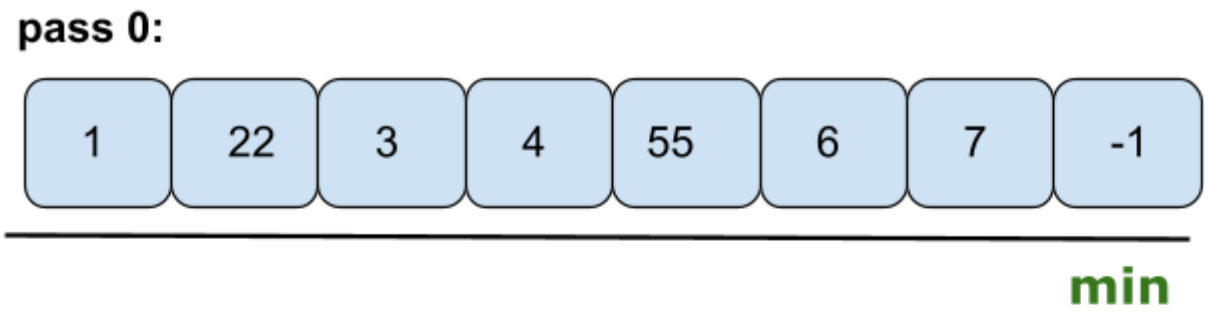
Selection Sort

Basic Idea:

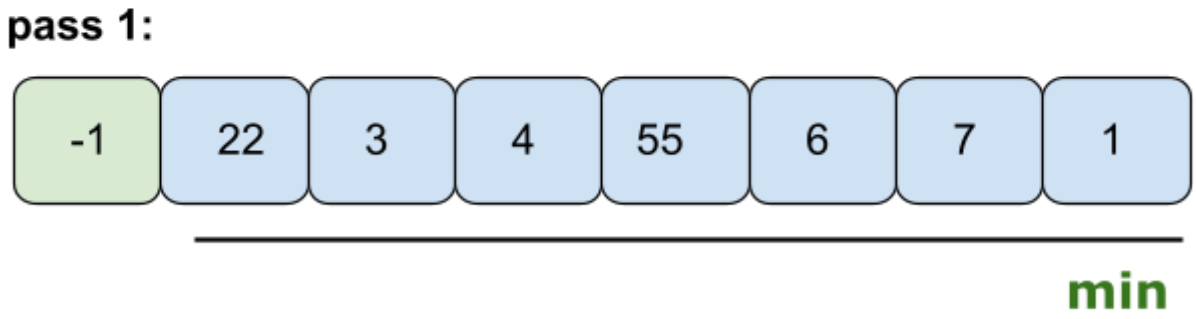
1. Find min in the array and swap with index 0
2. Find min in the array starting from index 1 and swap it with index 1
3. Find min in the array starting from index 2 and swap it with index 2
4. Repeat n-1 times

```
int[] arr = {1,22,3,4,55,6,7,-1};

        selectionSort(arr);
```

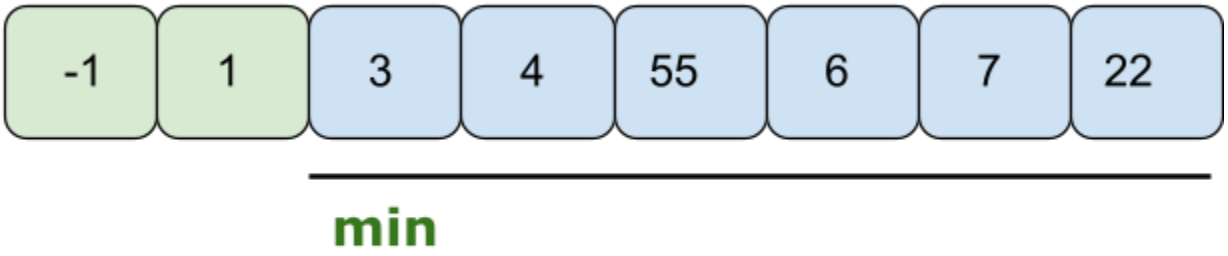


swap(1,-1)



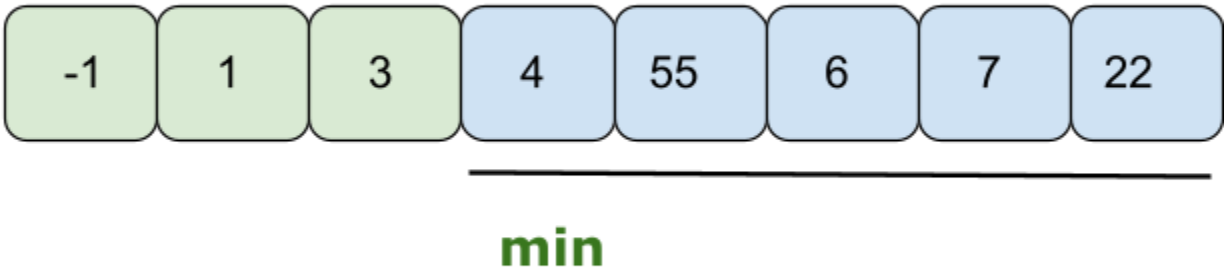
swap(22,1)

pass 2:



