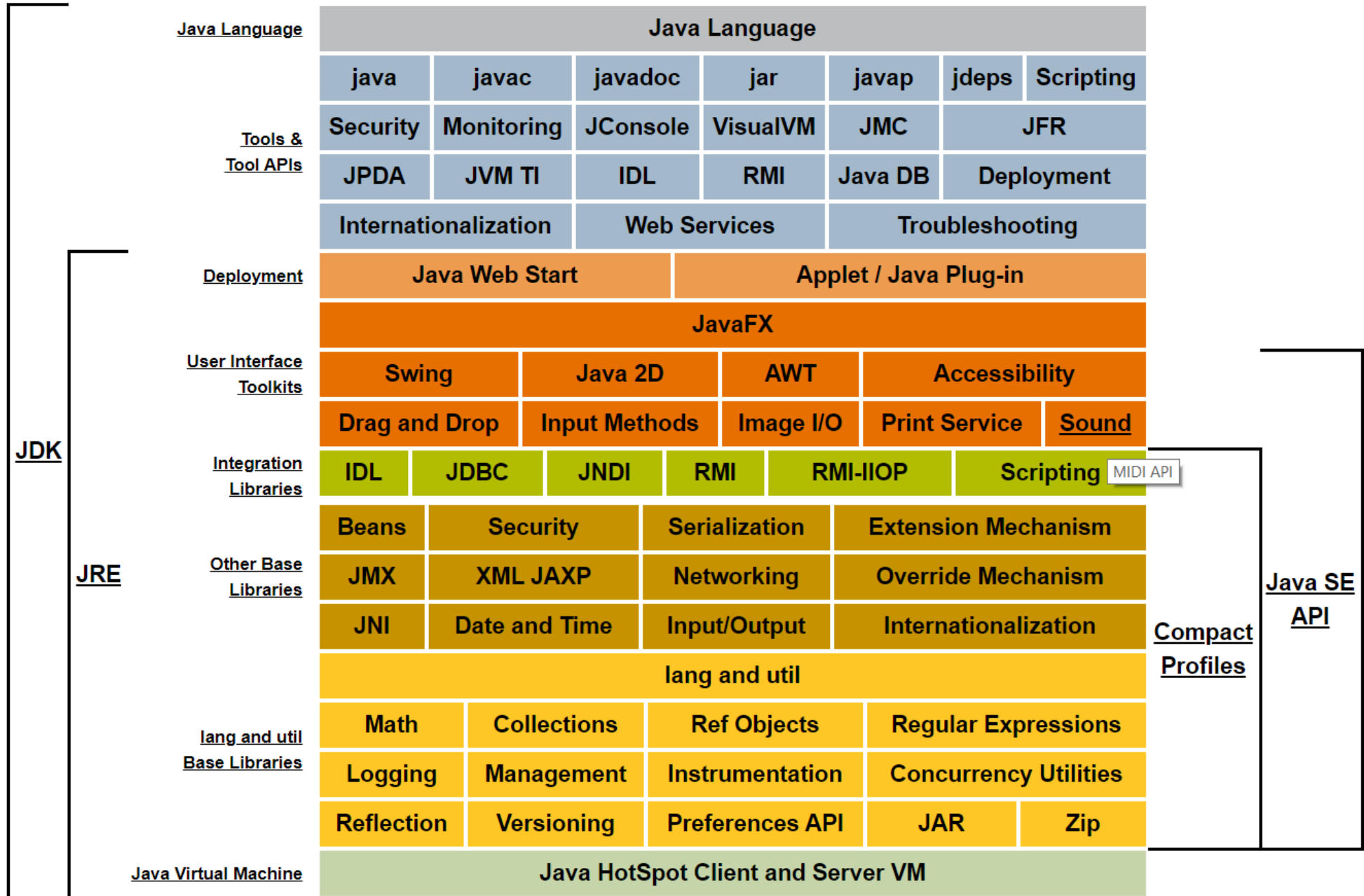- Защитен

Съкратени имена на дистрибуции на Java

Official Release Name	Nickname
JDK 1.0.x	Java 1.0
JDK 1.1.x	Java 1.1
Java 2 Platform, Standard Edition, v1.2	Java 2
Java 2 Platform, Standard Edition, v1.3	Java 3
Java 2 Platform, Standard Edition, v1.4	Java 4
Java 2 Platform, Standard Edition, v5.0	Java 5
Java Platform, Standard Edition 6	Java 6
Java Platform, Standard Edition 7	Java 7
Java Platform, Standard Edition 8	Java 8
Java Platform, Standard Edition 9	Java 9

Version	Year	New Language Features	Number of Classes and Interfaces
1.0	1996	The language itself	211
1.1	1997	Inner classes	477
1.2	1998	The `strictfp` modifier	1,524
1.3	2000	None	1,840
1.4	2002	Assertions	2,723
5.0	2004	Generic classes, "for each" loop, varargs, autoboxing, metadata, enumerations, static import	3,279
6	2006	None	3,793
7	2011	Switch with strings, diamond operator, binary literals, exception handling enhancements	4,024
8	2014	Lambda expressions, interfaces with default methods, stream and date/time libraries	4,240
9	2017	Modules, miscellaneous language and library enhancements	6,005

Java 15

Java 14

Java 13

Java 12

Java 11

commercial support

Java 10

Java 9

2018

2019

2020

Oracle Java SE Support Roadmap[*][†]				
Release	**GA Date**	**Premier Support Until**	**Extended Support Until**	**Sustaining Support**
6	December 2006	December 2015	December 2018	Indefinite
7	July 2011	July 2019	July 2022[*****]	Indefinite
8[**]	March 2014	March 2022	March 2025	Indefinite
9 (non-LTS)	September 2017	March 2018	Not Available	Indefinite
