

Applying Key Operators in RxJava: Case Study ex4 (Part 2)

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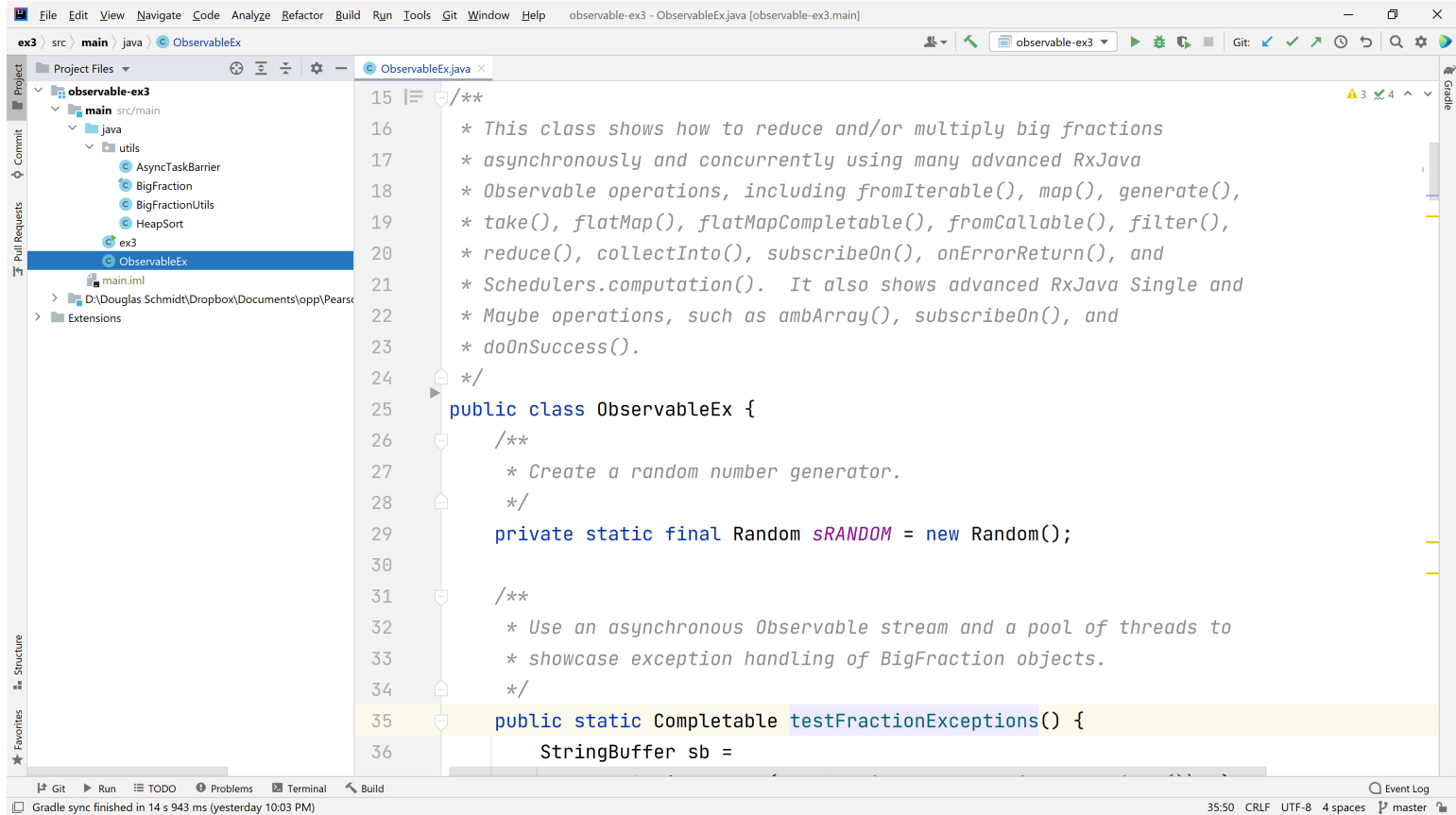
Learning Objectives in this Part of the Lesson

- Part 2 of case study ex4 explores how to combine Java Streams & RxJava Single operators flatMap(), flatMapCompletable(), zipArray(), ignoreElement(), ambArray(), & doOnSuccess() to create, reduce, multiply, & display BigFraction objects asynchronously

```
return Stream
    .generate(() ->
        makeBigFraction(new Random(),
                        false))
    .limit(sMAX_FRACTIONS)
    .map(unreducedBigFraction ->
        reduceAndMultiplyFraction
            (unreducedBigFraction,
             Schedulers.fromExecutor
                 (ForkJoinPool
                    .commonPool())))
    .collect(toSingle())
    .flatMapCompletable(list ->
        sortAndPrintList(list, sb));
```

Applying Key Operators in the Observable Class to ex4

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```
15  /**
16   * This class shows how to reduce and/or multiply big fractions
17   * asynchronously and concurrently using many advanced RxJava
18   * Observable operations, including fromIterable(), map(), generate(),
19   * take(), flatMap(), flatMapCompletable(), fromCallable(), filter(),
20   * reduce(), collectInto(), subscribeOn(), onErrorReturn(), and
21   * Schedulers.computation(). It also shows advanced RxJava Single and
22   * Maybe operations, such as ambArray(), subscribeOn(), and
23   * doOnSuccess().
24   */
25  public class ObservableEx {
26      /**
27       * Create a random number generator.
28       */
29      private static final Random sRANDOM = new Random();
30
31      /**
32       * Use an asynchronous Observable stream and a pool of threads to
33       * showcase exception handling of BigFraction objects.
34       */
35      public static Completable testFractionExceptions() {
36          StringBuffer sb =
```

Gradle sync finished in 14 s 943 ms (yesterday 10:03 PM)

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See github.com/douglasraigschmidt/LiveLessons/tree/master/Reactive/Observable/ex4

End of Applying Key Methods in the Observable Class: Case Study ex4 (Part 2)