Java Streams: Visualizing WordSearcher.printSlice()

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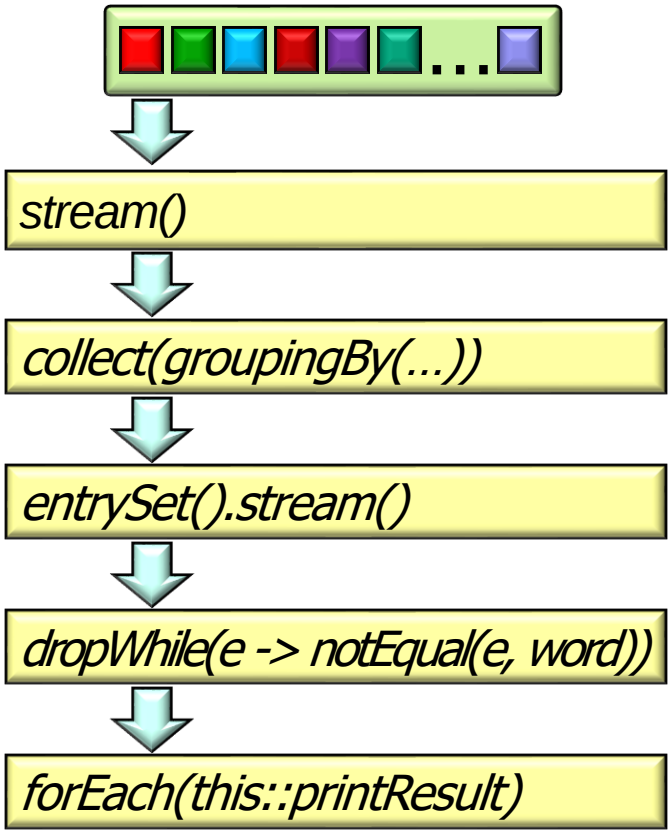
Learning Objectives in this Part of the Lesson

- Visualize aggregate operations in SimpleSearchStream's WordSearcher.printResults() method
- Visualize aggregate operations in SimpleSearch Stream's WordSearcher.printSlice() method



Visualizing the Word Searcher.printSlice() Method

Visualizing the WordSearcher.printSlice() Method

- Prints a slice of the listOfSearchResults starting at a particular word

```
wordSearcher.printSlice("La", results);
```

Word "La" appeared at indices [234|417|658|886|991|1207|1247|1269|1291|1339|1361|1742|1847|1863|1909|1949|2161|2254|2276|2283] with max index of 2283
Word "Ti" appeared at indices [237|994|1272|1294|1364|1850|1860|1912|1915|1952|1955|2299] with max index of 2299

Prints a slice of the stream from "La" to "Ti", while ignoring all entries from "Do" to "So".

This method shows the collect(groupingBy()) & dropWhile() aggregate operations

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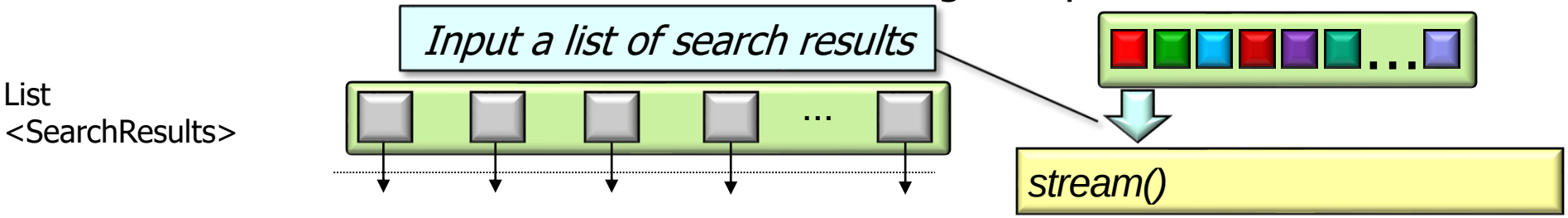

The search results correspond to words to find: "do","re","mi","fa","so","la","ti".

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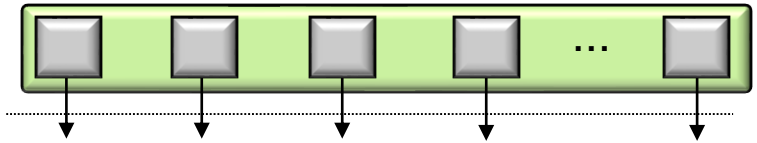
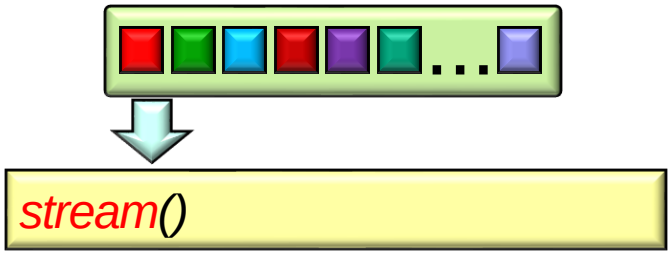
List
<SearchResults>





Convert list to a (sequential) stream of search results

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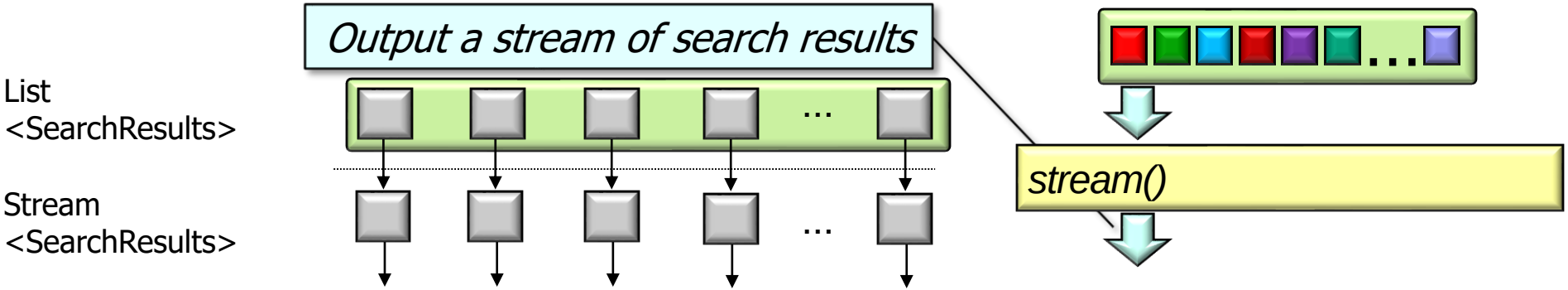

