MORE FUNCTIONAL JAVA WITH JAVA SLANG

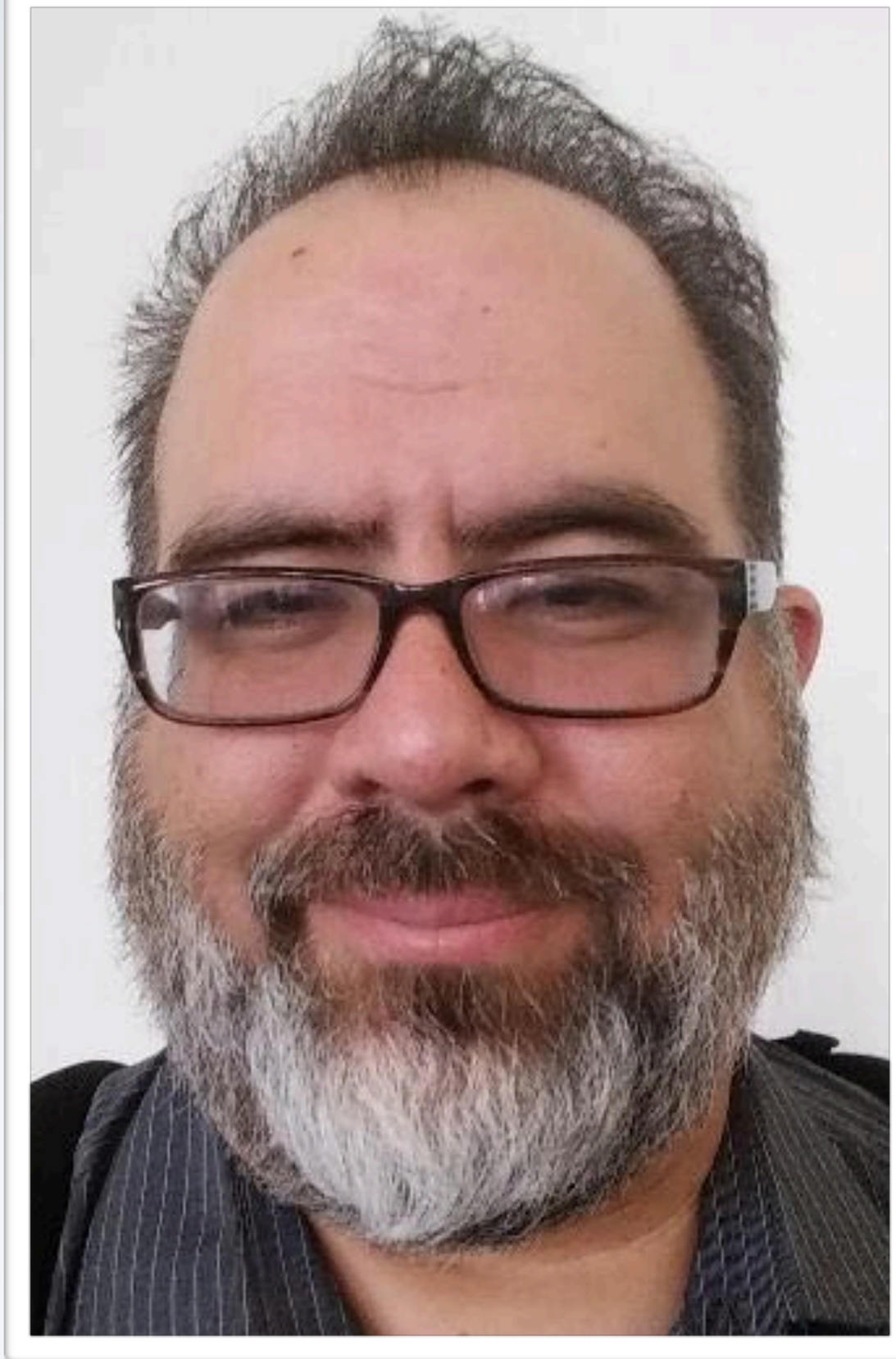
daniel.hinojosa

ABOUT ME

daniel.hinojosa

Independent Consultant,
Programmer. Trainer, Author

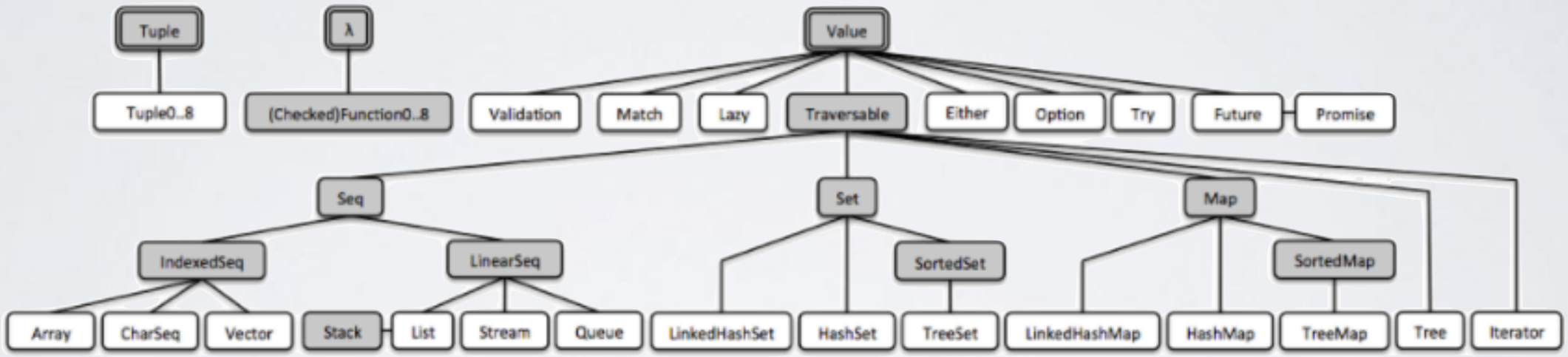
(Beard Optional)



