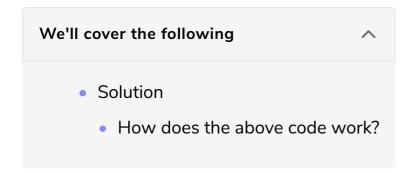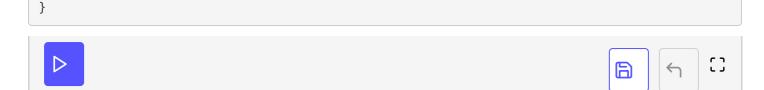# Solution Review: Gathering Zeros to the Start

In this review, solution of the challenge 'Gathering Zeros to the Start' from the previous lesson is provided.

Solution

```java
class ArrList {
    public static void zerosToStart(ArrayList < Integer > arrList) {
        ArrayList < Integer > newArrayList = new ArrayList < Integer > ();
        int newArray_index = 0;

        //Fill newArrayList with Zeros first.
        //Then Fill it with non-zero Values.
        //In the end, insert every element of newArrayList back into origional arrList.
        for (int i = 0; i < arrList.size(); i++) {

            if (arrList.get(i) == 0)
                newArrayList.add(newArray_index++, arrList.get(i));
        }

        for (int i = 0; i < arrList.size(); i++) {

            if (arrList.get(i) != 0)
                newArrayList.add(newArray_index++, arrList.get(i));
        }

        for (int j = 0; j < newArrayList.size(); j++) {
            arrList.set(j, newArrayList.get(j));
        }
    }
    public static void main( String args[] ) {
        ArrayList<Integer> input = new ArrayList<Integer>(Arrays.asList(5, 0, 20, 4, 0, 0, 9));
        System.out.println("Array List before calling zerosToStart");
        for (int i = 0; i < input.size(); i++){
            System.out.print(input.get(i)+ "  ");
        }
        System.out.println();
        ArrList.zerosToStart(input);
        System.out.println("Array List after calling zerosToStart");
        for (int i = 0; i < input.size(); i++){
            System.out.print(input.get(i)+ "  ");
        }
        System.out.println();
```

```
    }
}
```

How does the above code work?

In the above solution code, we have created a new `Integer` ArrayList. Using the for loop, first, we have copied the zeros from the original ArrayList i.e. *arrList* to the *newArrayList* meanwhile keeping track of the index via using an `int` variable.

In the next loop, we have copied the *non-zero* elements to the *newArrayList* in a similar way. Now that, all the elements have been arranged in the given order and added to the *newArrayList* we have implemented a for loop to copy the sorted elements back to the *arrList*.

In the next lesson, there will be another coding challenge to test your understanding of the ArrayLists.