Print out results of each map entry (key = word & value = list of search results)

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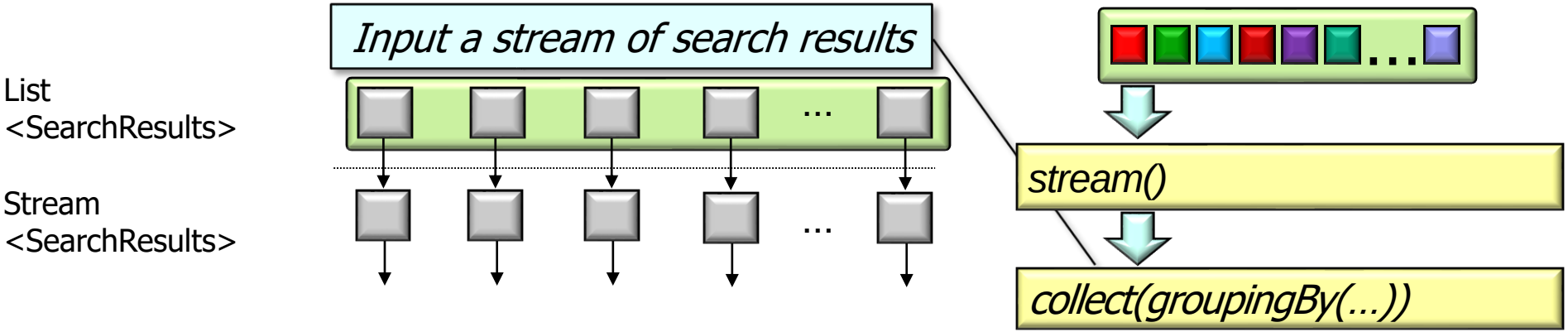

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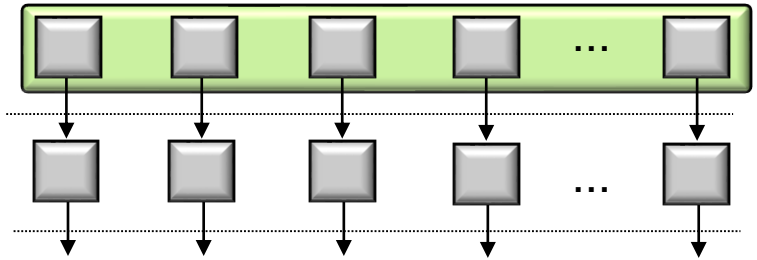
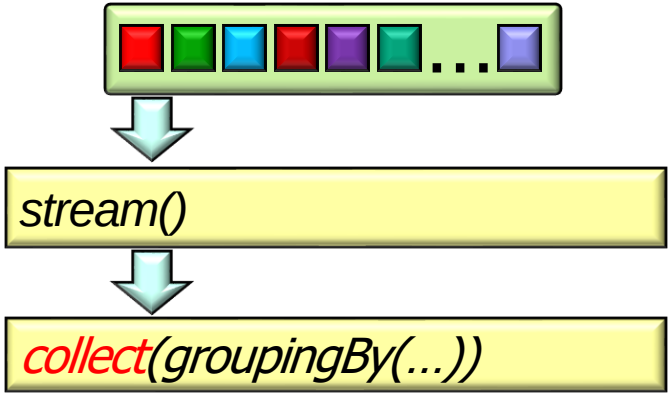
<SearchResults>

Stream
<SearchResults>





Trigger "intermediate operation" processing

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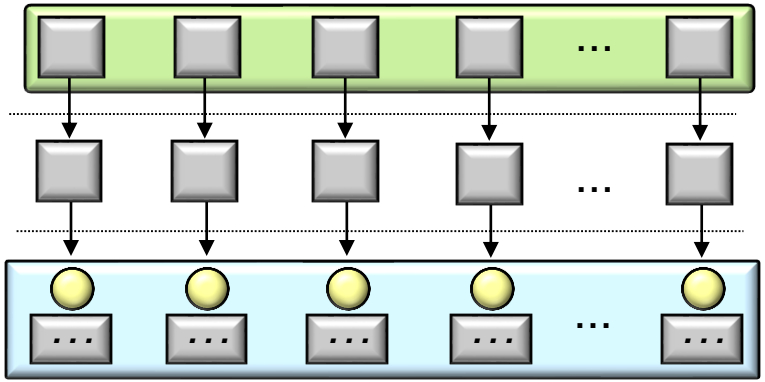
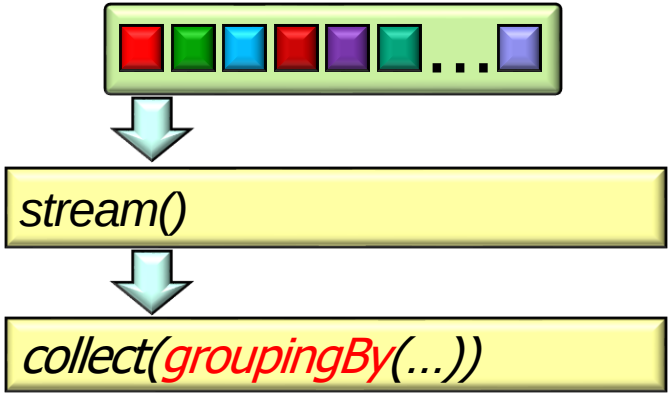
<SearchResults>

Stream
<SearchResults>

Map<String, List
<Result>>





Create a map that groups words with the indices where each word was found.

