



JCP Executive Committee Quality Group & Java Playground

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Java Developer Relations
June 2024

Agenda

1. OpenJDK Quality Group
2. Java Playground



OpenJDK Quality Group

Quality Outreach Program

- Promote the testing of FOSS projects with the latest early-access OpenJDK JDK builds
- Raise awareness on upcoming changes

OpenJDK

Quality Outreach Program

- Promote the testing of FOSS projects with the latest early-access OpenJDK JDK builds
 - Identify and address potential issues as early as possible
 - Bandwidth & knowledge
 - Raise awareness on upcoming changes
 - Anticipate potential issues as early as possible
- ⇒ Improve the Java platform quality
- ⇒ Evolve mindsets from Reactive to Proactive

OpenJDK

How?



- Recruit FOSS projects
- Mail Blast ⇒ Feedback ⇒ Bugs
- Regular QO mail blast
 - News & builds updates
 - Heads-ups & call-to-action
 - <https://inside.java/headsup/>
 - Latest blast
 - <https://mail.openjdk.org/pipermail/quality-discuss/2024-June/001135.html>
- JBS
 - <https://bugs.openjdk.org/browse/JDK-8319782?jql=labels=apache-lucene-found>

Awareness

- July 2023 - JDK 21 & JDK 22
 - Note if implicit annotation processing is being used
- October 2023 - JDK 22
 - No note is emitted, and annotation processors are not run, restore the previous behavior with ``-proc:full java``
 - Backed out!
- June 2024 - JDK 23
 - Changes Default Annotation Processing Policy
 - javac requires an additional command-line option to enable annotation processing
 - Backported

... besides that annotation processor change tripping us up, we're green on JDK23EA. Though I had hoped to see ... so that the annotation processor behavior change would be more visible...

~180 Participating Projects



- Apache Ant
- Apache Derby
 - <https://lists.apache.org/thread/7v9r3gmcjsqr78v99xdvvp2q7h892odq>
- Apache Lucene
 - <https://www.elastic.co/jp/blog/lucene-jvm-bugs>
- Apache Tomcat
- Eclipse Collections
 - <https://donraab.medium.com/the-benefits-of-participating-in-the-openjdk-quality-outreach-program-590b86382f20>
- Eclipse Hibernate
- Junit 5
- MyBatis
- ...



Inside Java

News and views from members of the Java team at Oracle

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The Arrival of Java 22!

[Sharat Chander](#) on March 19, 2024

JDK 22 is Now Available!

Oracle is pleased to announce the general availability of JDK 22 for developers, enterprises, and end-users. This release includes several new features and improvements, including the new `String` methods `stripTrailing()` and `strip()`, the new `String` method `stripPrefix()`, and the new `String` method `stripSuffix()`. For more information, please visit the [JDK 22 release page](#).

Additionally, through the [OpenJDK Quality Outreach](#) program we would like to thank the following FOSS projects that provided excellent feedback on testing Java 22 early access builds to help improve the quality of the release:

- Apache Syncope (Francesco Chicchiriccò)
- Apache Tomcat (Mark Thomas)
- ApprovalTests.Java (Lars Eckart)
- AssertJ (Stefano Cordio)
- Avaje (Josiah Noel)
- Jetty (Simone Bordet)
- MyBatis (Iwao Ave)
- Parallel Collectors (Grzegorz Piwowarek)
- RxJava (David Karnok)

Benefits

- Recognition
- Improved projects quality
- Improved OpenJDK quality
- OpenJDK author role (*)