@dhinojosa
dhinojosa@evolutionnext.com

Code and Slides are available on Github

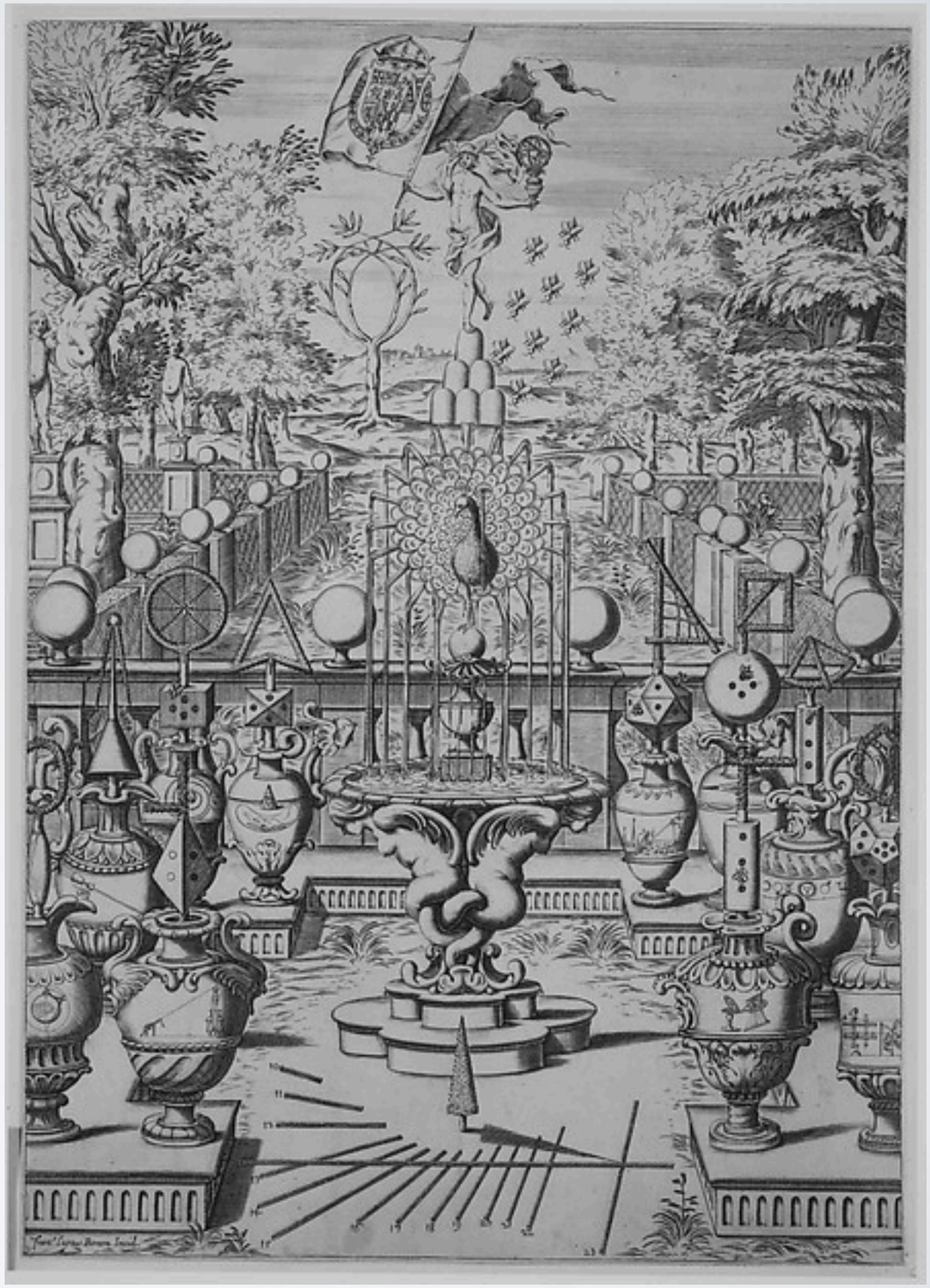
https://github.com/dhinojosa/javaslang-study


Tuple
λ
Value
Tuple0...8
(Checked)Function0...8
Validation
Match
Lazy
Traversable
Either
Option
Try
Future
Promise
Seq
Set
Map
IndexedSeq
LinearSeq
SortedSet
SortedMap
Array
CharSeq
Vector
Stack
List
Stream
Queue
LinkedHashSet
HashSet
TreeSet
LinkedHashMap
HashMap
TreeMap
Tree
Iterator

BASIC COMPONENTS

TUPLES

FUNCTIONS



- Extended from **λ** (say what?)
- Instead of `Supplier<T>`, `Function<T, R>`, or `BiFunction<T1, T2, R>` it's `Function0`, `Function1`, `Function2`, …
- Up to `Function8`