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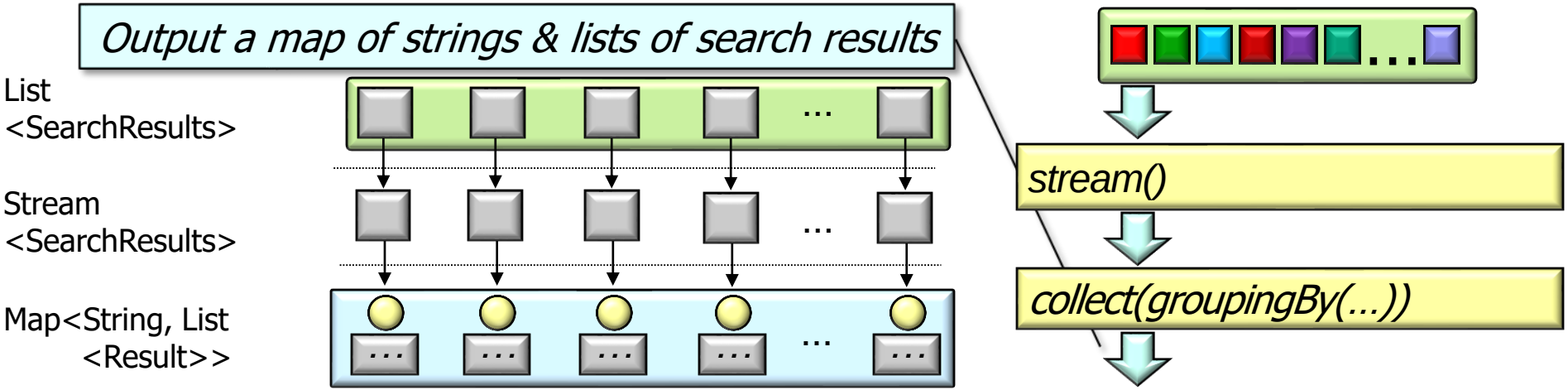

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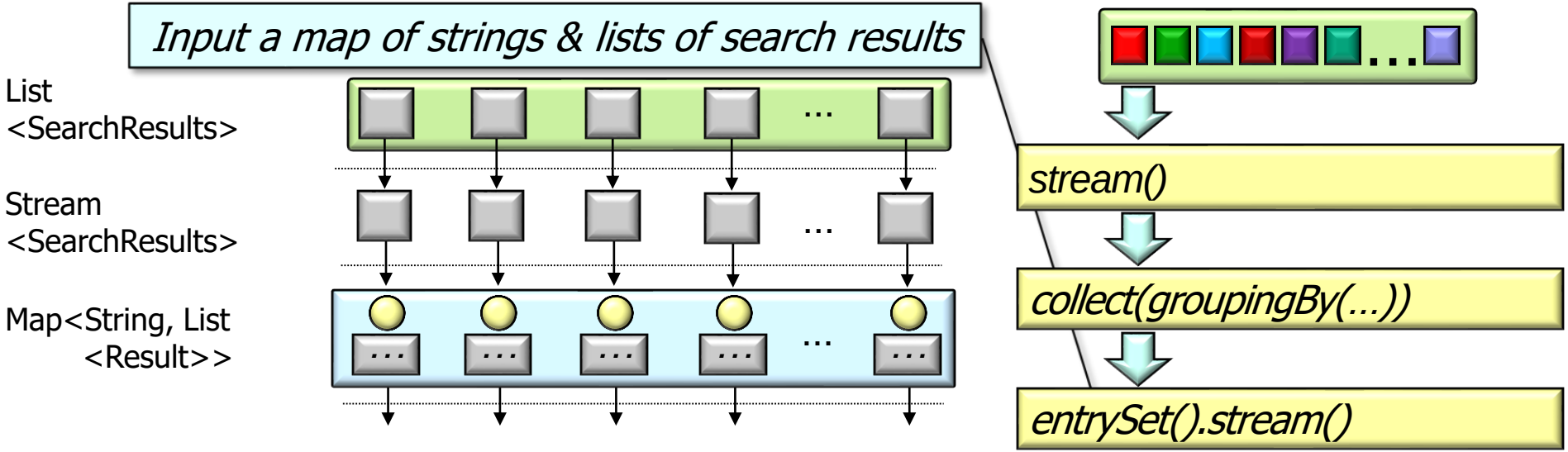

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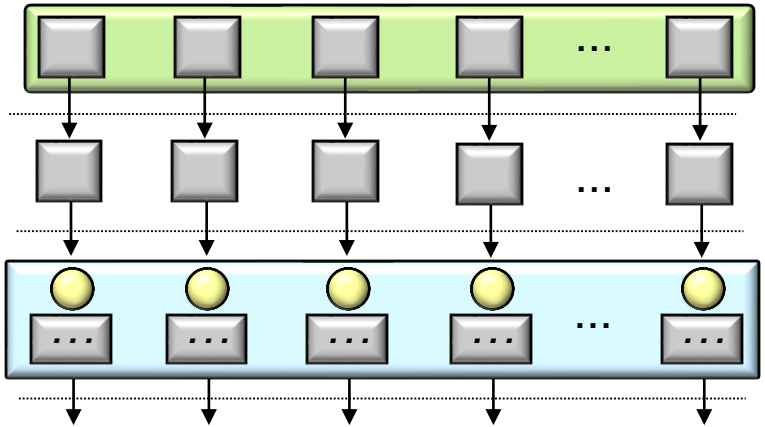

