

Java 7: What's new

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Java 7: Overview

- Released 06.2011 (current update 25)
- Linux, MacOS X, Solaris and Windows
- **New Language Features (Project Coin)**
- New I/O API
- New multicore-ready API
- Support for dynamic languages (JVM)

Switch on Strings

```
final String str = "Java7";  
switch (str) {  
    case "Java6":  
        System.out.println("You couldn't do this!");  
        break;  
    case "Java7":  
        System.out.println("Now you can!");  
        break;  
}
```

Binary Literals

Java 6:

```
int binary = 8;
```

Java 7:

```
int binary = 0b1000;
```

Underscored Numeric Literals

// New in Java7

```
int oneMillion_ = 1_000_000;
```

```
int oneMillion = 1000000;
```

Diamond Syntax

Java 6:

```
Map<String, Integer> map =  
    new TreeMap<String, Integer>();
```

Java 7:

```
Map<String, Integer> map =  
    new TreeMap<>();
```

Multi-Catch for Exceptions

```
try {  
    fileInputStream.read(fileContent);  
}  
catch (FileNotFoundException | IOException e) {  
    e.printStackTrace();  
}
```

Automatic Resource Management

```
try (  
    OutputStream fos = new FileOutputStream("j7.txt");  
    OutputStream dos = new DataOutputStream(fos)  
    ) {  
        dos.write("Java7 cleans up after itself!");  
    }  
catch (IOException e) {  
    e.printStackTrace();  
}
```


IDE Status

- Eclipse: since Indigo SR 1 Release (09.2011)
- NetBeans: since 7.0.1 (08.2011)
- IntelliJ IDEA: since 10.5 (05.2011)

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 - Underscored Numeric Literals
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New I/O API (NIO 2.0)

- Better path handling (Path & FileSystem classes)
- New file operations (copy, move, delete)
- Better support for Symbolic Links
- Asynchronous I/O (via Futures & Callbacks)
- File Change Notification (WatchService API)

New multicore-ready API

- Fork/Join Framework
 - Parallel processing of tasks
- Synchronization Barriers (Phaser)
- Thread-Local Random Numbers
- Better/New Concurrent-Collections

Further Reading

https://blogs.oracle.com/javase/entry/java_7_has_released

<http://openjdk.java.net/projects/jdk7/features/>

http://www.eclipse.org/jdt/ui/r3_8/Java7news/whats-new-java-7.html