Resources

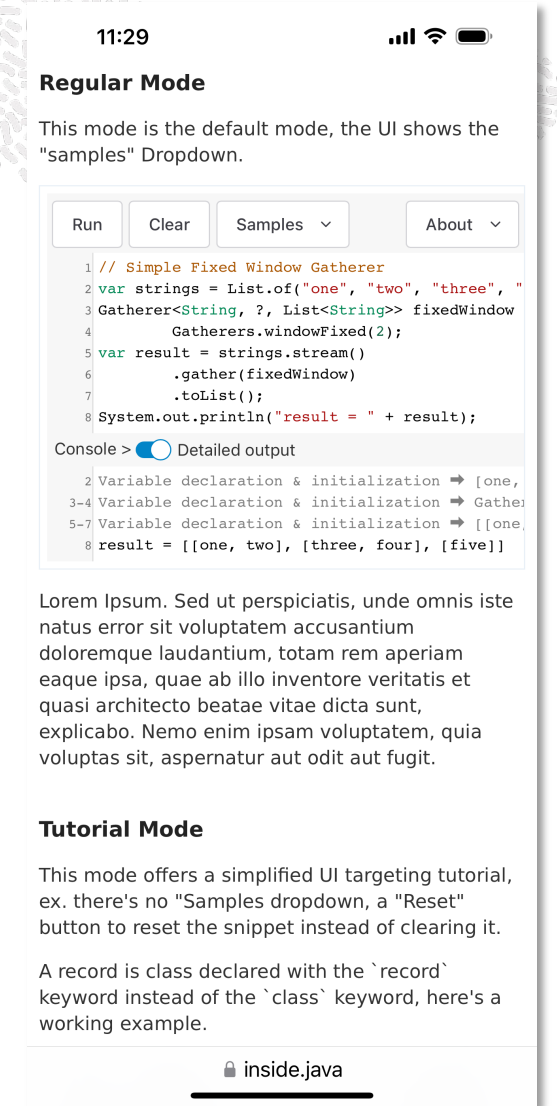
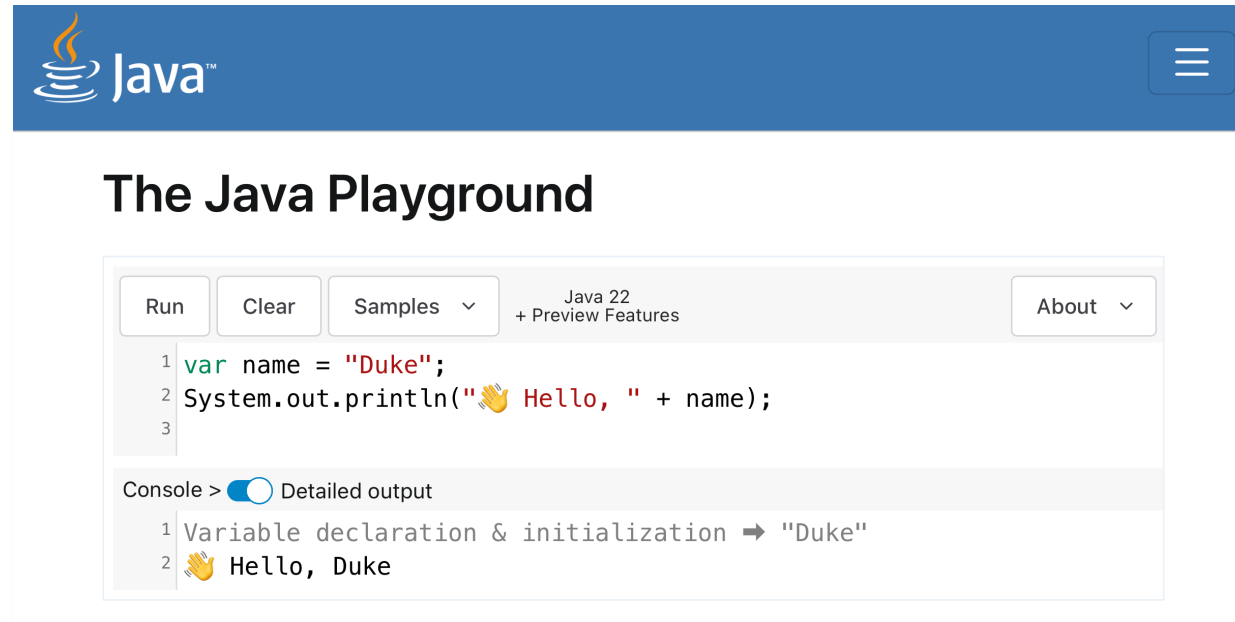


- Quality Outreach
 - <https://wiki.openjdk.org/display/quality/Quality+Outreach> (*)
- Heads-up
 - <https://inside.java/headsup/>
- Mailing list
 - <https://mail.openjdk.org/pipermail/quality-discuss/>
- Oracle setup-java GitHub action
 - <https://github.com/oracle-actions/setup-java>

Java Playground

The Java Playground

- Simple online tool that helps exploring Java Language features
 - <https://dev.java/playground/>
- “No setup required, just type your Java snippet and run it!”



The Java Playground

- Java : Java 22, jshell API and Classfile API
- Infra : OCI Functions
- UI : Javascript and Web Component
- Restrictions
 - APIs ⇒ Amber, Collections, ...
 - Runtime
- Not a development tool!



The Java Playground



```
<java-playground id="Hello World">  
  <snippet>  
    var name = "Duke";  
    System.out.println("👋 Hello, " + name);  
  </snippet>  
</java-playground>
```

The Java Playground



```
<java-playground id="Another test">
  <snippet>
    <!--
    var a = 1;
    var b = a+1;
    var c = b+1;
    if ((a < b) && ( c > b)) System.out.println("<test>");
    -->
  </snippet>
</java-playground>
```

The Java Playground



```
<java-playground id="A test" gist="48393e32...ce7faacb">  
</java-playground>
```

Demo



Tutorial Mode

This mode offers a simplified UI targeting tutorial, ex. there's no "Samples dropdown, a "Reset" button to reset the snippet instead of clearing it.

A record is class declared with the `record` keyword instead of the `class` keyword, here's a working example.

```
Run Reset Java 22 + Preview Features About ▾

1 record Population(int population) {}
2 record City(String name, Population population) {
3     // static methods are allowed in records
4     public static City of(String name, int p) {
5         var population = new Population(p);
6         return new City(name, population);
7     }
8 }
9 var paris = City.of("Paris", 2_161);
10 System.out.println(paris);
11

Console > Detailed output
1 Record declaration
2-6 Record declaration
9 Variable declaration & initialization ⇒ City[name=Paris, population=Population[population=2
10 City[name=Paris, population=Population[population=2161]]
```

For more information, make sure to check [Using Record to Model Immutable Data](#).

The Playground also prevents the execution of some operations. We know you want to try, so here's an example.

```
Run Reset Java 22 + Preview Features About ▾

1 System.out.println("<p>HTML</p>");
2 Thread.sleep(1);
3 throw new Exception("Boom");

Console > Detailed output
! Your snippet is trying to perform an unauthorized operation!
```

Roadmap

- Summer
 - JDK 23
 - Dev.java tutorials
 - A11Y
 - ...
- TBC
 - Prefix
 - ...



Thank you

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Developer Relations
Java Platform Group
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