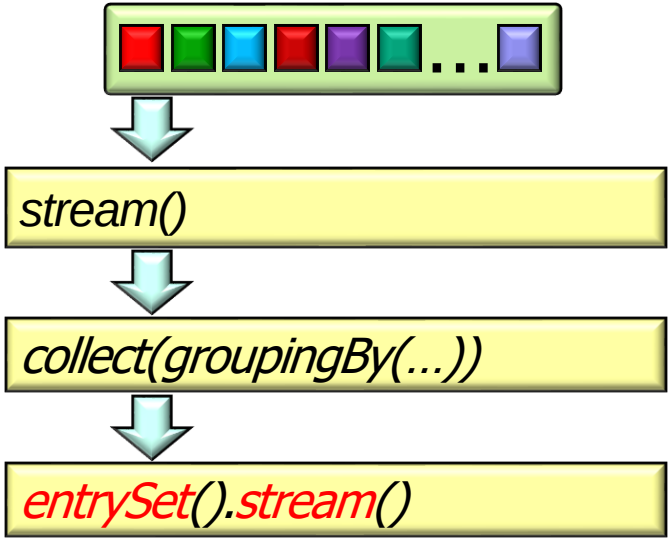

Obtain the entry set from the map & convert it into a stream

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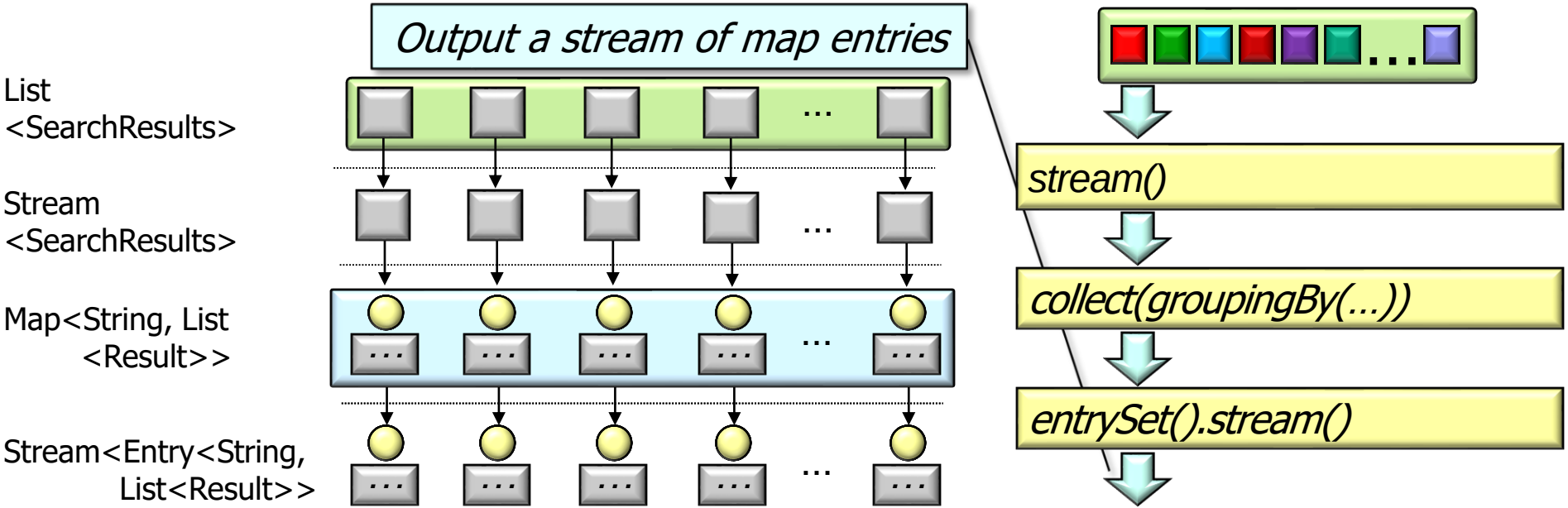

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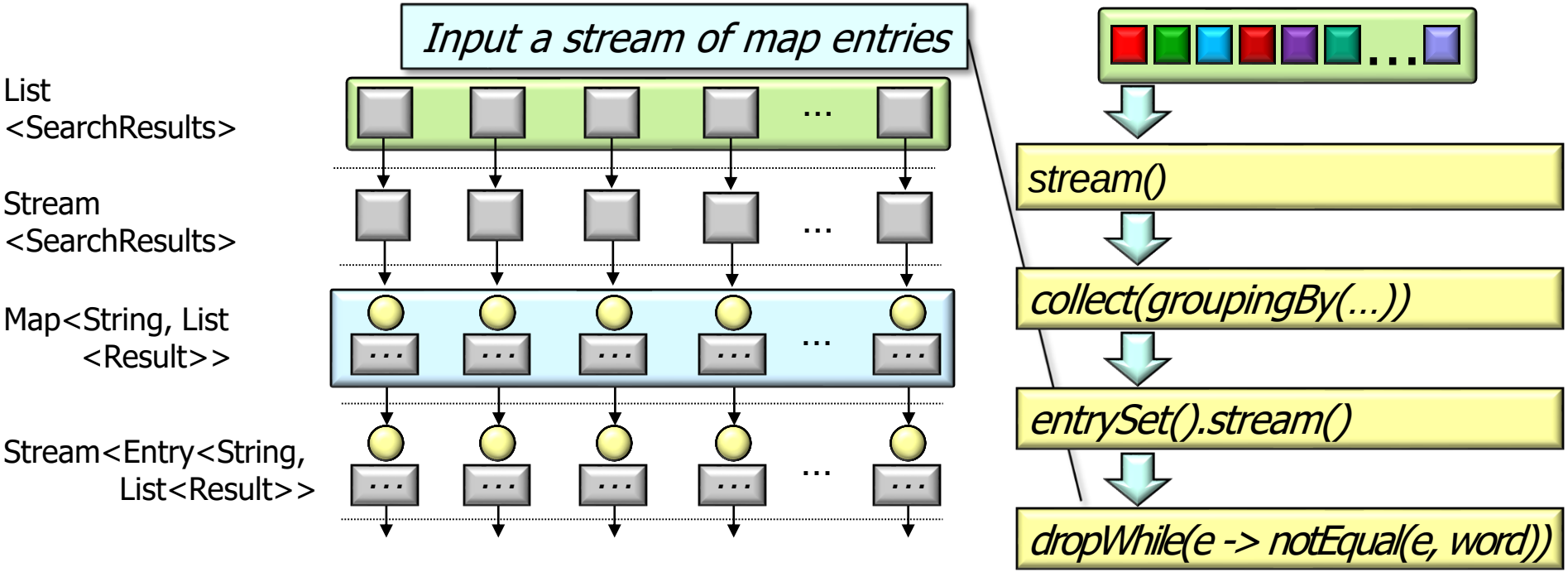