TUPLES & FUNCTIONS

LAZY

Lazy<LocalDateTime>

Lazy<Integer>

PERSISTENT DATA STRUCTURES

IMMUTABILITY

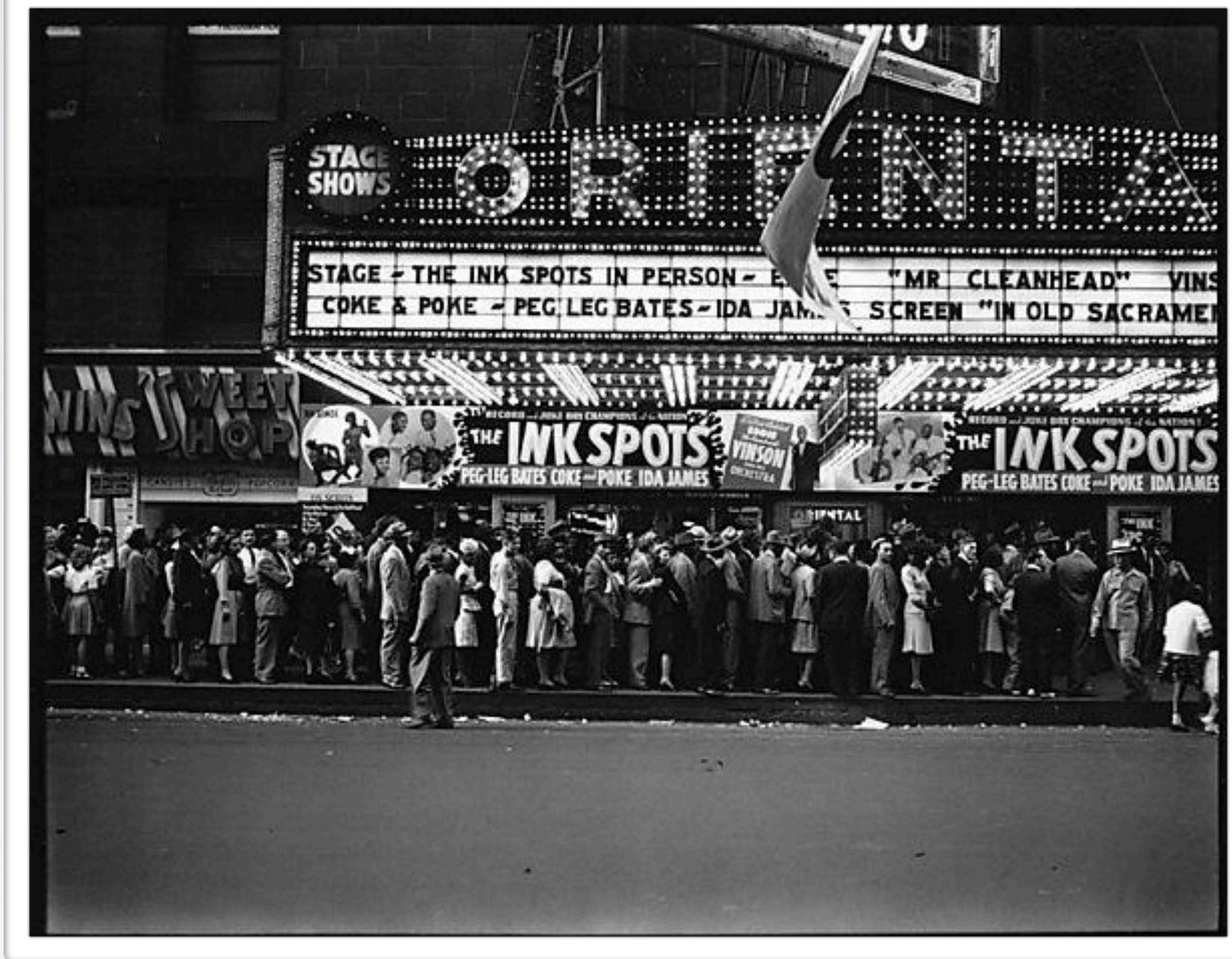
OPERATIONS RETURN COPIES

The integrity of the original stay intact

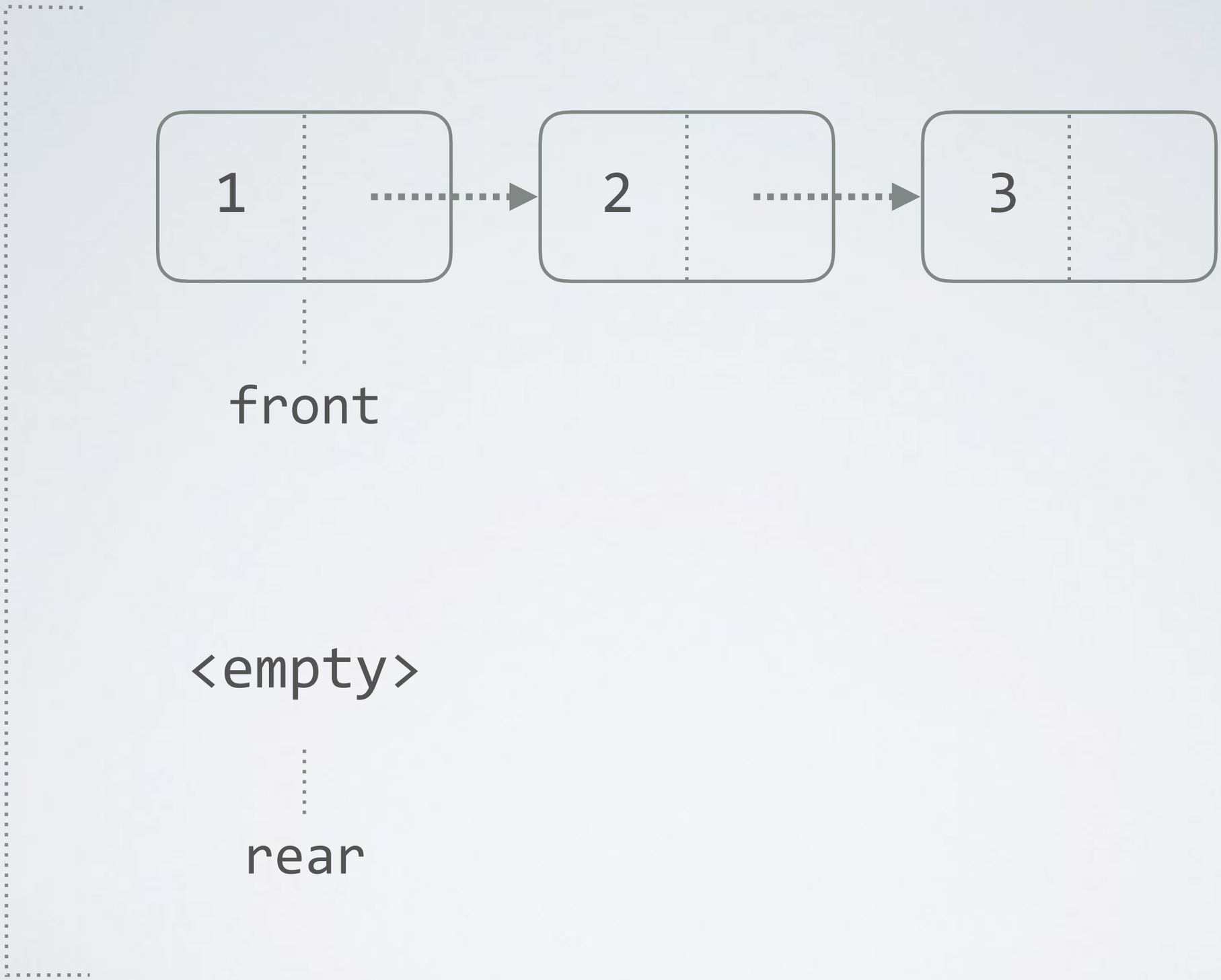
REFERENTIALLY TRANSPARENT

An expression is said to be referentially transparent if it can be replaced with its corresponding value without changing the program's behavior.

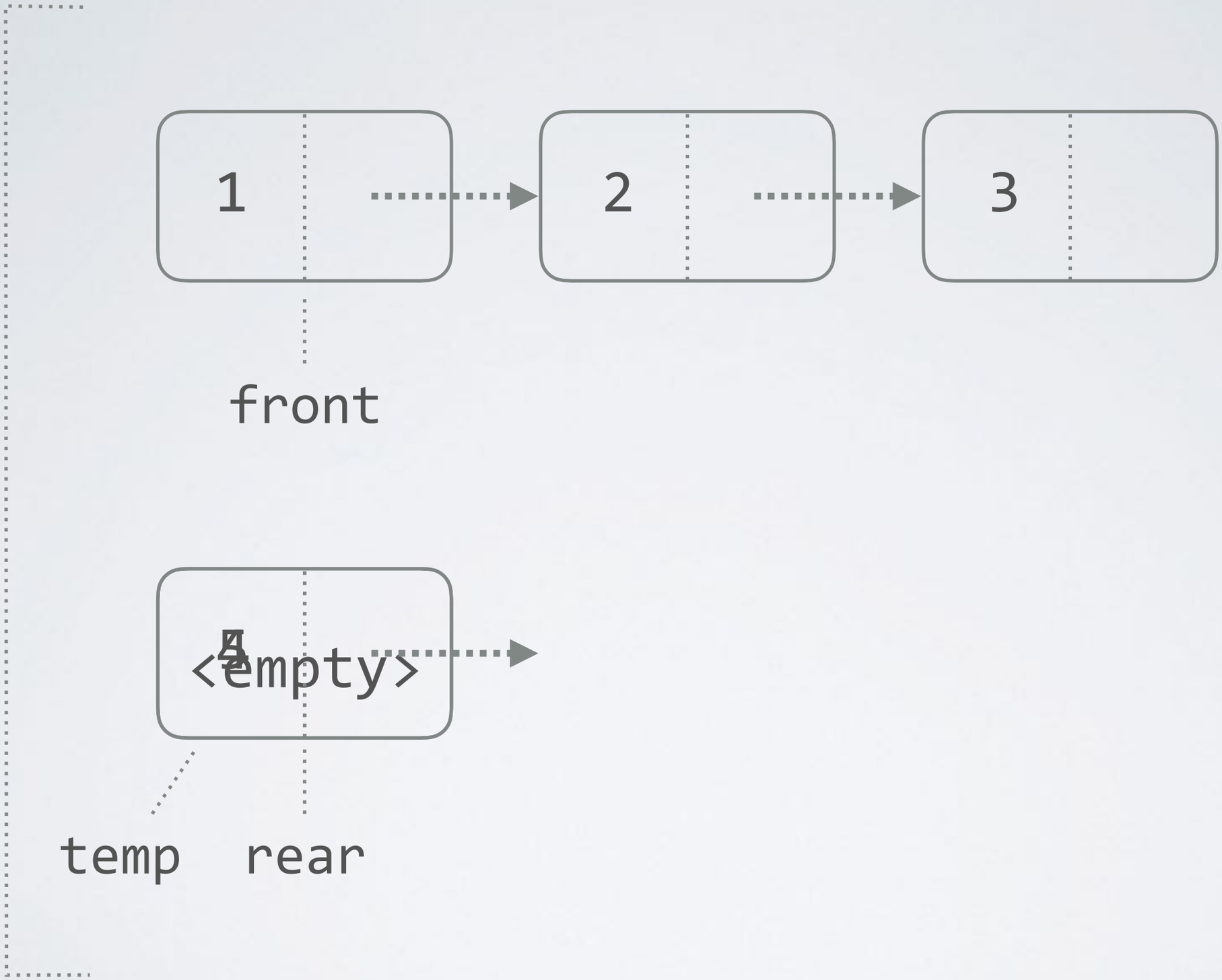
QUEUE


STAGE SHOWS
STAGE - THE INK SPOTS IN PERSON -
"MR CLEANHEAD"
COKE & POKE - PEG LEG BATES - IDA JA
SCREEN "IN OLD SACRAME
THE INK SPOTS
PEG-LEG BATES COKE and POKE IDA JAMES
VINSON
THE INK SPOTS
PEG-LEG BATES COKE and POKE IDA JAMES

Queue.of(1,2,3)