10 (non-LTS)	March 2018	September 2018	Not Available	Indefinite
11 (LTS)	September 2018	September 2023	September 2026	Indefinite
12 (non-LTS)	March 2019	September 2019	Not Available	Indefinite
13 (non-LTS)	September 2019[***]	March 2020	Not Available	Indefinite

	Java Language
Java Language	Java Language

Tools & Tool APIs						
java	javac	javadoc	jar	javap	jdeps	Scripting
Security	Monitoring	JConsole	VisualVM	JMC	JFR	
JPDA	JVM TI	IDL	RMI	Java DB	Deployment	
Internationalization		Web Services		Troubleshooting		

Deployment

Java Web Start	Applet / Java Plug-in

JavaFX

User Interface Toolkits			
Swing	Java 2D	AWT	Accessibility
Drag and Drop	Input Methods	Image I/O	Print Service / Sound

Integration Libraries					
IDL	JDBC	JNDI	RMI	RMI-IIOP	Scripting MIDI API

Other Base Libraries			
Beans	Security	Serialization	Extension Mechanism
JMX	XML JAXP	Networking	Override Mechanism
JNI	Date and Time	Input/Output	Internationalization

lang and util

lang and util Base Libraries			
Math	Collections	Ref Objects	Regular Expressions
Logging	Management	Instrumentation	Concurrency Utilities
Reflection	Versioning	Preferences API	JAR / Zip

Java Virtual Machine

Java HotSpot Client and Server VM

Left brackets: **JDK**, **JRE**

Right brackets: **Compact Profiles**, **Java SE API**

Who is Using it?

(Open Source)

Google · in · Apple

Apache Solr

NETFLIX · amazon.com

hadoop

mahout

ebay

Mars Rover Spirit

Motivation

Sun microsystems

1991

The Green Team
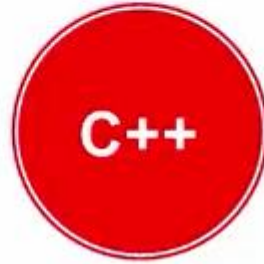
Next Wave in Computing?

