### Applying Key Operators in Project Reactor: Case Study ex4 (Part 2)

Douglas C. Schmidt
<a href="mailto:d.schmidt@vanderbilt.edu">d.schmidt@vanderbilt.edu</a>
www.dre.vanderbilt.edu/~schmidt



**Institute for Software Integrated Systems** 

Vanderbilt University Nashville, Tennessee, USA





 Part 2 of case study ex4 applies Flux operators flatMap() & subscribe() to create, multiply, & display BigFraction objects asynchronously

```
Mono
  .fromSupplier(() ->
     makeBigFraction
        (sRANDOM, true))
  .repeat(sMAX FRACTIONS - 1)
```

```
.flatMap(bf1 ->
  multiplyFraction(bf1,
     sBigReducedFraction,
     Schedulers.parallel(),
```

```
(blockingSubscriber);
```

sb))

subscribe

makeBigFraction

(sRANDOM, true))

.repeat(sMAX FRACTIONS - 1)

create, multiply, & display BigFraction

objects asynchronously

```
.flatMap(bf1 ->
                                      multiplyFraction(bf1,
                                          sBigReducedFraction,
                                          Schedulers.parallel(),
                                          sb))
                                   .subscribe
                                       (blockingSubscriber);
This example does apply backpressure via the registered subscriber
```

Mono

- Part 2 of case study ex4 applies Flux operators flatMap() & subscribe() to create, multiply, & display BigFraction objects asynchronously
  - It also shows how to use Mono operators fromSupplier(), repeat(), & subscribeOn()

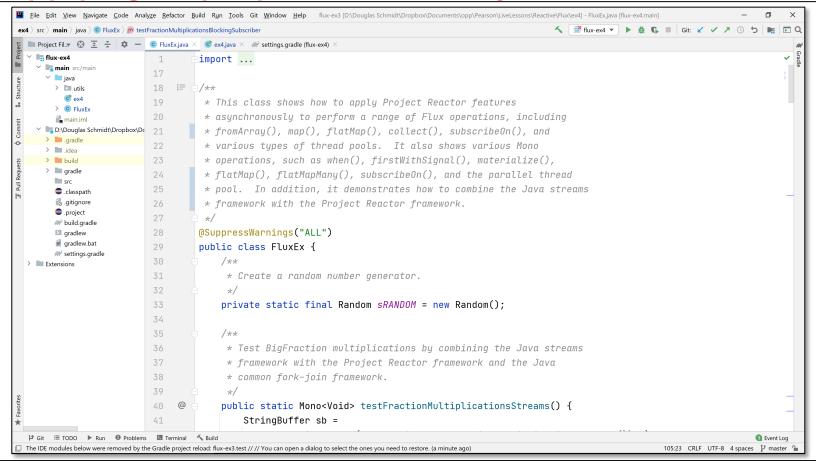
```
.fromSupplier(() ->
  makeBigFraction
     (sRANDOM, true))
.repeat(sMAX FRACTIONS - 1)
.flatMap(bf1 ->
  multiplyFraction(bf1,
      sBigReducedFraction,
      Schedulers.parallel(),
      sb))
.subscribe
   (blockingSubscriber);
```

- Part 2 of case study ex4 applies Flux operators flatMap() & subscribe() to create, multiply, & display BigFraction objects asynchronously
  - It also shows how to use Mono operators fromSupplier(), repeat(), & subscribeOn()
  - In addition, it shows how to create
     & use a generic blocking Subscriber
    - This subscriber is "backpressure aware"

```
class BlockingSubscriber<T>
      implements Subscriber<T> {
  @Override
 public void onSubscribe
  (Subscription subscription) {
    mSubscription =
      subscription;
    subscription
      .request(mRequestSize);
```

## Applying Key Operators in Project Reactor to ex4

#### Applying Key Operators in Project Reactor to ex4



See github.com/douglascraigschmidt/LiveLessons/tree/master/Reactive/flux/ex4

# End of Applying Key Methods in Project Reactor: Case Study ex4 (Part 2)