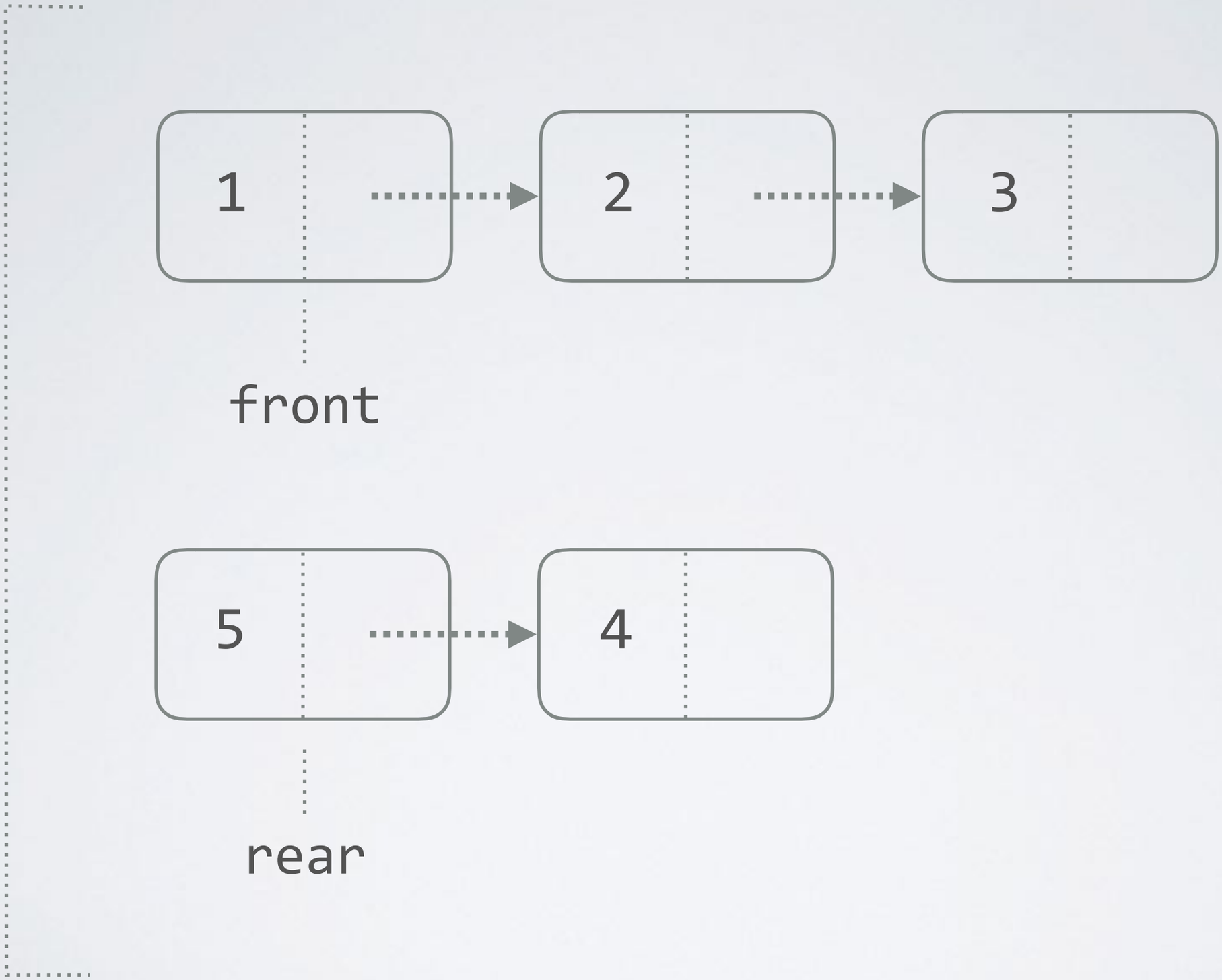


Queue.of(1,2,3).enqueue(4,5)



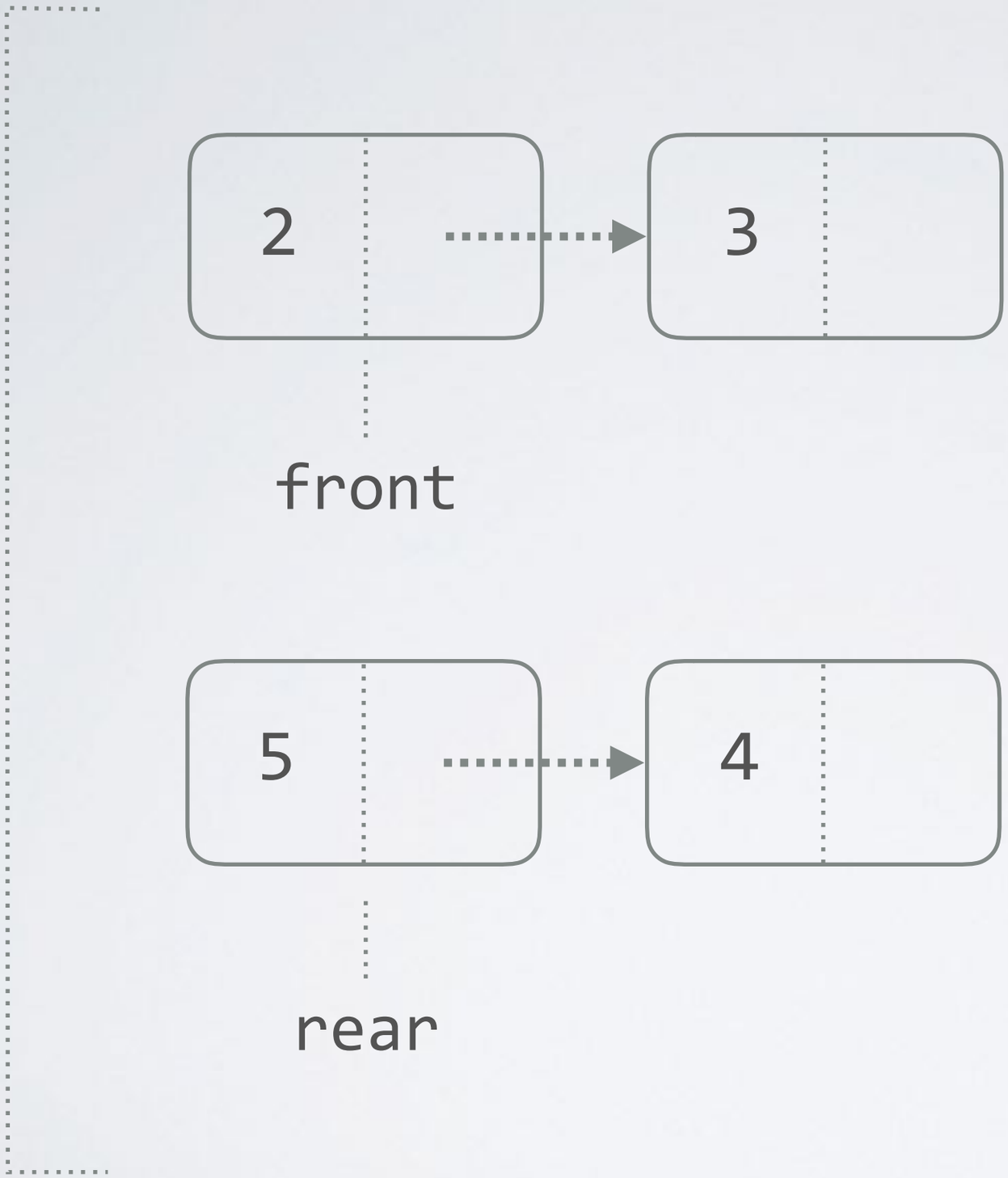
Queue.of([1,2,3], [5,4])

Queue.of(1,2,3,4,5).dequeue()



