

Applying Key Operators in the Flux Class: Case Study ex1 (Part 1)

Douglas C. Schmidt

d.schmidt@vanderbilt.edu

www.dre.vanderbilt.edu/~schmidt

Professor of Computer Science

**Institute for Software
Integrated Systems**

**Vanderbilt University
Nashville, Tennessee, USA**



Learning Objectives in this Part of the Lesson

- Part 1 of case study ex1 shows how to use Flux operators fromIterable(), just(), fromArray(), from(), map(), doOnNext(), mergeWith(), repeat(), & subscribe() to create, reduce, multiply, & display BigFraction objects synchronously

Flux

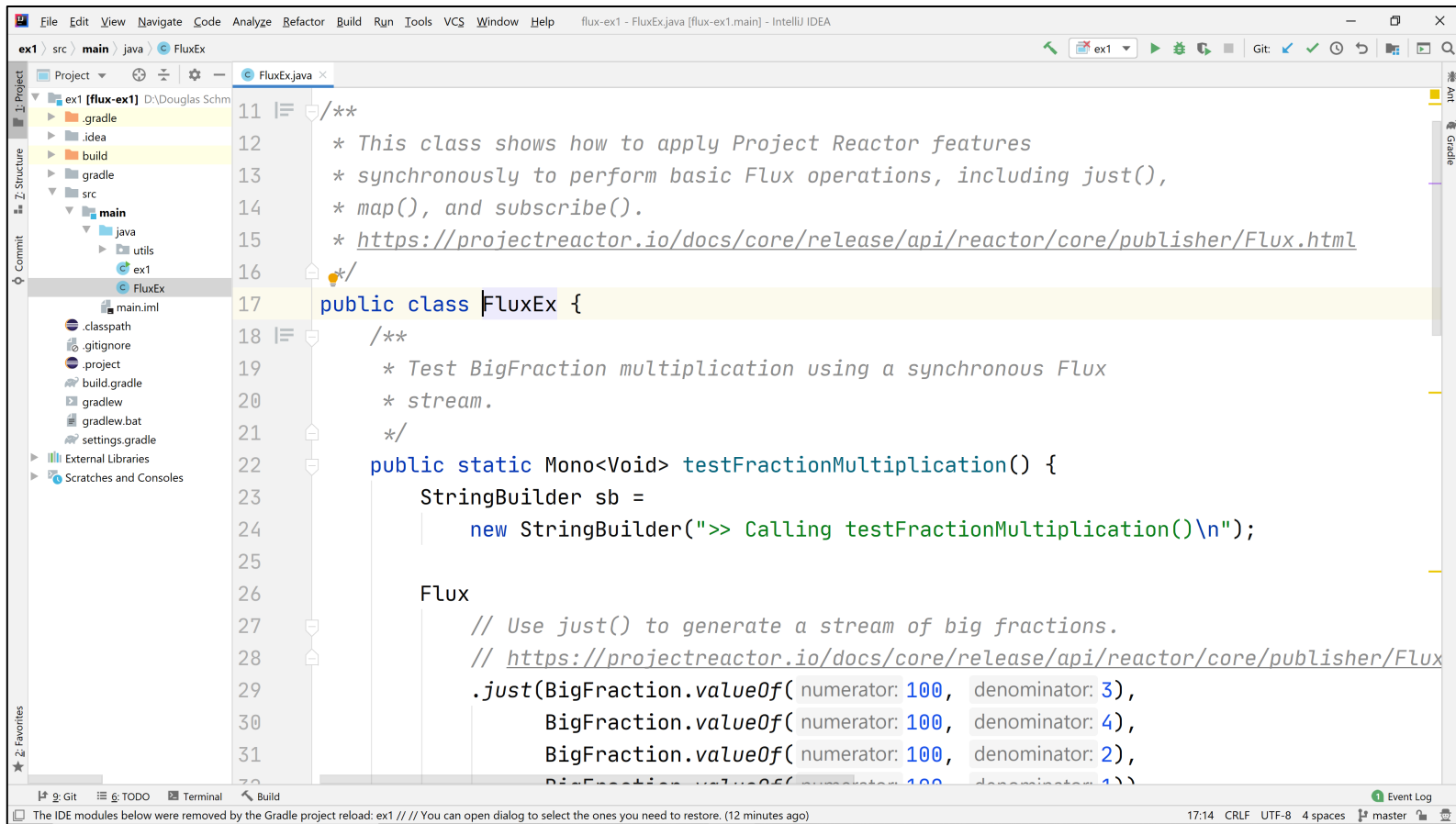
```
.just(BigFraction.valueOf(100,3),
      BigFraction.valueOf(100,4),
      BigFraction.valueOf(100,2),
      BigFraction.valueOf(100,1))

.map(fraction -> fraction
     .multiply(sBigReducedFraction))

.subscribe
(fraction -> sb.append(" = "
                      + fraction.toMixedString()
                      + "\n"),
 error -> sb.append("error"),
 () -> BigFractionUtils
     .display(sb.toString()));
```

Applying Key Operators in the Flux Class to ex1

Applying Key Operators in the Flux Class to ex1



```
11  /**
12     * This class shows how to apply Project Reactor features
13     * synchronously to perform basic Flux operations, including just(),
14     * map(), and subscribe().
15     * https://projectreactor.io/docs/core/release/api/reactor/core/publisher/Flux.html
16     */
17  public class FluxEx {
18      /**
19       * Test BigFraction multiplication using a synchronous Flux
20       * stream.
21       */
22      public static Mono<Void> testFractionMultiplication() {
23          StringBuilder sb =
24              new StringBuilder(">> Calling testFractionMultiplication()\n");
25
26          Flux
27              // Use just() to generate a stream of big fractions.
28              // https://projectreactor.io/docs/core/release/api/reactor/core/publisher/Flux
29              .just(BigFraction.valueOf( numerator: 100, denominator: 3),
30                  BigFraction.valueOf( numerator: 100, denominator: 4),
31                  BigFraction.valueOf( numerator: 100, denominator: 2),
32                  BigFraction.valueOf( numerator: 100, denominator: 1))
33          }
```

See github.com/douglasraigschmidt/LiveLessons/tree/master/Reactive/flux/ex1

End of Applying Key Operators in the Flux Class: Case Study ex1 (Part 1)