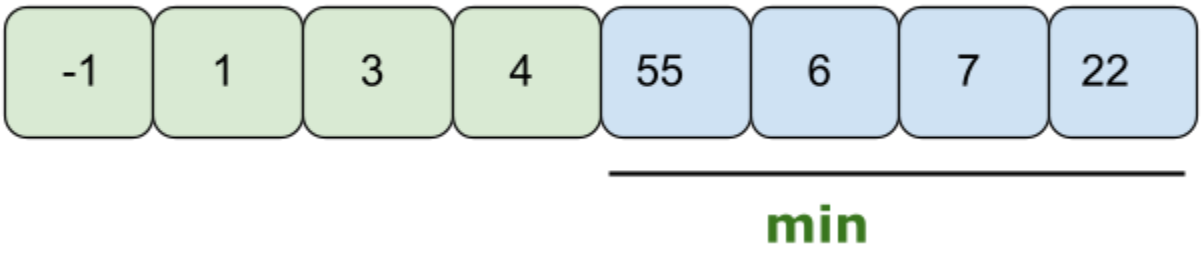
swap(3,3)

pass 3:



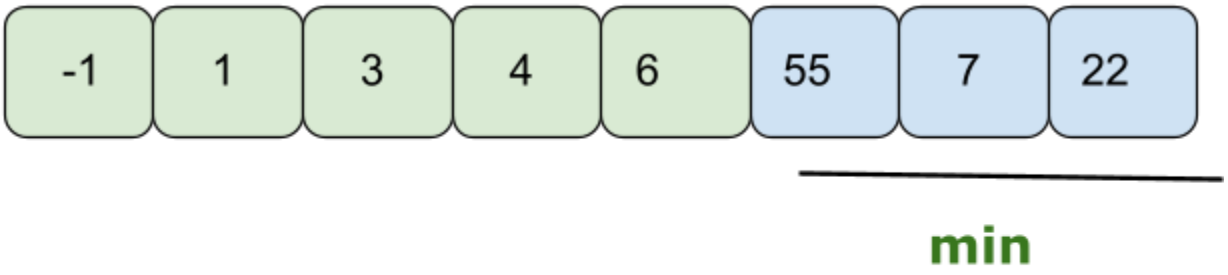
swap(4,4)

pass 4:



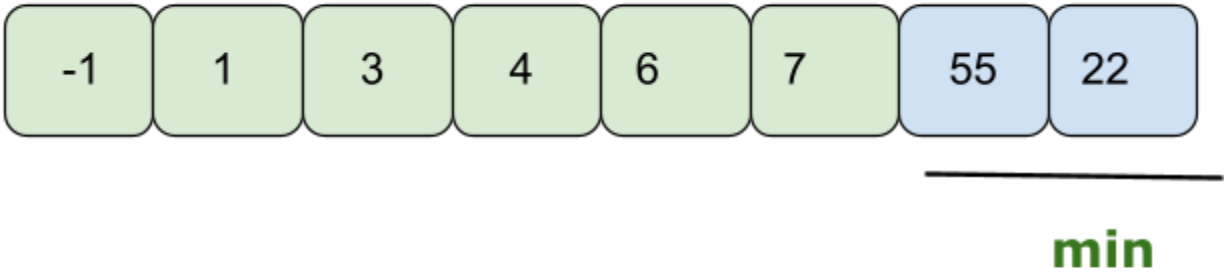
swap(55,6)

pass 5:

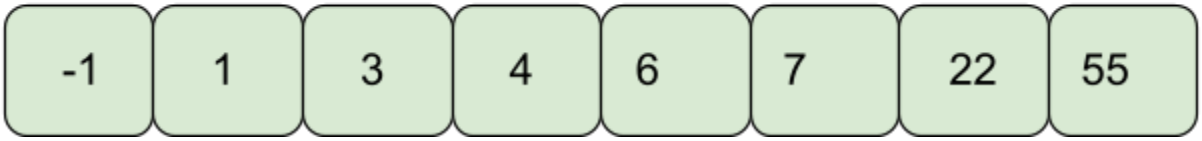


swap(55,7)

pass 6:



swap(55,22)




```
public static void selectionSort(int[] a){
       int n = a.length;

       for (int i = 0; i < n-1; i++) {
           int minIndex = i;
           for (int j = i; j < n; j++) {
               if (a[j]<a[minIndex]) {
                   minIndex = j;
               }
           }
           int temp = a[i];
           a[i] = a[minIndex];
           a[minIndex] = temp;
       }

   }
```