

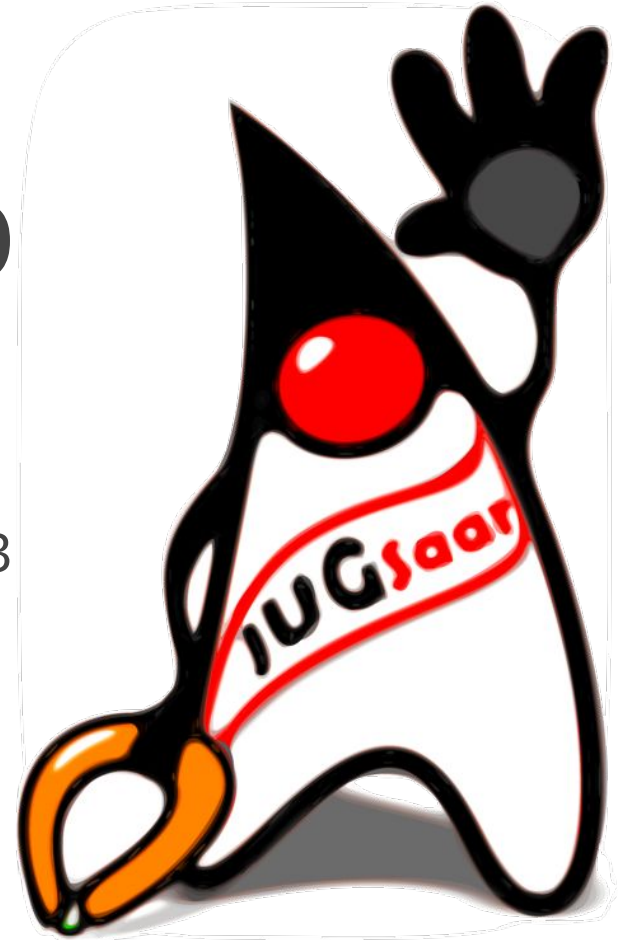
# Java User Group Saarland

Java After X - New Features in Java 11,12, 13

Thomas Darimont

47. Meeting

*30. July 2019*



*Sponsored by*

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# Time-Based Release Versioning

A release every 6 months

March 2014: **Java 8 LTS**

Sept 2017: Java 9

March 2018: Java 10

Sept 2018: **Java 11 LTS**

March 2019: Java 12

Sept 2019: Java 13

...

March 2021: Java 16

Sept 2021: **Java 17 LTS**

# Java 11

- September 2018
- [Latest Spec](#) [API Diff](#)
- Major new Features
  - **Syntax**
    - **Local-Variable Syntax for Lambda Parameters**
  - **API Improvements**
    - **String, Functional Interfaces, Files**
    - **HTTP Client (Standard)**
  - **Updated Crypto**
    - **New Algorithms & Transport Layer Security (TLS) 1.3**
  - **JVM Features**
    - **Epsilon Garbage Collector**
    - **Dynamic Class-File Constants & Nest-Based Access Control**
  - **Deprecations & Removals**
    - **Pack200 API & Nashorn JavaScript Engine deprecated**
    - **Java EE, CORBA and JavaFX Modules removed**

Java 11

DEMO

# Java 11 Summary

- Conservative LTS Release (could have been a 9.2...)
- JavaFX and many other JPMS modules were removed
  - Also aggregator module `java.se.ee` was removed
  - Workarounds: [Replacements for missing JPMS Modules](#)
- Flight recorder OpenSourced (former Commercial feature)
  - Also [JMC \(Java Missing Control\) was OpenSourced](#)

# Java 12

- March 2019
- [Latest Spec](#) [API Diff](#)
- Major new Features
  - **Language Preview Feature**
  - **Switch Expressions (Preview)**
  - **Low-Pause Garbage Collector Shenandoah**
  - JVM Constants API
  - JMH [Micro Benchmarking Harness part of OpenJDK](#)

Java 12

DEMO

# Java 12 Summary

- Small intermediate release like Java 10
  - Will be replaced by Java 13 in September 2019
- New switch expression can be very handy



# Java 13

- Planned for September 2019
- [Latest Spec](#) [API Diff](#)
- Major new Features
  - **Switch Expressions (Preview)**
  - **Text Blocks (Preview)** (Multi-line string literals)
  - [Reimplement the Legacy Socket API](#)

Java 13

DEMO

# Java 13 Summary

- Incremental release
- Fun to try out new language features
- [Early access builds available here](#)

# Java Almanac

- “Information about the history of Java primarily from a technical point of view”
- <https://github.com/marchof/java-almanac>

## New APIs in Java 12

Comparing 12.0.2-open with 11.0.4.hs-adpt.

