HowToDoInJava

Java Stream toArray()



Learn to **convert a Stream to an array** using **Stream toArray()** API. In this totorial, we will see multiple examples for collecting the <u>Stream</u> elements into an <u>array</u>.

1. Stream to Array() Method

The toArray() method returns an array containing the elements of the given stream. This is a terminal operation.

```
Object[] toArray()
<T> T[] toArray(IntFunction<T[]> generator)
```

toArray() method is an overloaded method. The second method uses a **generator** function to allocate the returned array.

The generator function takes an integer, which is the *size of the desired array* and produces an array of the desired size.

2. Stream to Array() Example

Example 1: Converting Stream of String to Array of String

In the given example, we are converting a stream to an array using using toArray() API.

```
Convert stream of strings to array

Stream<String> tokenStream = Arrays.asList("A", "B", "C", "D").stream(); //stream

String[] tokenArray = tokenStream.toArray(String[]::new); //array

System.out.println(Arrays.toString(tokenArray));
```

Program output.

```
Console
[A, B, C, D]
```

Example 2: Converting an Infinite Stream to an Array

To convert an infinite stream into array, we must **limit the stream** to a finite number of elements.

Infinite stream of Integers

Program output.

```
Console
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

Infinite boxed stream of Integers

Convert infinite stream to array

Program output.

```
Console
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

Example 3: Stream filter and collect to an Array

Sometimes we need to find specific items in stream and then add only those elements to array. Here, we can use **Stream.filter()** method to pass a predicate which will return only those elements who match the pre-condition.

```
Convert stream to array - filtered elements
import java.util.ArrayList;
import java.util.Arrays;
import java.util.List;
public class Main
  public static void main(String[] args)
    List<Employee> employeeList = new ArrayList<>(Arrays.asList(
               new Employee(1, "A", 100),
               new Employee(2, "B", 200),
              new Employee(3, "C", 300),
               new Employee(4, "D", 400),
               new Employee(5, "E", 500),
               new Employee(6, "F", 600)));
    Employee[] employeesArray = employeeList.stream()
             .filter(e -> e.getSalary() < 400)</pre>
             .toArray(Employee[]::new);
    System.out.println(Arrays.toString(employeesArray));
  }
```

Program output.

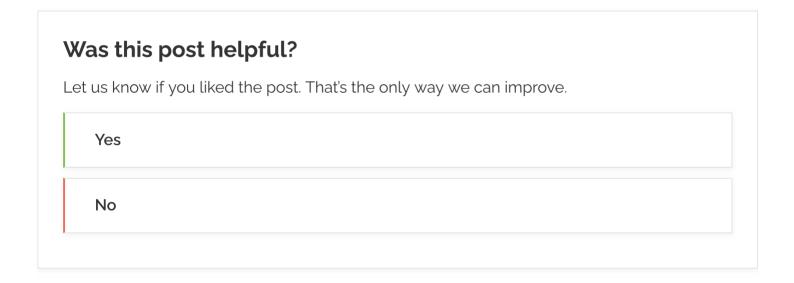
```
Console

[Employee [id=1, name=A, salary=100.0],
Employee [id=2, name=B, salary=200.0],
Employee [id=3, name=C, salary=300.0]]
```

3. Conclusion

We can use Stream **toArray()** function is variety of ways to collect stream elements into an array in all usescases.

Happy Learning!!



Recommended Reading:

- Java ArrayList to Array() Convert ArrayList to Array
- 2. Java Stream reuse traverse stream multiple times?
- 3. Java Stream sorted()
- 4. Java Stream findFirst()
- 5. Java Stream findAny()

- 6. Java Stream for Each()
- 7. Java Stream for Each Ordered()
- 8. Java Stream max()
- 9. Java Stream min()
- O. Java Stream skip()

Join 7000+ Awesome Developers

Get the latest updates from industry, awesome resources, blog updates and much more.

Email Address

Subscribe

* We do not spam !!

Leave a Comment	
Name *	
Email *	
Website	
☐ Add me to your newslet	ter and keep me updated whenever you publish new blog
posts	
Post Comment	
Search	Q

23/06/2022,	22:46	Java Stre	am toArray()	Converting Stream to Array

HowToDoInJava

A blog about Java and related technologies, the best practices, algorithms, and interview questions.

Meta Links

- > About Me
- > Contact Us
- > Privacy policy
- > Advertise
- > Guest Posts

Blogs

REST API Tutorial







Copyright © 2022 · Hosted on Cloudways · Sitemap