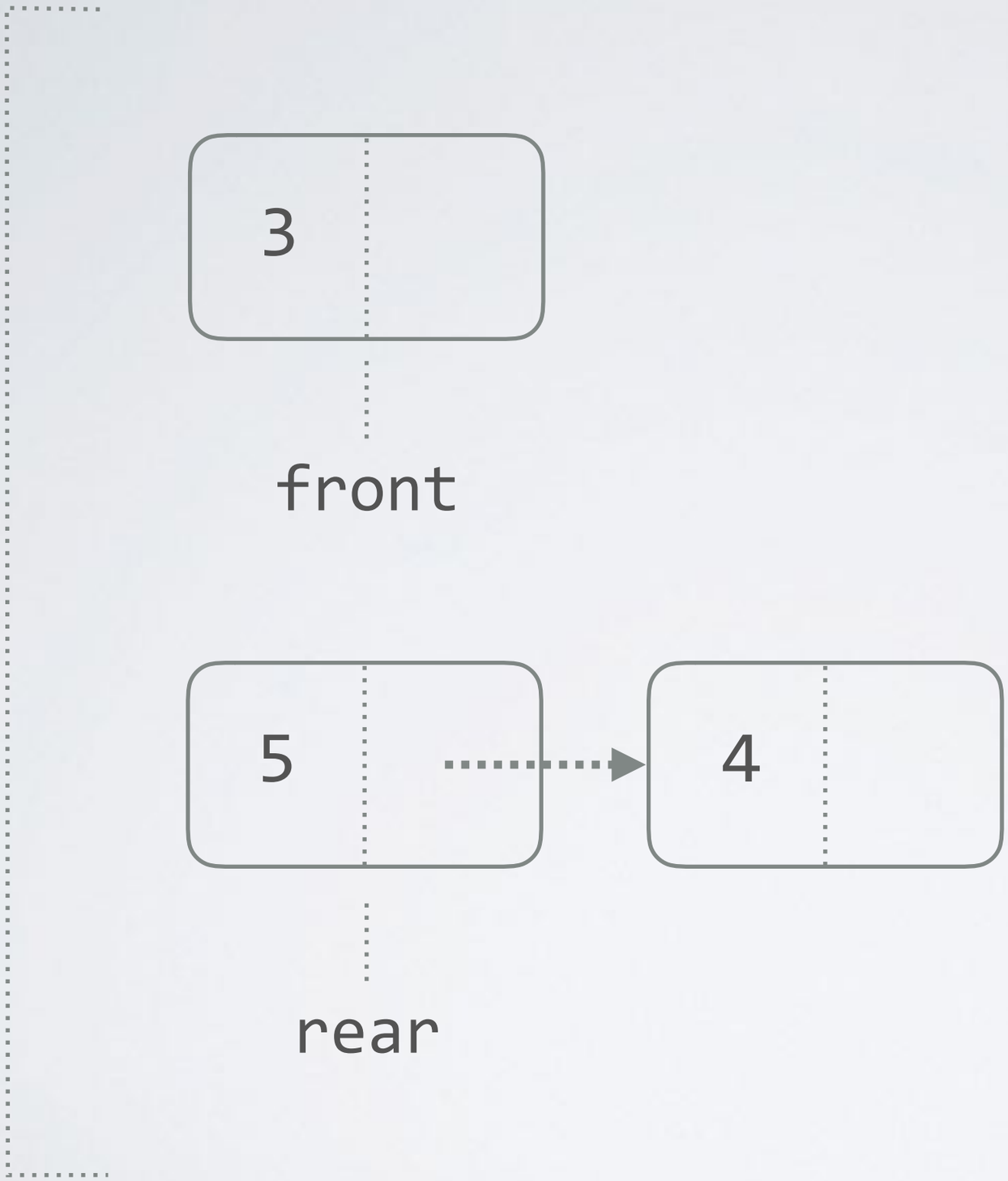
Tuple(1, Queue.of([2,3], [5,4]))

Queue.of(2,3,4,5).dequeue()

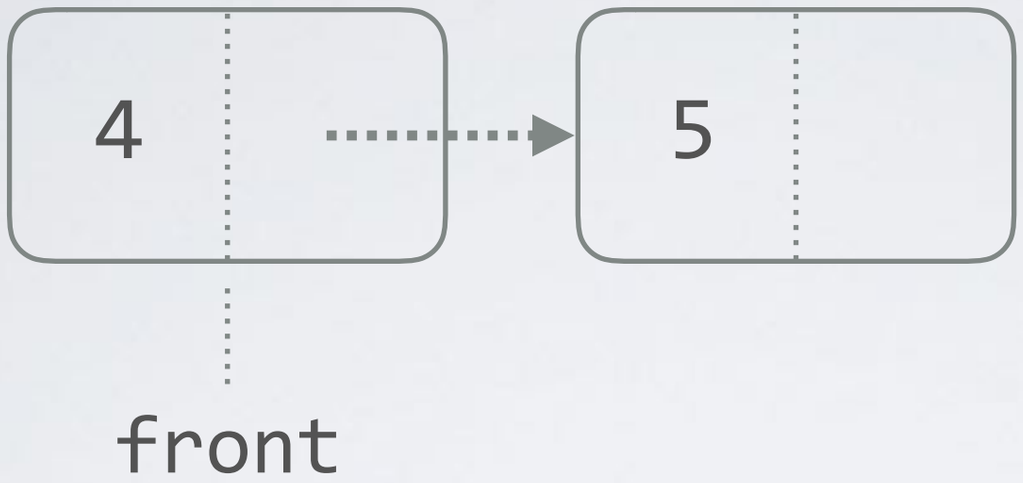


Tuple(2, Queue.of([3], [5,4]))

Queue.of(3,4,5).dequeue()



Tuple(3, Queue.of([], [5,4]))



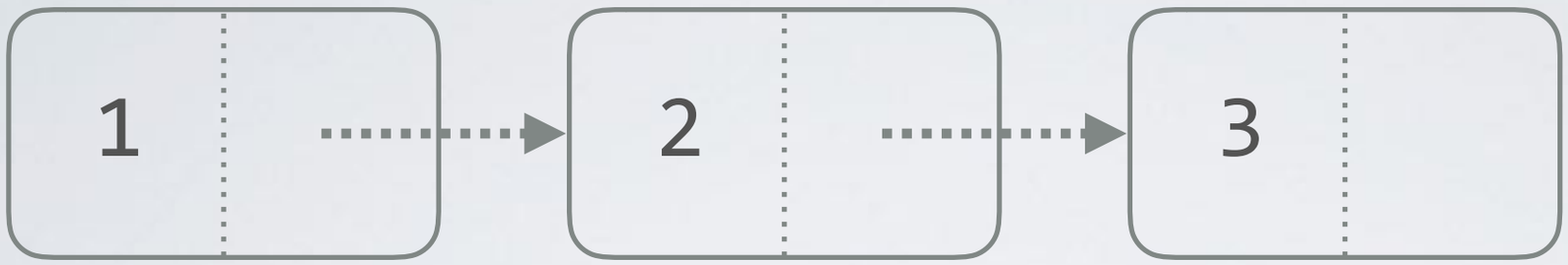
<empty>

rear

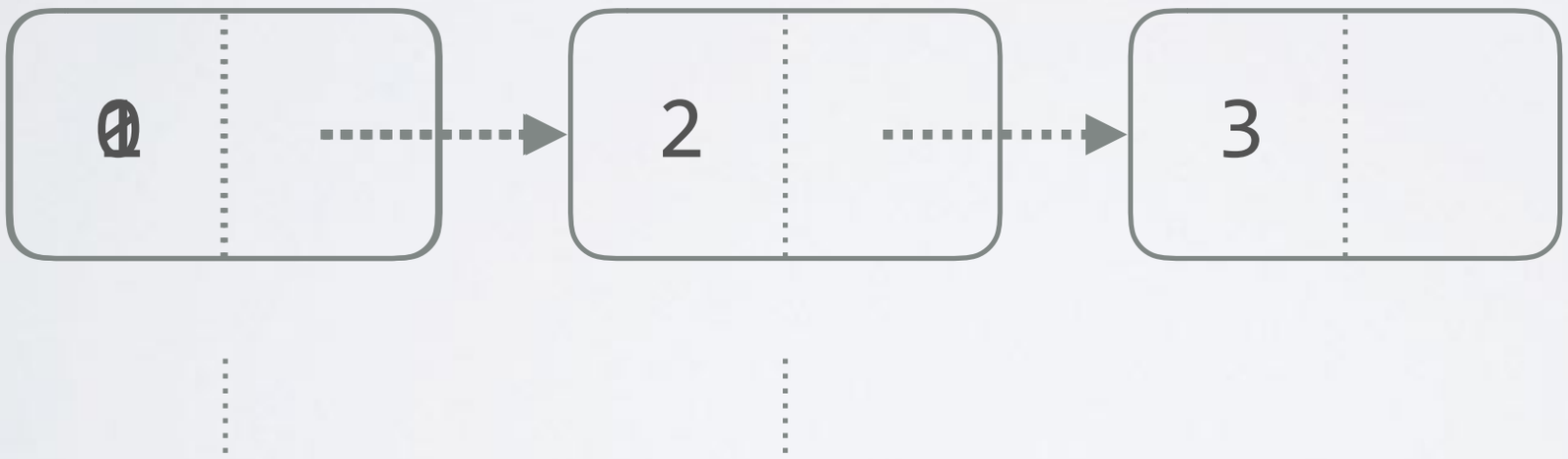
Tuple(3, Queue.of([], [5,4]))