📦 java.base		
📦 java.io		
🔗 FileInputStream		
• finalize()	removed	
🔗 FileOutputStream		
• finalize()	removed	
🔗 InputStream		
• skipNBytes(long)	added	
📦 java.lang.constant	added	
📦 java.lang.invoke		
🔗 MethodHandle	+ implements Constable	
• describeConstable()	added	
🔗 MethodType	+ implements TypeDescriptor.OfMethod	+ implements Constable
• describeConstable()	added	
• descriptorString()	added	
🔗 VarHandle, VarHandleDesc	added	
🔗 VarHandle	+ implements Constable	
• describeConstable()	added	
• toString()	added	
🔗 TypeDescriptor.OfField	added	

# Java Full Throttle

1 person clipped this slide

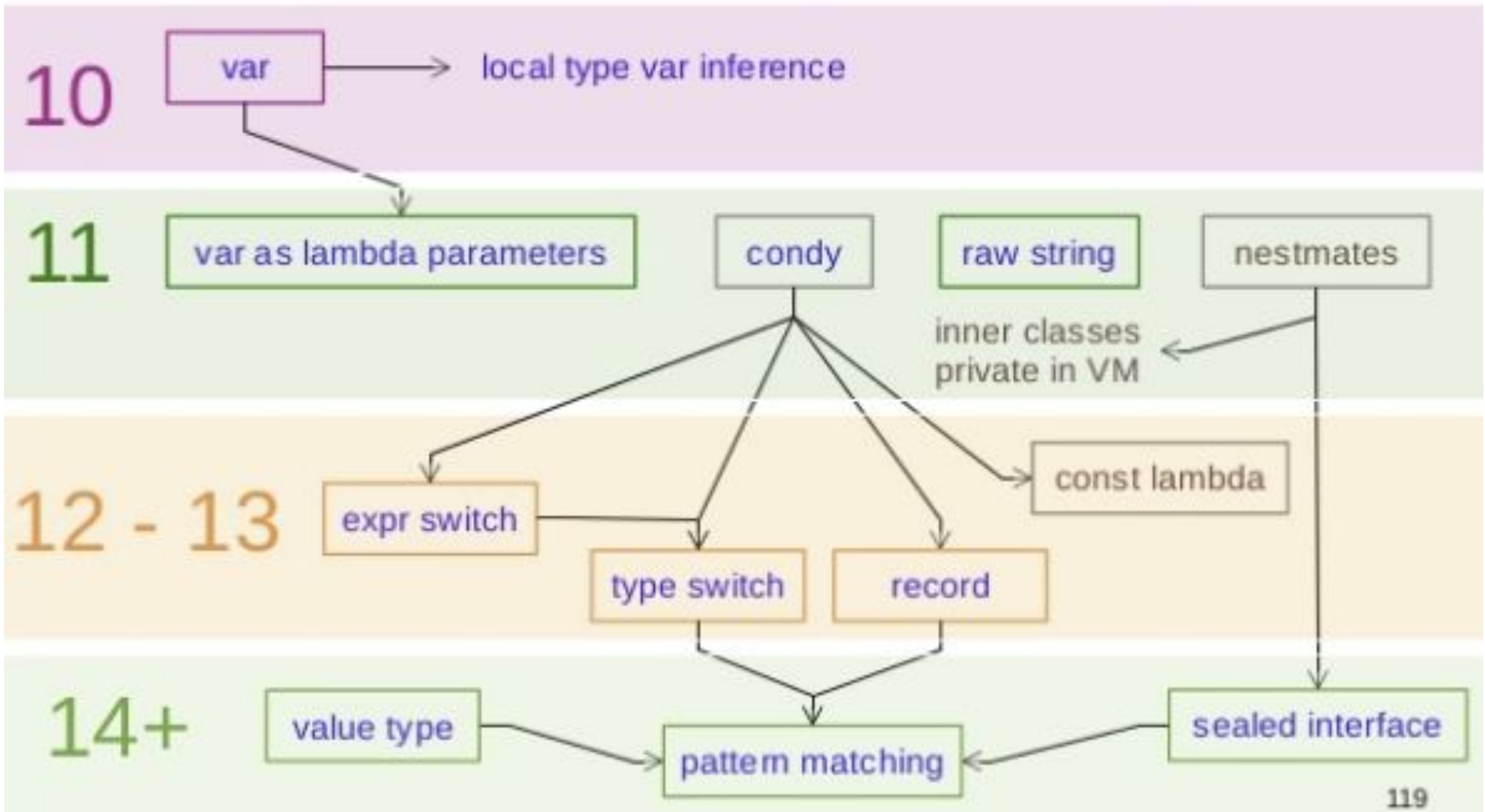
Clip slide



Java Full Throttle

726 views

# Java 14 and beyond



# Try it yourself!

<https://github.com/forax/rivieradev-deepdive>

