

TELUSKO

Collection.java Stream.java Iterable.java Consumer.java

```
import java.util.Arrays;
import java.util.List;
import java.util.function.Consumer;
import java.util.stream.Stream;

public class Demo

    public static void main(String[] args)
    {
        List<Integer> nums = Arrays.asList(4,5,7,8,9);

        Stream<Integer> data = nums.stream();
        long count = data.count();
        System.out.println(count);
        data.forEach(n -> System.out.println(n));
    }
}
```

Run: Demo

/Library/Java/JavaVirtualMachines/jdk-

Exception in thread "main" java.lang.
at java.base/java.util.stream.Abs
at Demo.main(Demo.java:15)

Process finished with exit code 1

Control Run TODO Problems Terminal Services Build

next occurrence

2:11 PM

UTF-8

4 spaces



JavaDemo > src > Demo > main > anonymous Predicate > test

Project: Demo.java, Collection.java, Stream.java, Predicate.java, Iterable.java, Consumer.java

```
8 {
9     public static void main(String[] args)
10    {
11        List<Integer> nums = Arrays.asList(6,5,2,8,1,7);
12
13
14        Predicate<Integer> predi = new Predicate<Integer>() {
15            @Override
16            public boolean test(Integer n) {
17                return n%2==1;
18            }
19        };
20
21        nums.stream()
22            .filter(predi)
23            .sorted()
24            .map(n -> n*2)
25            .forEach(n -> System.out.println(n));
26
27
28
29
30    }
```

functional interface

Run: Demo

/Library/Java/JavaVirtualMach:  
2  
10  
14

Process finished with exit co

Version Control Run TODO Problems Terminal Services Build

Build completed successfully in 789 ms (a minute ago)

17:29 (6 chars) LF

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JavaDemo > src > Demo > main

Project: Demo.java, Collection.java, Stream.java, BinaryOperator.java, BiFunction.java, Function.java, Predicate.java, Iterable.java, Consumer.java

```
1 public class Demo
2 {
3     public static void main(String[] args)
4     {
5         List<Integer> nums = Arrays.asList(6,5,2,8,1,7);
6
7         // use parallel streams
8
9         int result = nums.parallelStream()
10             .filter(n -> n%2==1)
11             .map(n -> n*2)
12             .reduce(identity: 0, (c,e)->c+e);
13
14         System.out.println(result);
15
16         //
17         // for(int n : nums)
18         // {
19         //     System.out.println(n*2);
20         // }
21     }
22 }
```

Run: Demo

/Library/Java/JavaVirtualMach  
26

Process finished with exit co

Build completed successfully in 676 ms (moments ago)

17:41 (14 chars) LF

JavaDemo src Demo main TELUSKO

Project Demo.java Collection.java Stream.java BinaryOperator.java BiFunction.java Function.java Predicate.java Iterable.java Consumer.java

```
1 public class Demo
2 {
3     public static void main(String[] args)
4     {
5         List<Integer> nums = Arrays.asList(6,5,2,8,1,7);
6
7         int result = nums.stream()
8             .filter(n -> n%2==1)
9             .sorted()
10            .map(n -> n*2)
11            .reduce(Identity: 0, (c,e)->c+e);
12
13        System.out.println(result);
14
15        //
16
17        // for(int n : nums)
18        // {
19        //     System.out.println(n*2);
20        // }
21    }
22 }
```


Run: Demo

/Library/Java/JavaVirtualMach: 26

Process finished with exit code 0

Version Control Run TODO Problems Terminal Services Build

Build completed successfully in 774 ms (moments ago) 21:40 LF



JavaDemo

src

Demo

main

Lambda

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

Build completed successfully in 746 ms (moments ago)

7:1

LF

Project

Structure

Bookmarks

Version Control

Run

TODO

Problems

Terminal

Services

Build

Demo.java

Collection.java

Stream.java

Predicate.java

Iterable.java

Consumer.java

public class Demo

{

public static void main(String[] args)

{

List<Integer> nums = Arrays.asList(6,5,2,8,1,7);

Predicate<Integer> predi = n -> n%2==1;

nums.stream()

.filter(predi)

.sorted()

.map(n -> n\*2)

.forEach(n -> System.out.println(n));

//

// for(int n : nums)

// {

// System.out.println(n\*2);

// }

Run: Demo

/Library/Java/JavaVirtualMach:

2

10

14

Process finished with exit co

1

3

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JavaDemo > src > Demo > main

Project: Demo.java x Collection.java x Stream.java x Iterable.java x Consumer.java x

```
1 import java.util.Arrays;
2 import java.util.List;
3 import java.util.function.Consumer;
4 import java.util.stream.Stream;
5
6 public class Demo
7 {
8     public static void main(String[] args)
9     {
10         List<Integer> nums = Arrays.asList(6,5,2,8,4,7);
11
12         nums.stream()
13             .filter(n -> n%2==1)
14             .sorted()
15             .map(n -> n*2)
16             .forEach(n -> System.out.println(n));
17
18         //
19
20         for(int n : nums)
21         {
22             System.out.println(n*2);
23         }
24     }
25 }
```

Run: Demo x

/Library/Java/JavaVirtualMach:  
2  
10  
14  
Process finished with exit co

Build completed successfully in 767 ms (moments ago)

