

# Java Streams API

# What is a Stream

- ▶ **AN ABSTRACTION**
- ▶ **FOCUSES ON THE ALL INSTEAD OF THE PARTS**



# What is a Stream

- ▶ **IMPERATIVE TO FUNCTIONAL PROGRAMMING**
- ▶ **USED WITH COLLECTIONS**



# How to use Java Streams

## ▶ 1 - START WITH CONCRETE IMPLEMENTATION

▶ ARRAYS

▶ SET

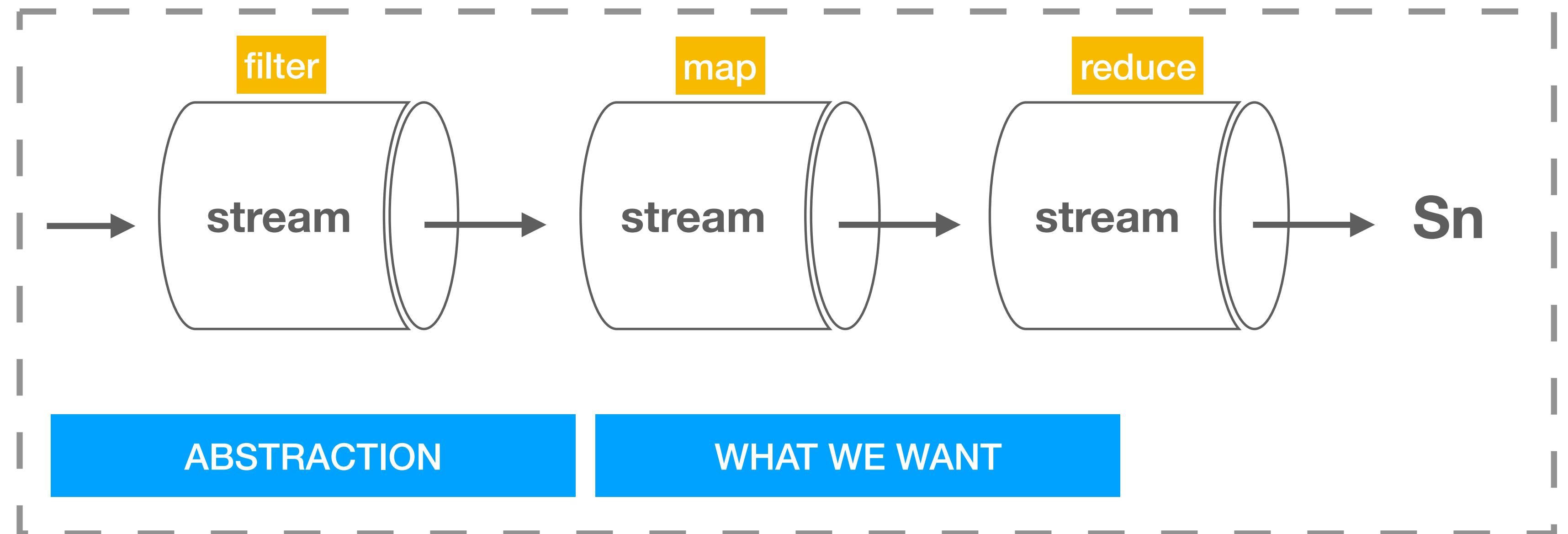
▶ LISTS

▶ MAPS

# How to use Java Streams

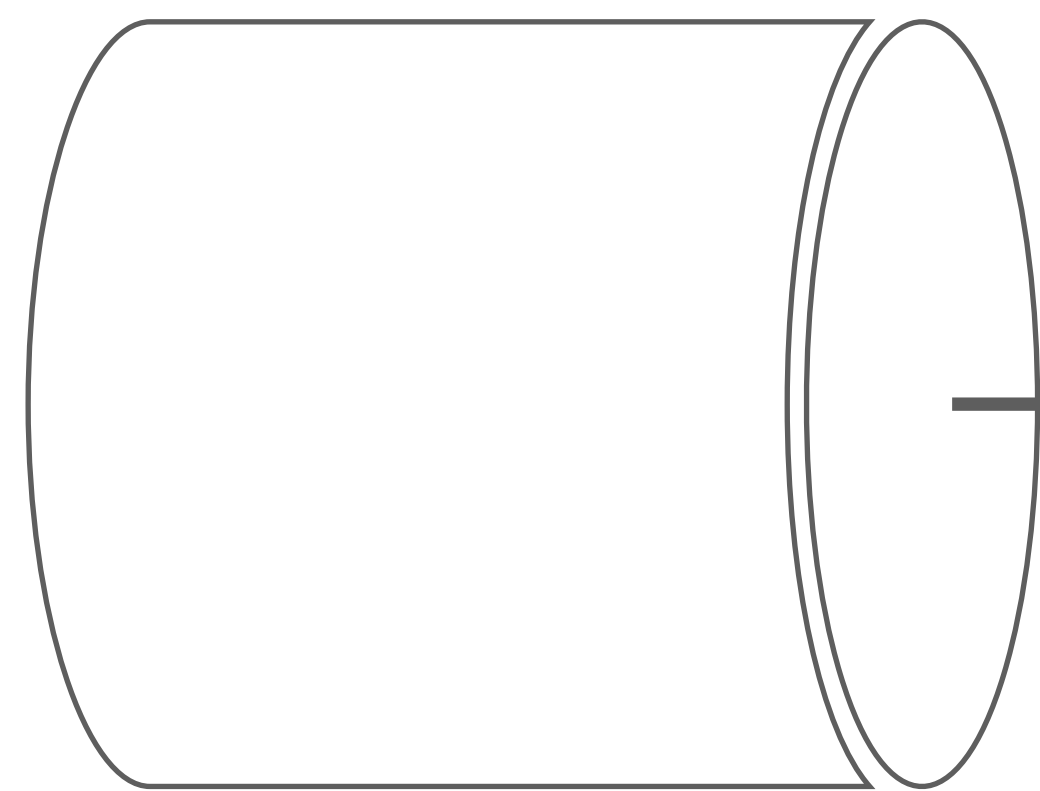
► 2

► `concrete.stream()`



# How to use Java Streams

▶ 3



**BACK TO CONCRETE**

`sum()`

`collect(Collectors.toList())`

`average()`

`collect(Collectors.groupingBy())`

▶ **LIST**

▶ **INT**

▶ **OBJECT**

▶ **OPTIONAL**

▶ **STRING**





# Benefits of Steams

- ▶ **EASIER TO UNDERSTAND**
- ▶ **MAINTAINABLE**
- ▶ **LESS CODE FOR COMPLEX LOGIC**
- ▶ **PERFORMANCE**
- ▶ **NO NEED TO WORRY ABOUT THREAD SAFETY**
- ▶ **NO MUTATING**
- ▶ **WRITE MORE CODE**