JDK Builds with latest version of loom, lworld, record

forax / rivieradev-deepdive

lines 2639

Watch

1

Unstar

6

Fork

0

Code

Issues 0

Pull requests 0

Actions

Projects 0

Wiki

Security

Insights

A deepdive on valhalla, loom and amber

19 commits

1 branch

0 releases

1 contributor

MIT

Branch: master

New pull request

Create new file

Upload files

Find File

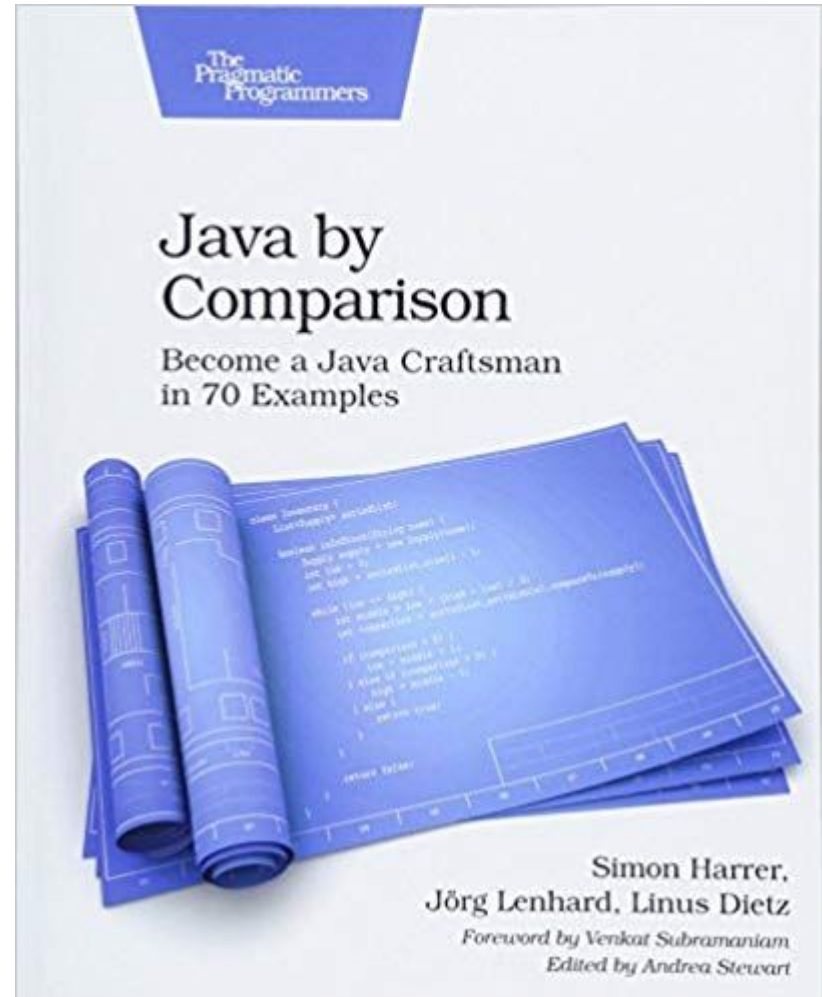
Clone or download

forax records doesn't support short syntax (; instead of {}) anymore

Latest commit 100e5dc 9 days ago

loom	fix package declarations	last month
lworld	move to use source version 14	last month
record	records doesn't support short syntax (; instead of {}) anymore	9 days ago

# Book recommendations





**Thank you**

Questions?

