

# Applying Java Lambda Expressions – Case Study ex4

**Douglas C. Schmidt**

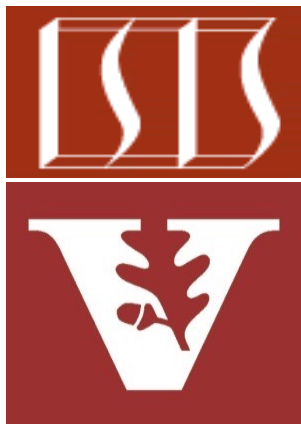
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# Learning Objectives in this Part of the Lesson

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- Understand how lambda expressions provide a foundational functional programming feature in Modern Java
- Know the benefits of applying Java lambda expressions
- Recognize how to implement lambda expressions

```
void threadSimpleHelloWorld()  
... {  
    Thread t =  
        startNewThread(() -> ex4  
            .display("hello world"));  
  
    ex4.display("Block caller");  
  
    t.join();  
}
```

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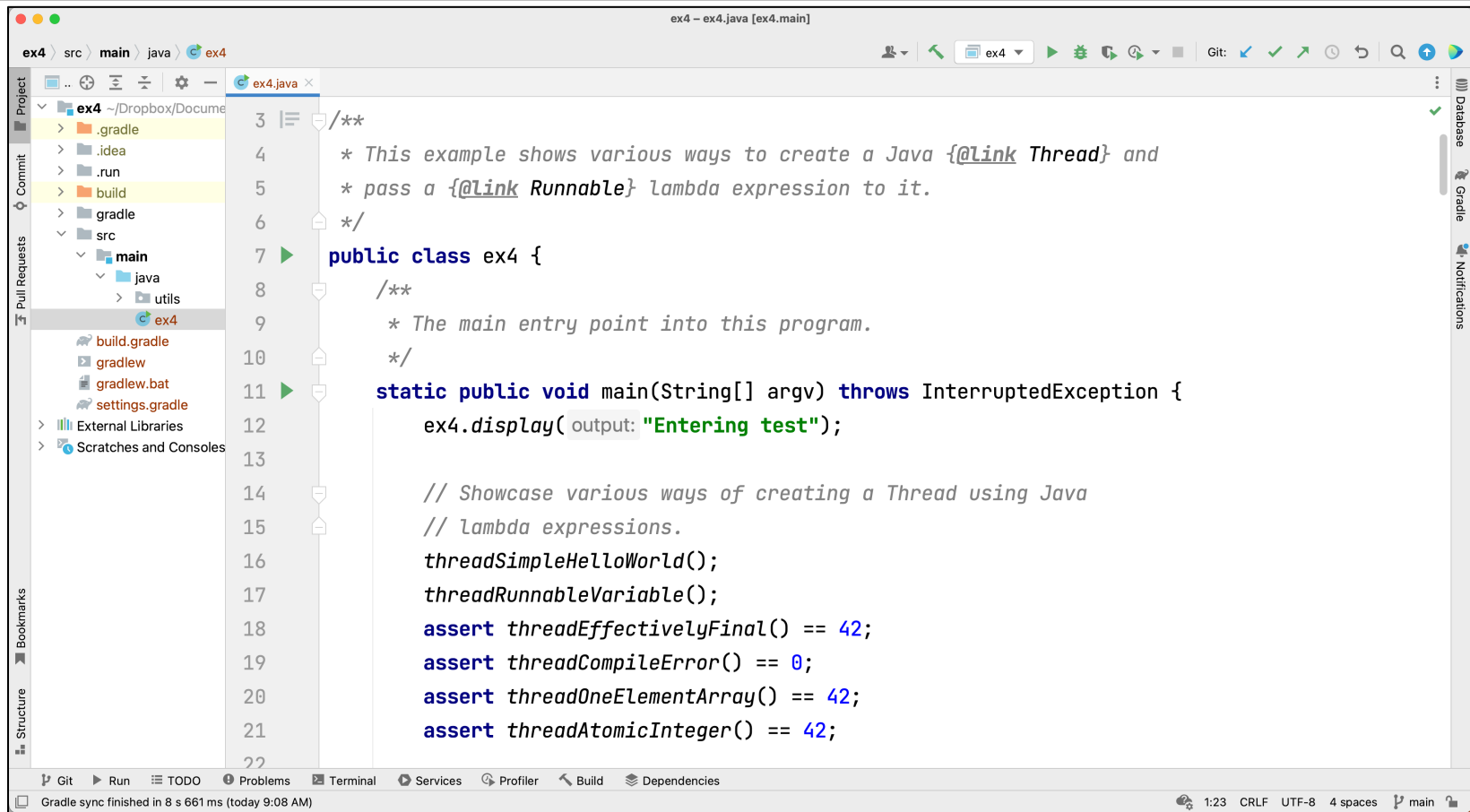
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*This example demonstrates Java lambda expressions in a multi-threaded context*

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```
ex4 - ex4.java [ex4.main]
ex4 > src > main > java > ex4
3  /**
4  * This example shows various ways to create a Java {@link Thread} and
5  * pass a {@link Runnable} lambda expression to it.
6  */
7  public class ex4 {
8      /**
9       * The main entry point into this program.
10     */
11     static public void main(String[] argv) throws InterruptedException {
12         ex4.display( output: "Entering test");
13
14         // Showcase various ways of creating a Thread using Java
15         // lambda expressions.
16         threadSimpleHelloWorld();
17         threadRunnableVariable();
18         assert threadEffectivelyFinal() == 42;
19         assert threadCompileError() == 0;
20         assert threadOneElementArray() == 42;
21         assert threadAtomicInteger() == 42;
22     }
}
```

Gradle sync finished in 8 s 661 ms (today 9:08 AM) 1:23 CRLF UTF-8 4 spaces main

See [github.com/douglasraigschmidt/ModernJava/tree/main/FP/ex4](https://github.com/douglasraigschmidt/ModernJava/tree/main/FP/ex4)

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# End of Applying Java Lambda Expressions – Case Study ex4