

| <i><b>Operation</b></i>  | <i><b>Purpose</b></i>   | <i><b>Type</b></i> | <i><b>Example</b></i>   |
|--------------------------|---|--------------------|---|
| <code>map()</code>       | Transforms each element in the stream using a given function.             | Intermediate       | <code>map(n -&gt; n * n)</code> - squares each number         |
| <code>filter()</code>    | Selects elements that match a given condition (predicate).                | Intermediate       | <code>filter(n -&gt; n % 2 == 0)</code> - keeps even numbers  |
| <code>sorted()</code>    | Sorts elements in natural order or with a custom comparator.              | Intermediate       | <code>sorted()</code> - sorts names alphabetically            |
| <code>distinct()</code>  | Removes duplicate elements from the stream.                               | Intermediate       | <code>distinct()</code> - removes duplicates                  |
| <code>forEach()</code>   | Performs an action for each element in the stream.                        | Terminal           | <code>forEach(System.out::println)</code> - prints all        |
| <code>findFirst()</code> | Retrieves the first element in the stream (if present).                   | Terminal           | <code>findFirst()</code> - gets the first element             |
| <code>reduce()</code>    | Combines all elements into a single result using an accumulator function. | Terminal           | <code>reduce(0, Integer::sum)</code> - sums all numbers       |
| <code>limit()</code>     | Truncates the stream to a specified number of elements.                   | Intermediate       | <code>limit(3)</code> - gets the first 3 elements             |
| <code>skip()</code>      | Skips the first n elements in the stream.                                 | Intermediate       | <code>skip(2)</code> - skips the first 2 elements             |
| <code>collect()</code>   | Converts the stream elements into a collection or another data structure. | Terminal           | <code>collect(Collectors.toList())</code> - collects to list  |
| <code>anyMatch()</code>  | Checks if any element matches a given predicate.                          | Terminal           | <code>anyMatch(n -&gt; n &gt; 3)</code> - checks if any > 3   |
| <code>allMatch()</code>  | Checks if all elements match a given predicate.                           | Terminal           | <code>allMatch(n -&gt; n &gt; 0)</code> - checks if all > 0   |
| <code>noneMatch()</code> | Checks if no elements match a given predicate.                            | Terminal           | <code>noneMatch(n -&gt; n &lt; 0)</code> - checks if none < 0 |
| <code>peek()</code>      | Performs an action on each element as it is processed (debugging).        | Intermediate       | <code>peek(System.out::println)</code> - prints during stream |