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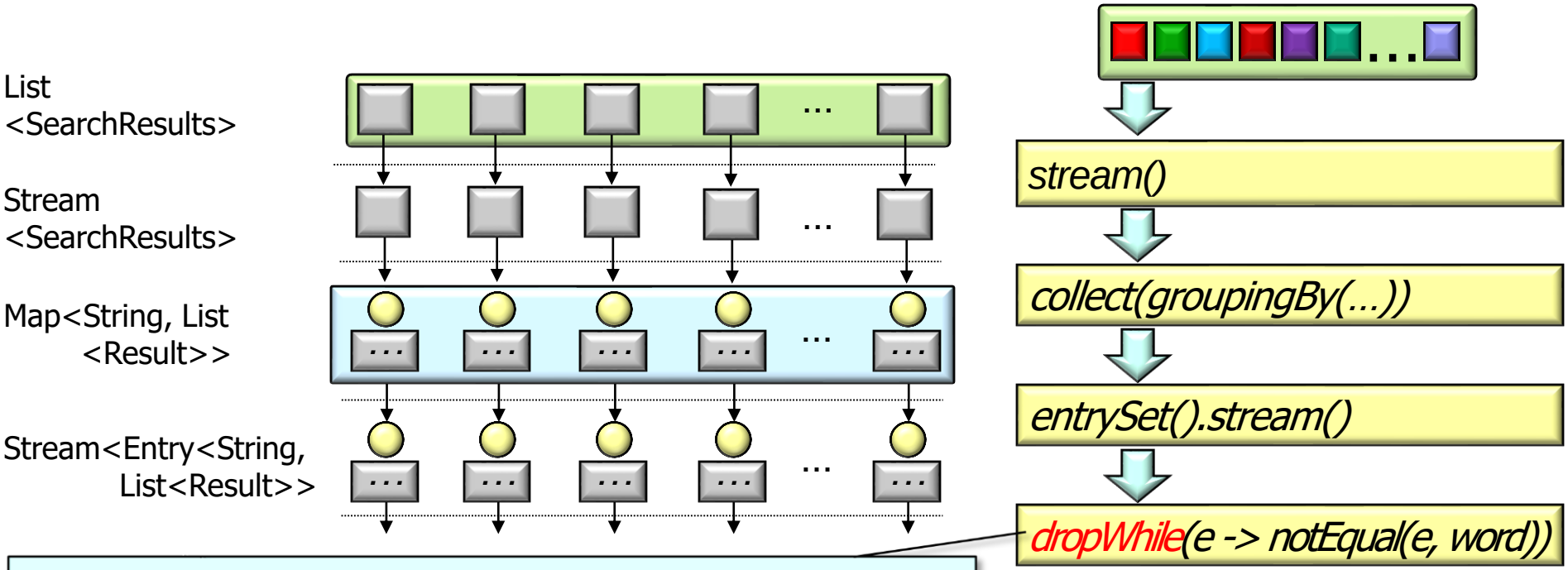

Slice the stream to contain remaining elements after dropping subset of elements that don't match `word'.

See docs.oracle.com/javase/9/docs/api/java/util/stream/Stream.html#dropWhile

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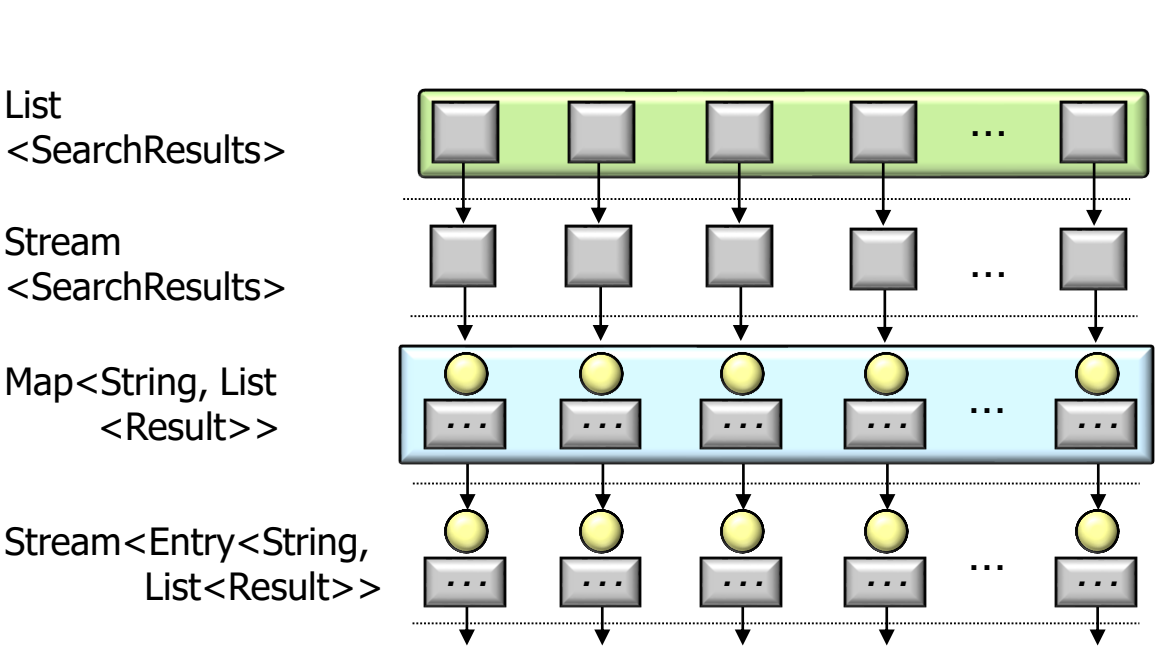