LINKED LISTS

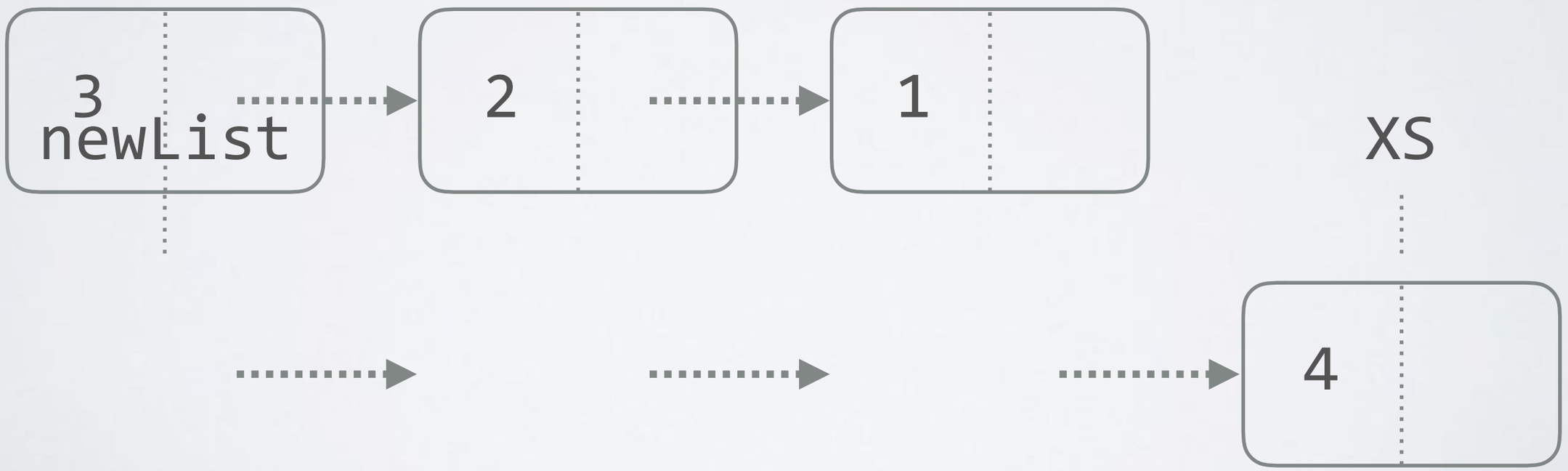
```
list = List.of(1, 2, 3);
```



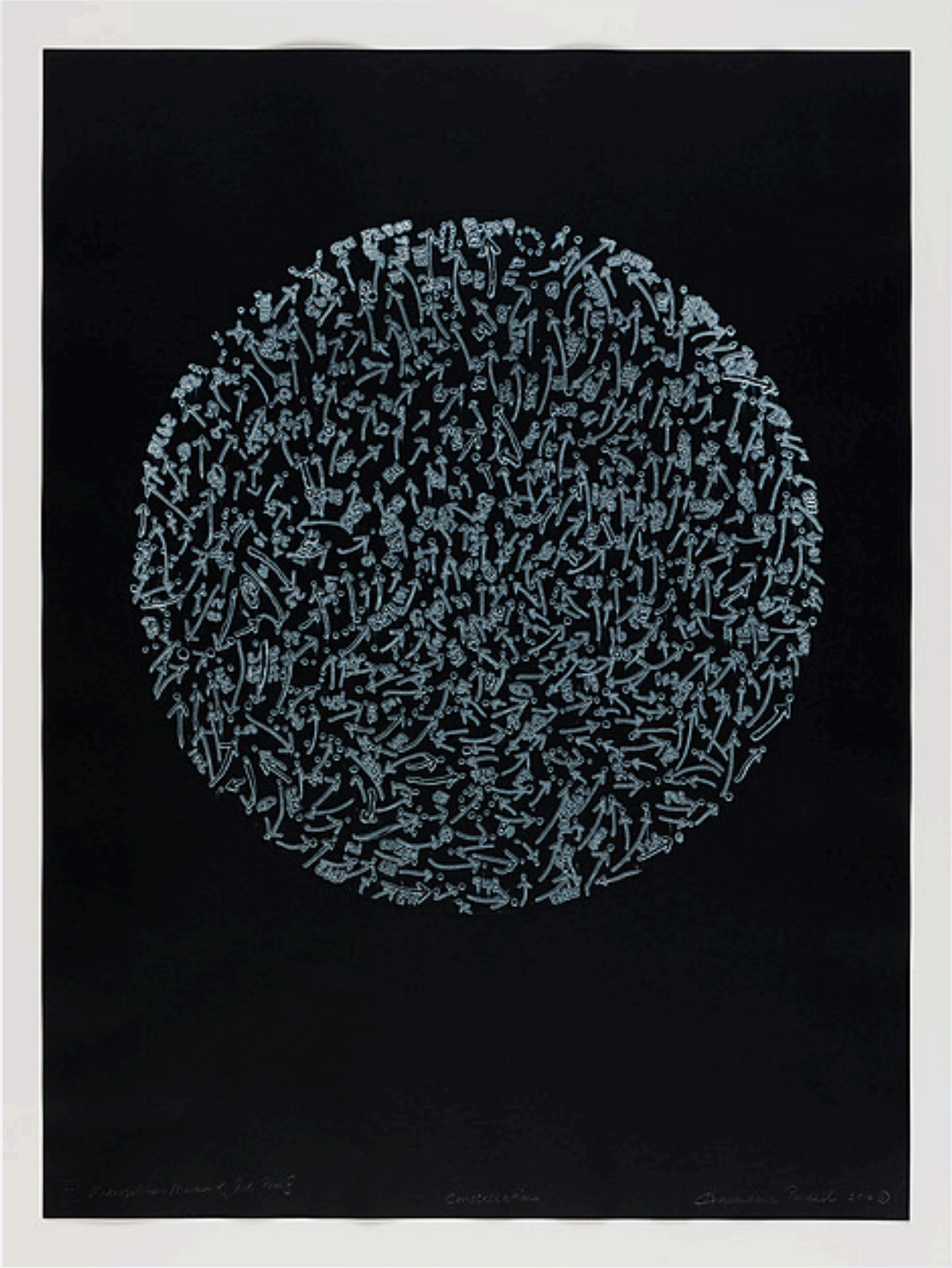

```
newList = list.prepend(0);
```

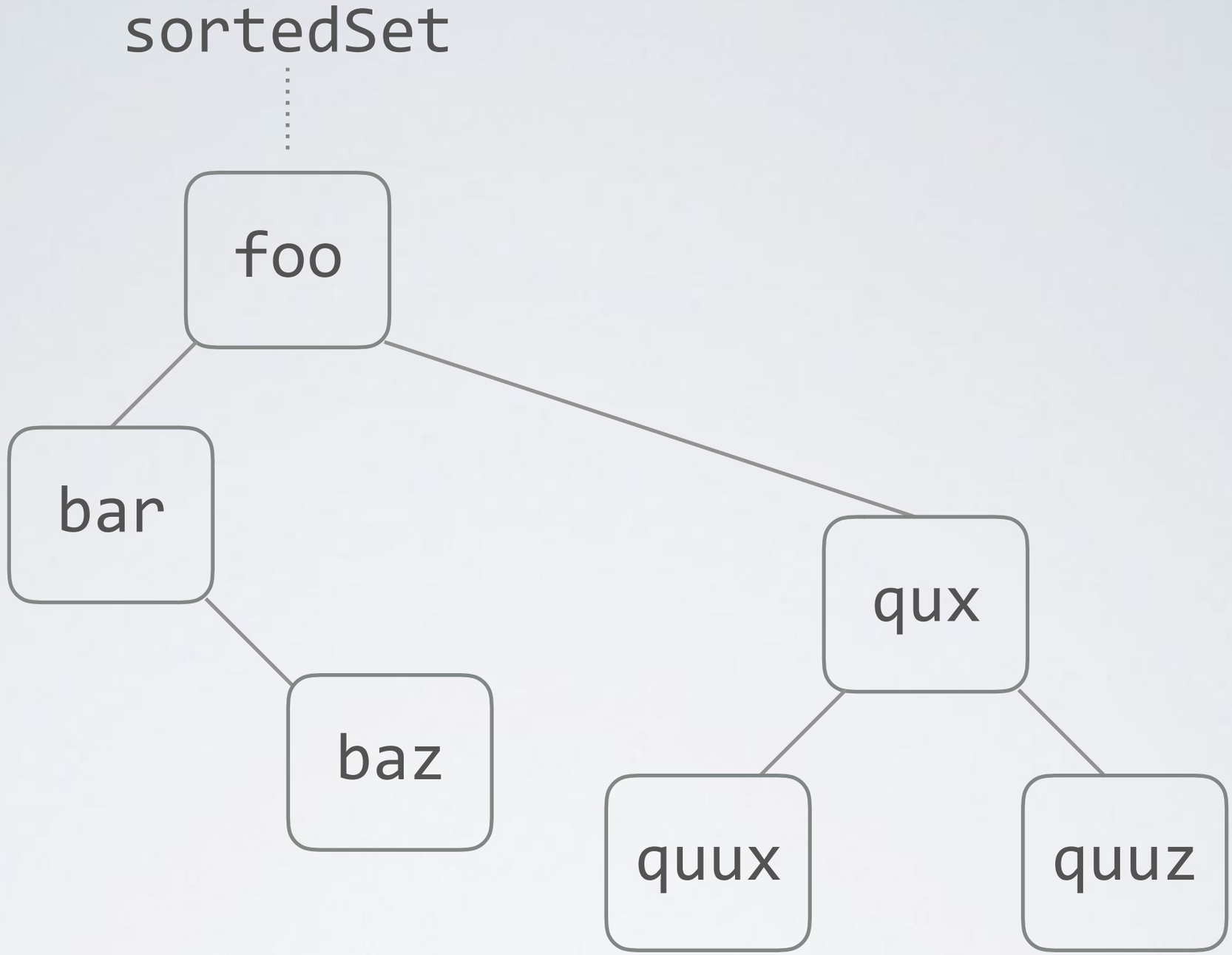



```
