

## Selection Sort

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```
In [ ]: def getVals(arr):  
  
    print('Current length of array:', len(arr))  
    print('Current array:', arr)  
  
    arr += (input("Enter numbers separated by spaces: ").split())  
    arr = [int(i) for i in arr if i.isdigit()]  
  
    print('Current length of array:', len(arr))  
    print('Current array:', arr)  
  
    if len(arr) < 10:  
        arr = getVals(arr)  
  
    return arr
```

```
In [ ]: def selectionSort(arr):  
    for i in range(len(arr)):  
        j = arr.index(min(arr[i:]))  
        arr[i], arr[j] = arr[j], arr[i]  
        print('Current array:', arr)  
  
    return arr
```

```
In [ ]: arr = getVals([])
```

```
Current length of array: 0  
Current array: []  
Current length of array: 17  
Current array: [1, 43, 546, 3, 123, 345, 24, 22, 54, 654, 234, 987, 68, 7, 18, 9,  
0]
```

```
In [ ]: selectionSort(arr)
```

```
Current array: [0, 43, 546, 3, 123, 345, 24, 22, 54, 654, 234, 987, 68, 7, 18, 9, 1]
Current array: [0, 1, 546, 3, 123, 345, 24, 22, 54, 654, 234, 987, 68, 7, 18, 9, 4 3]
Current array: [0, 1, 3, 546, 123, 345, 24, 22, 54, 654, 234, 987, 68, 7, 18, 9, 4 3]
Current array: [0, 1, 3, 7, 123, 345, 24, 22, 54, 654, 234, 987, 68, 546, 18, 9, 4 3]
Current array: [0, 1, 3, 7, 9, 345, 24, 22, 54, 654, 234, 987, 68, 546, 18, 123, 4 3]
Current array: [0, 1, 3, 7, 9, 18, 24, 22, 54, 654, 234, 987, 68, 546, 345, 123, 4 3]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 54, 654, 234, 987, 68, 546, 345, 123, 4 3]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 54, 654, 234, 987, 68, 546, 345, 123, 4 3]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 654, 234, 987, 68, 546, 345, 123, 5 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 234, 987, 68, 546, 345, 123, 65 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 987, 234, 546, 345, 123, 65 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 546, 345, 987, 65 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 546, 345, 987, 65 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 345, 546, 987, 65 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 345, 546, 987, 65 4]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 345, 546, 654, 98 7]
Current array: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 345, 546, 654, 98 7]
Out[ ]: [0, 1, 3, 7, 9, 18, 22, 24, 43, 54, 68, 123, 234, 345, 546, 654, 987]
```