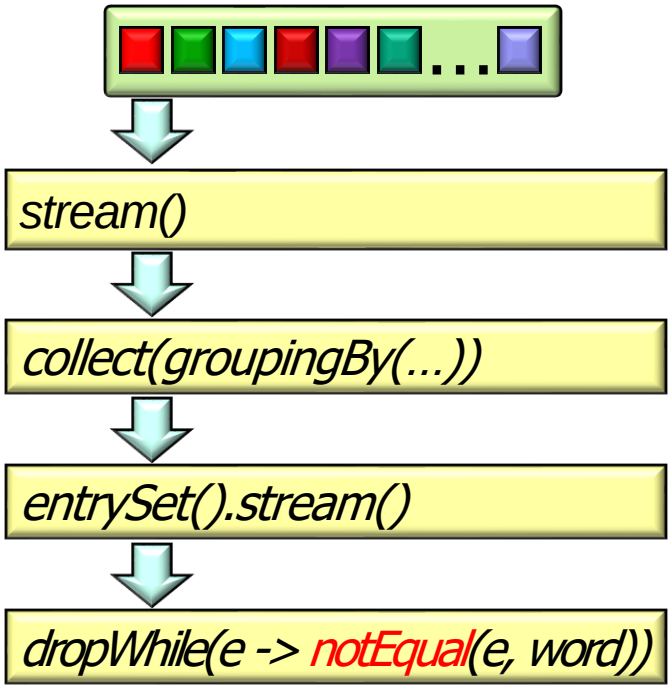

The notEqual() method is simple: `return !entry.getKey().equals(word)`

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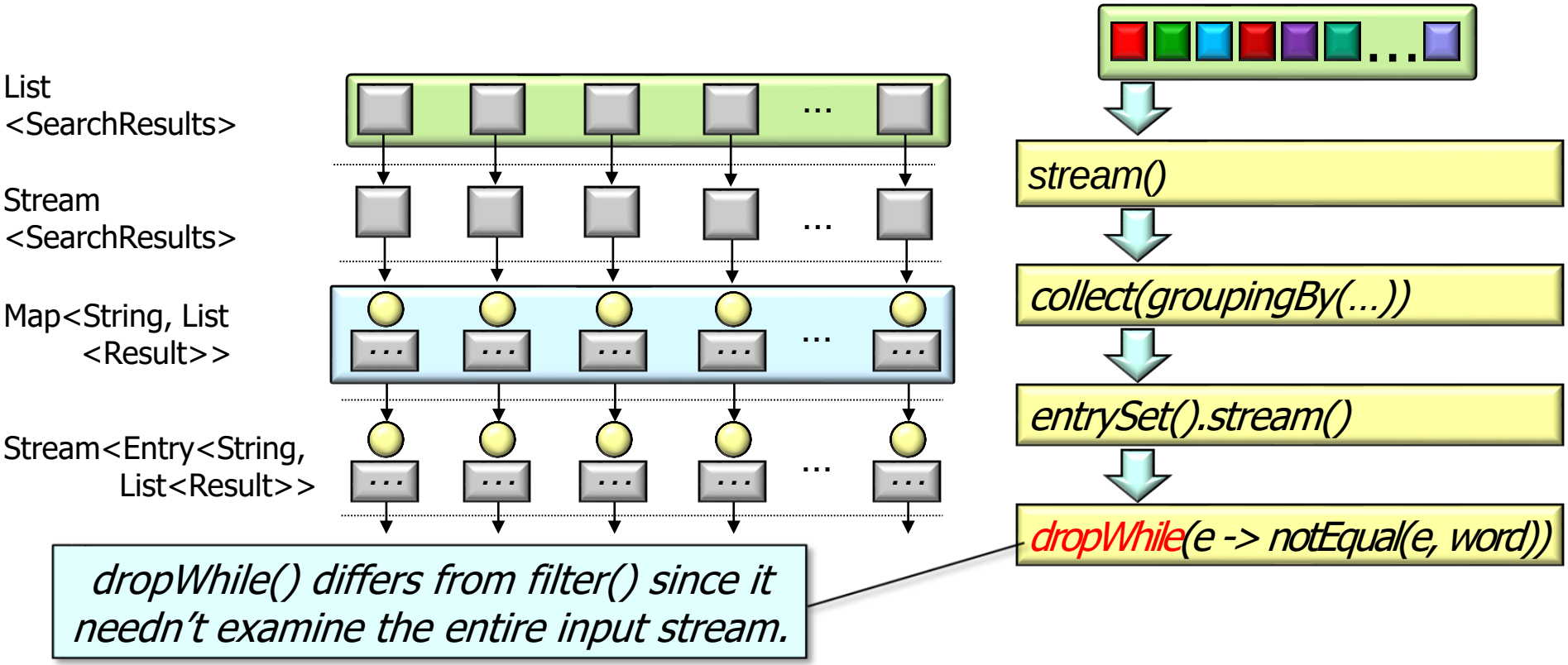

See itnext.io/streams-api-new-features-after-java-8-f2df81bed5ac

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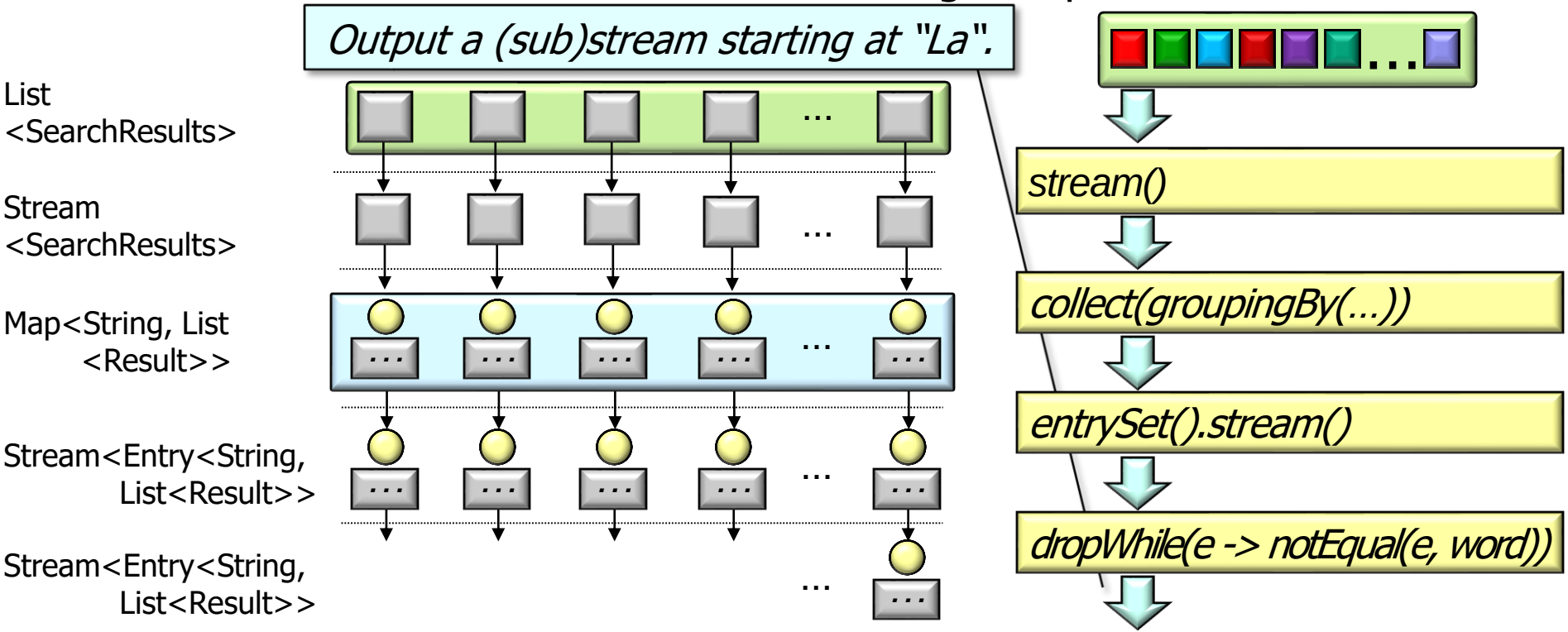