newList = list(reversed(xs)) + [4];
```

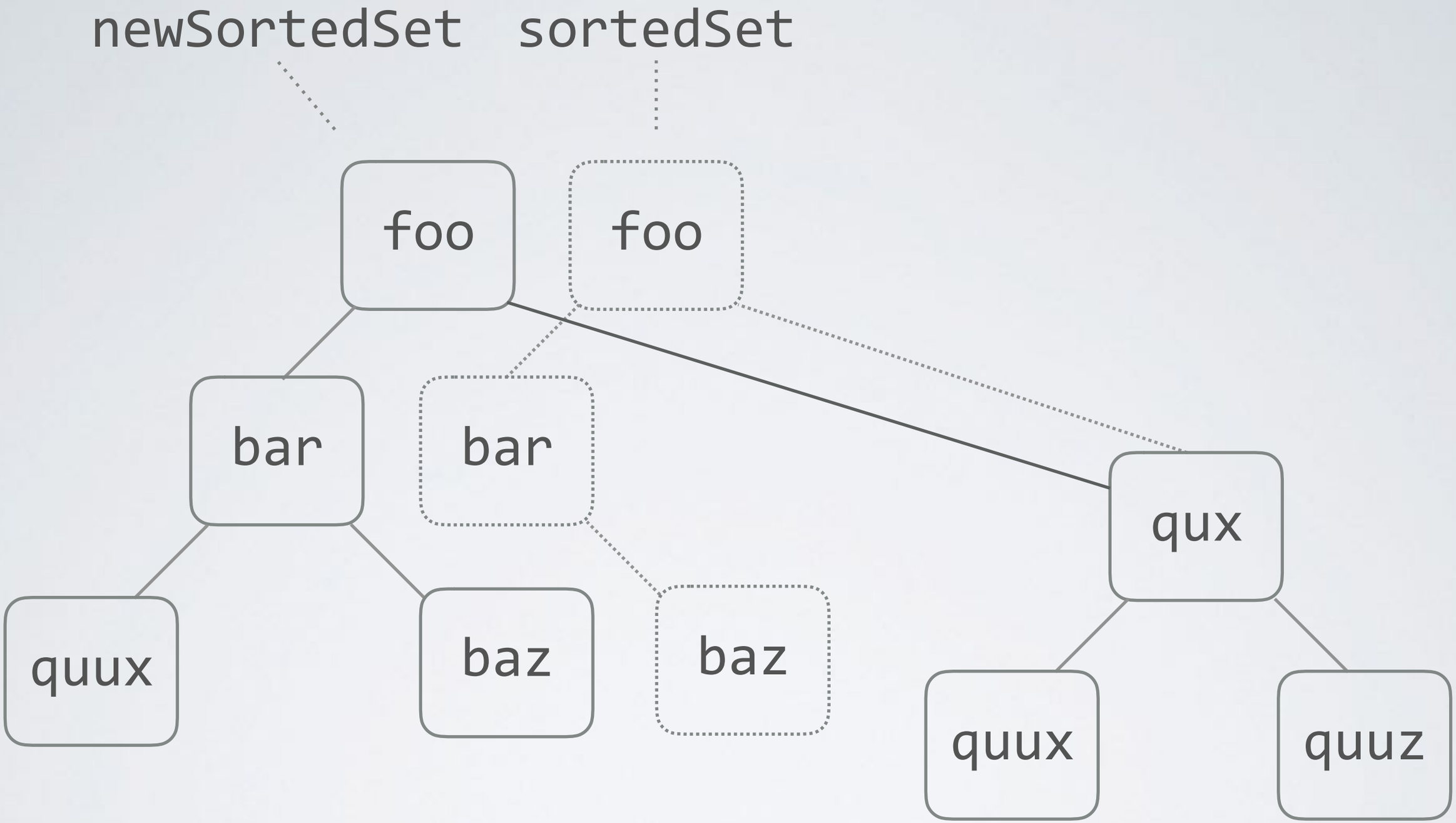


SORTED SET



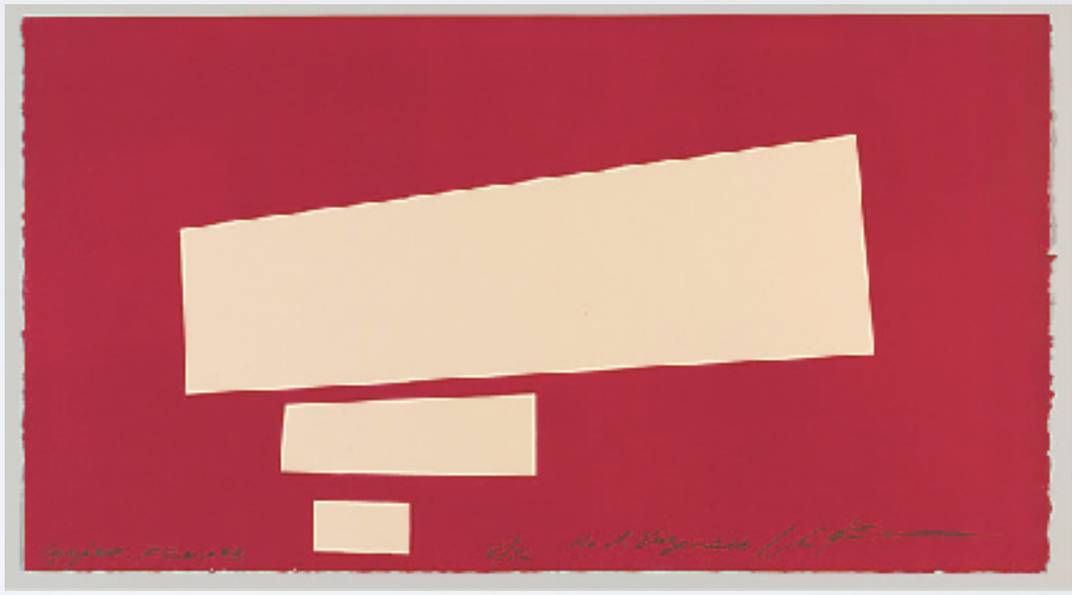



```
SortedSet<String> sortedSet =
TreeSet.of("foo", "bar", "baz", "qux", "quux", “quuz")
```