Цели

- Да консумира по-малко памет
- Да предоставя готови библиотеки със софтуерни компоненти
- Да осигури сигурност
- Да поддържа multithreading

Birth of Java

Since 1995, Java has changed our world . . . and our expectations..

C++

(Oak)

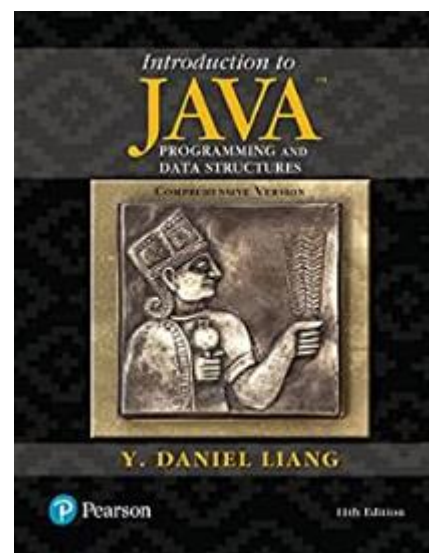

James Gosling

*7 & Initial Failure ...
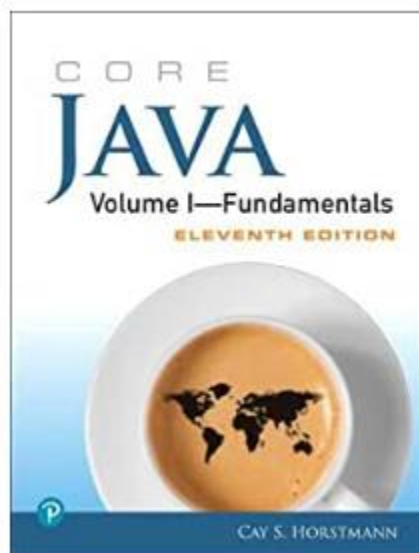
gosling star7

Sep. 92

Cable TV Industry – *Not Interested!*

Java среща WWW

- Pre-Java – Static HTML
- HotJava browser:
  - HTML + applets – dynamic
  - Java се инсталира в browser
  - Аплетите са платформено независими
- Netscape Navigator - 1996

Препоръчителна литература:
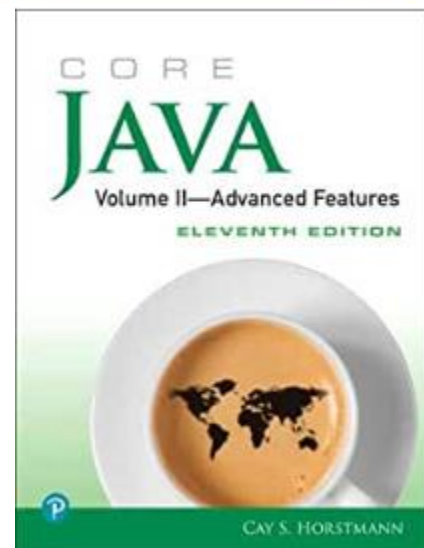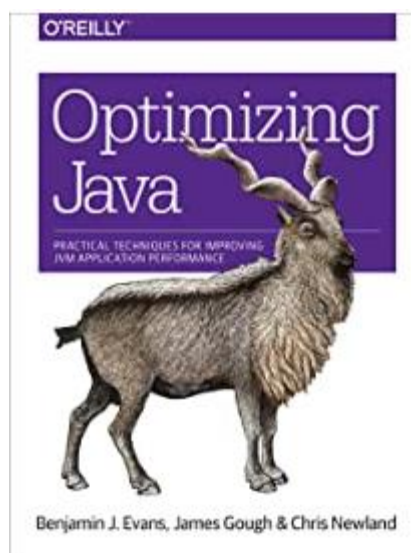
- https://docs.oracle.com/javase/tutorial/
- https://education.oracle.com/oracle-certified-professional-java-se-11-developer/trackp_815