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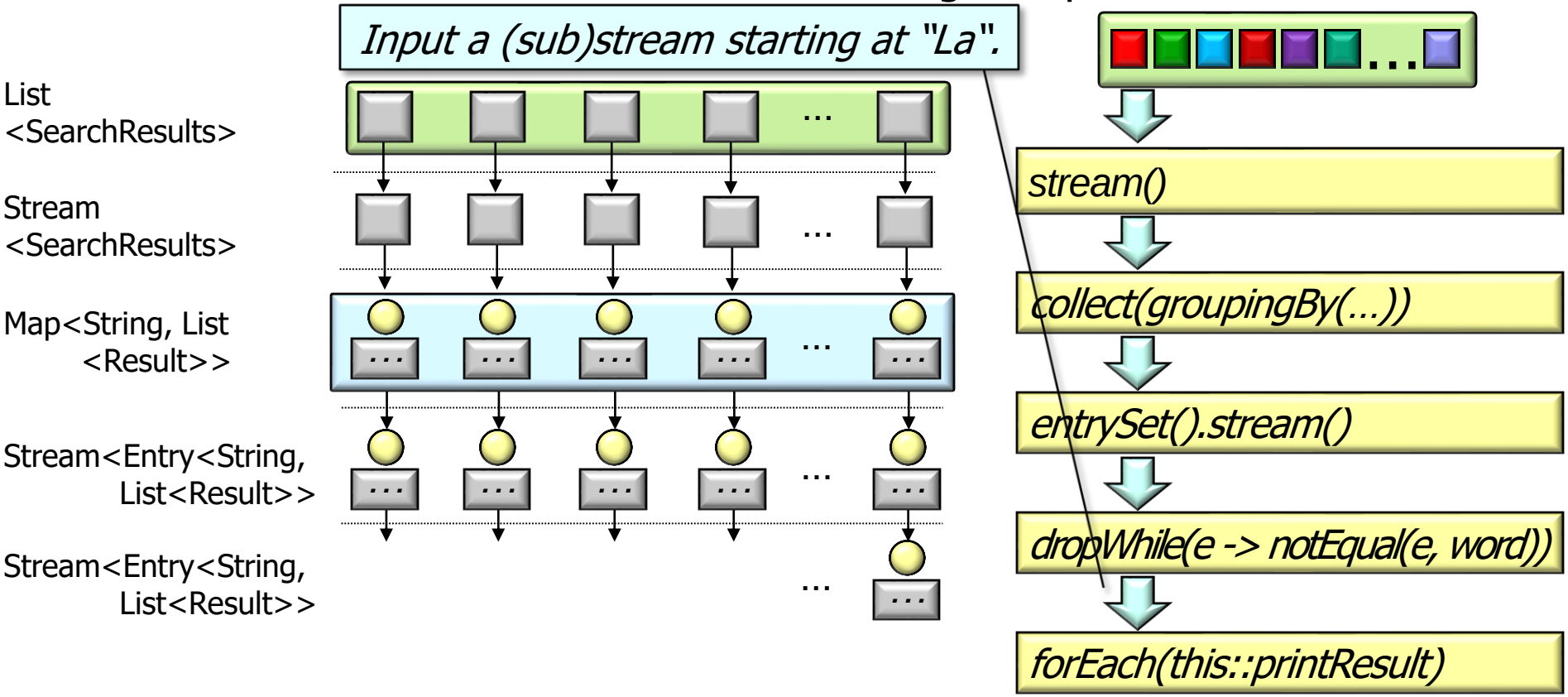