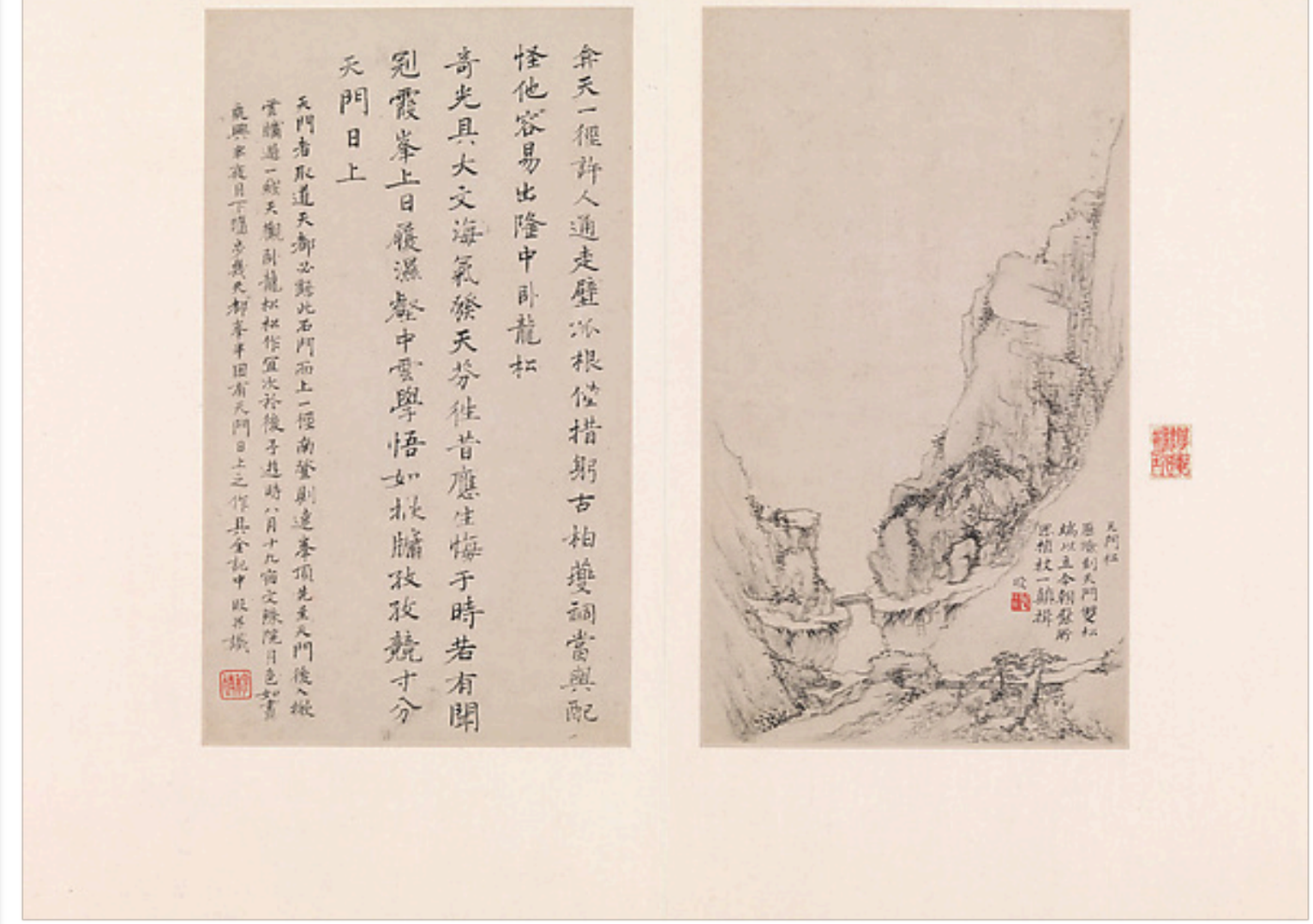

```
SortedSet<String> newSortedSet = sortedSet.add(“bam”);
```

VALUES



OPTIONS

FUTURES



TRY

EITHER

PATTERN

MATCHING

```
import static javaslang.API.*;
```

`$()` - wildcard pattern

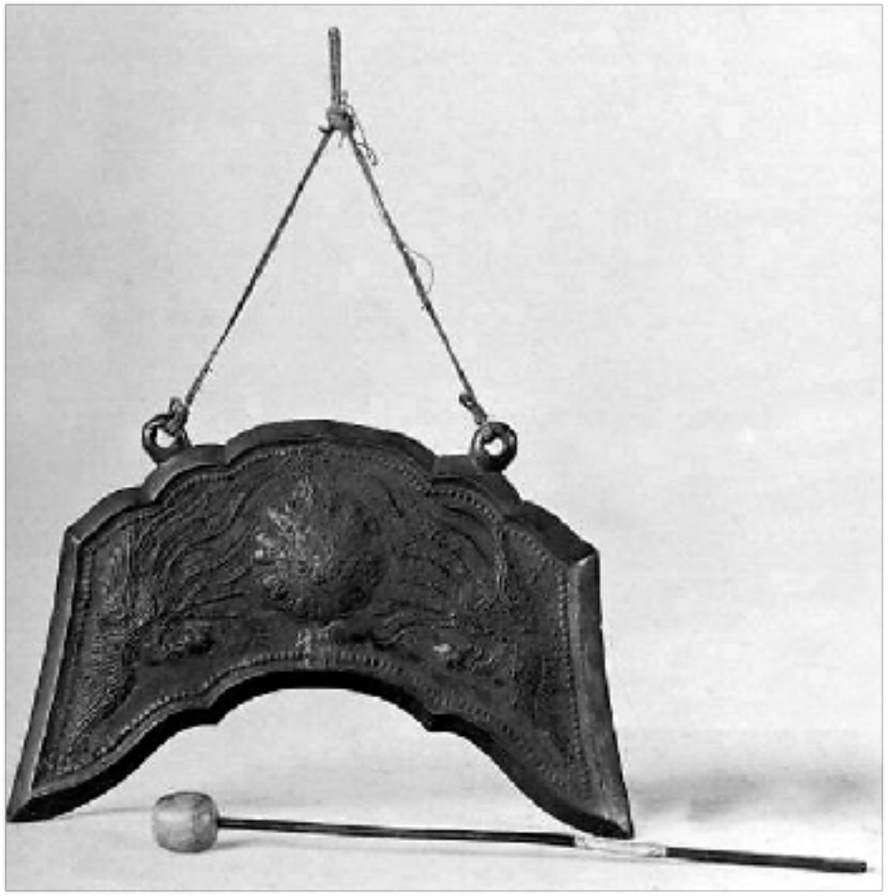
`$(value)` - equals pattern

`$(predicate)` - conditional pattern

VALIDATE

PROPERTIES

FOR COMPREHENSIONS



All images are from
the creative commons open
access initiative

http://www.metmuseum.org/

@dhinojosa
dhinojosa@evolutionnext.com