10:52 (1 char) LF

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```
public class Demo
{
    public static void main(String[] args)
    {
        List<Integer> nums = Arrays.asList(6,5,2,8,1);

        nums.stream()
            .sorted()
            .map(n -> n*2)
            .forEach(n -> System.out.println(n));
    }
}
```

```
//
//
// for(int n : nums)
// {
//     System.out.println(n*2);
// }
```



JavaDemo src Demo main

Project: Demo.java Collection.java Stream.java Iterable.java Consumer.java

```
2 import java.util.List;
3 import java.util.function.Consumer;
4 import java.util.stream.Stream;
5
6 public class Demo
7 {
8     public static void main(String[] args)
9     {
10         List<Integer> nums = Arrays.asList(6,5,2,8,1);
11
12         nums.stream()
13             .map(n -> n*2)
14             .forEach(n -> System.out.println(n));
15
16         //
17
18         // for(int n : nums)
19         // {
20         //     System.out.println(n*2);
21         // }
22
23
24 }
```

Run: Demo

/Library/Java/JavaVirtualMach:

12  
10  
4  
16  
2

Process finished with exit co

Build completed successfully in 739 ms (moments ago)

9:1 LF

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JavaDemo > src > Demo > main

Project: Demo.java x Collection.java x Stream.java x Iterable.java x Consumer.java x

```
2 import java.util.List;
3 import java.util.function.Consumer;
4 import java.util.stream.Stream;
5
6 public class Demo
7 {
8     public static void main(String[] args)
9     {
10         List<Integer> nums = Arrays.asList(6,5,2,8,1);
11
12         Stream<Integer> data = nums.stream();
13         Stream<Integer> mappedData = data.map(n -> n*2);
14         mappedData.forEach(n -> System.out.println(n));
15
16         //
17         // for(int n : nums)
18         // {
19         //     System.out.println(n*2);
20         // }
21
22     }
23 }
24
```

Run: Demo x

/Library/Java/JavaVirtualMe

12  
10  
4  
16  
2

Process finished with exit

Build completed successfully in 920 ms (moments ago)

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```

import java.util.Arrays;
import java.util.List;
import java.util.function.Consumer;
import java.util.stream.Stream;

public class Demo

    public static void main(String[] args)
    {
        List<Integer> nums = Arrays.asList(6,5,2,8,1);

        Stream<Integer> data = nums.stream();
        Stream<Integer> sortedData = data.sorted();
        sortedData.forEach(n -> System.out.println(n));
    }
}

```

Run

Run: Demo

```

/Library/Java/JavaVirtualMachines/jdk-
1
2
5
6
8
Process finished with exit code 0

```



rol ▶ Run ⋮ TODO ⓘ Problems 📄 Terminal ⚙ Services ↶ Build

successfully in 695 ms (moments ago)



TELUSKO

```
Collection.java x Stream.java x Iterable.java x Consumer.java x  
import java.util.Arrays;  
import java.util.List;  
import java.util.function.Consumer;  
import java.util.stream.Stream;  
  
public class Demo  
{  
    public static void main(String[] args)  
    {  
        List<Integer> nums = Arrays.asList(4,5,7,8,9);  
  
        Stream<Integer> data = nums.stream();  
  
        data.forEach(n -> System.out.println(n));  
        data.forEach(n -> System.out.println(n));  
    }  
}
```

Run: Demo x  
vaagent:/Applications/IntelliJ IDEA CE.app/Contents/Lib  
Error: stream has already been operated upon or closed  
or(AbstractPipeline.java:279) <1 internal line>

15:50 (91 chars, 1 line break) 4 spaces

src Demo main

Collection.java Stream.java Iterable.java Consumer.java

```
import java.util.Arrays;
import java.util.List;
import java.util.function.Consumer;
import java.util.stream.Stream;

public class Demo
{
    public static void main(String[] args)
    {
        List<Integer> nums = Arrays.asList(4,5,7,8,9);

        Stream<Integer> data = nums.stream();

        data.forEach(n -> System.out.println(n));
        data.forEach(n -> System.out.println(n));
    }
}
```

Run: Demo

```
4
5
7
8
9
Exception in thread "main" java.lang.IllegalStateException:
at java.base/java.util.stream.AbstractPipeline.source
at Demo.main(Demo.java:15)
```

- once it used never be used again

Control Run TODO Problems Terminal Services Build

sted successfully in 849 ms (moments ago)

2:1 (9 chars, 4 line ok) UTF-8 4 spaces

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JavaDemo src Demo main

Project Demo.java Collection.java Stream.java Iterable.java Consumer.java

```
1 import java.util.Arrays;
2 import java.util.List;
3 import java.util.function.Consumer;
4 import java.util.stream.Stream;
5
6 public class Demo
7 {
8     public static void main(String[] args)
9     {
10         List<Integer> nums = Arrays.asList(4,5,7,8,9);
11
12         Stream<Integer> data = nums.stream();
13
14         data.forEach(n -> System.out.println(n));
15
16     }
17 }
18
```

- stream will never effect the original list.

Run: Demo x

/Library/Java/...

4  
5  
6  
7  
8  
9

Process finished

Version Control Run TODO Problems Terminal Services Build

Build completed successfully in 2 sec; 210 ms (moments ago)

2:14:21:15 (6 chars) LF

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