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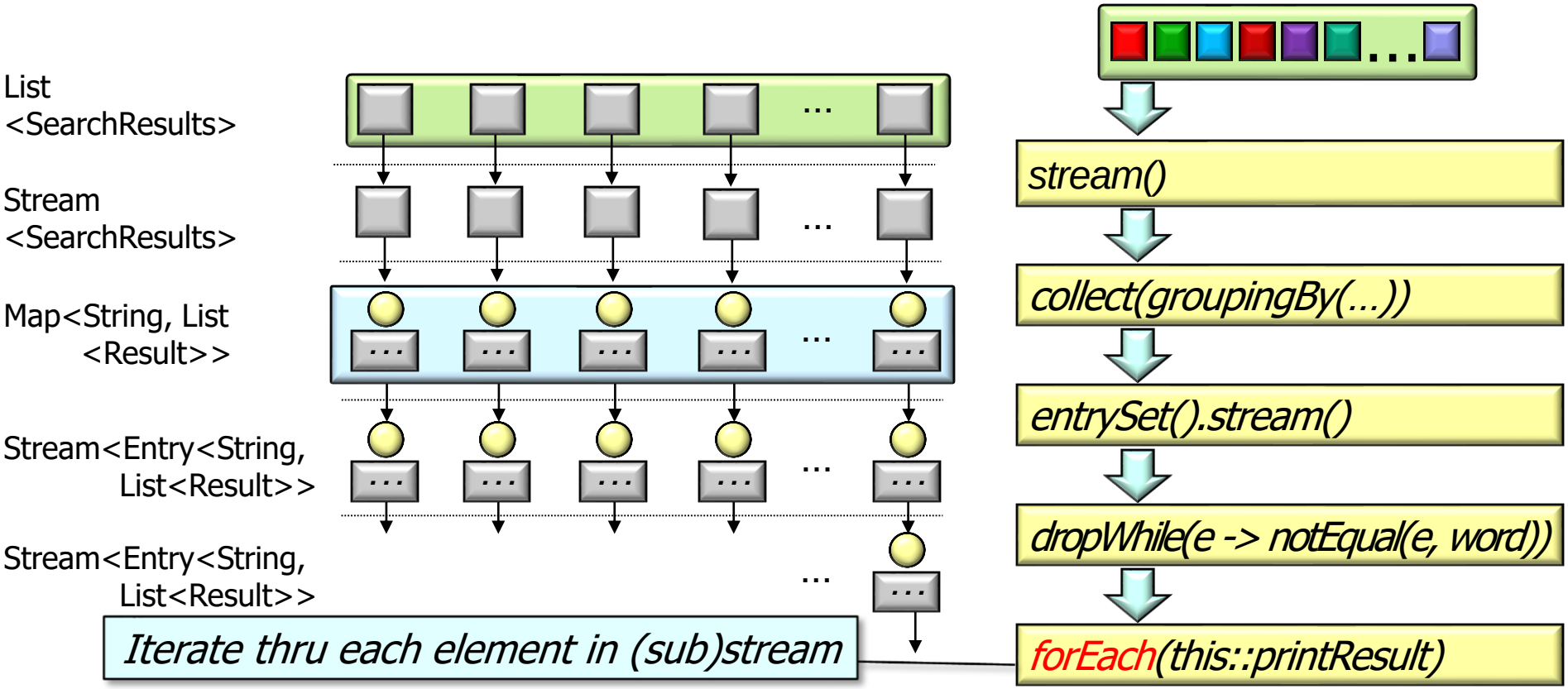

See docs.oracle.com/javase/8/docs/api/java/util/stream/Stream.html#forEach

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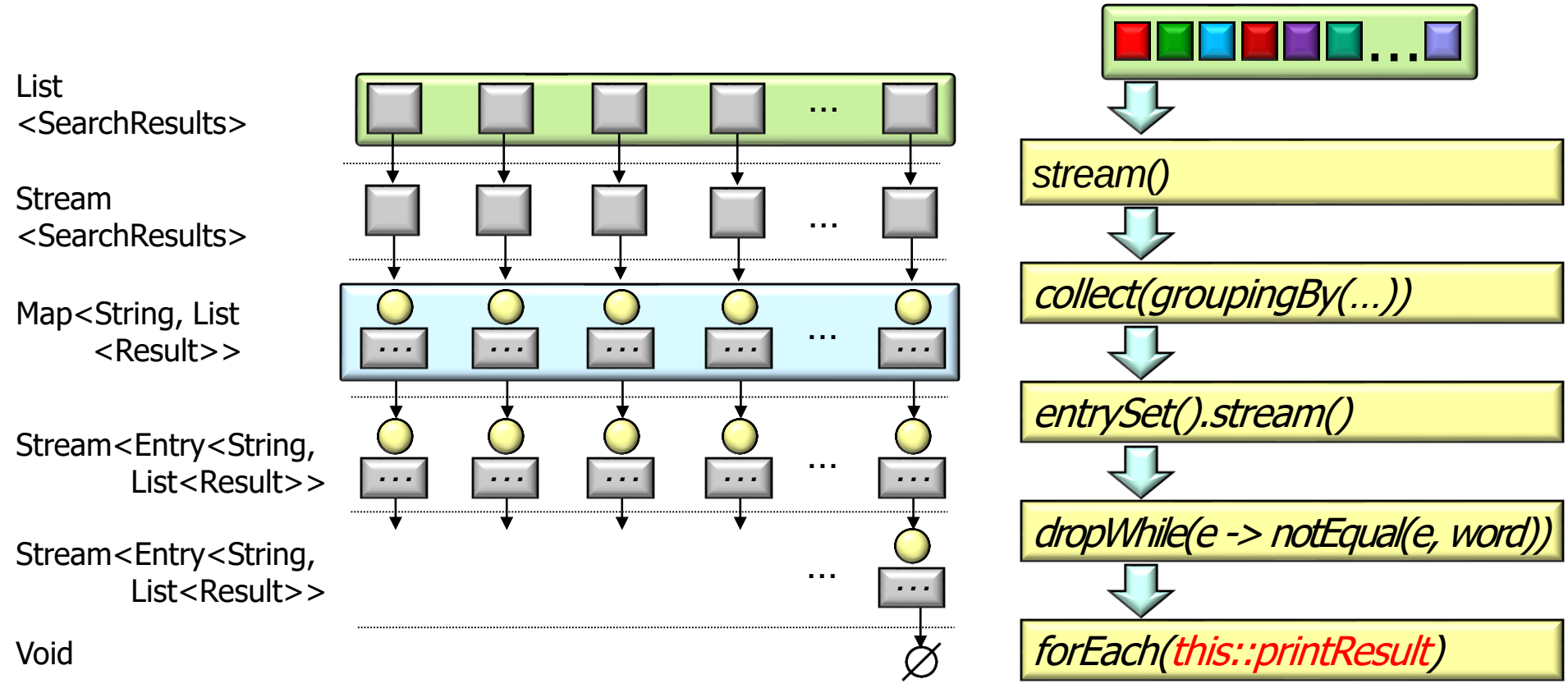

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End of Java Streams: Visualizing Word Searcher.printSlice()