





Challenge: Implement Selection Sort

Selection sort loops over positions in the array. For each position, it finds the index of the minimum value in the subarray starting at that position. Then it swaps the values at the position and at the minimum index. Write selection sort, making use of the swap and indexOfMinimum functions.

 Java

 Python

 C++

 JS

```
1  class Solution {
2      static void swap(int[] array,
3          int firstIndex,
4          int secondIndex) {
5          int temp = array[firstIndex];
6          array[firstIndex] = array[secondIndex];
7          array[secondIndex] = temp;
8          return;
9      }
10
11     static int indexOfMinimum(int[] array,
12         int startIndex) {
13         int minValue = array[startIndex];
14         int minIndex = startIndex;
15
16         for(int i = minIndex + 1; i < array.length; i++) {
17             if(array[i] < minValue) {
18                 minIndex = i;
19                 minValue = array[i];
20             }
21         }
22         return minIndex;
23     };
24
25     public static void selectionSort(int[] array) {
26         for(int i = 1; i < array.length; i++) {
27             int current = array[i];
28             int j = i - 1;
29
30             while (j >= 0 && array[j] < current) {
31                 array[j + 1] = array[j];
32                 j--;
33             }
34             array[j + 1] = current;
35         }
36     }
37 }
```

