HOW TO SORT A LIST OF NUMBERS

Date No.

Start $a = [4, 5, 2, 3]$

Create another list, which is empty $b = [\,]$

Find minimal value in a

$val = min(a)$

Remove this value from a

$a = [4, 5, 2, 3] \longrightarrow [4, 2, 3]$

Add this value to b

$b = [\,] \longrightarrow [2]$

Keep on doing it, until a is empty

$a = [4, 5, 3] \longrightarrow [4, 5]$

$b = [2] \longrightarrow [2, 3]$

$a = [4, 5] \longrightarrow [5]$

$b = [2, 3] \longrightarrow [2, 3, 4]$

$a = [5] \longrightarrow [\,]$

$b = [2, 3, 4, 5]$

a is empty, we stop and b is our final result

HOW TO SORT A LIST OF NUMBERS

Date

Start $a = [4, 5, 2, 3]$ → def my-sort(a):

Create another list, which is empty $b = []$

Find minimal value in a

$val = min(a)$

Remove this value from a

$a = [4, 5, 2, 3] \rightarrow [4, 2, 3]$ a.remove(val)

Add this value to b

$b = [] \rightarrow [2]$ b.append(val)

Keep on doing it, until a is empty → while loop

→ len(a)==0 means empty, len(a)>0 means not empty

one iteration:
- $a = [4, 5, 3] \rightarrow [4, 5]$
- $b = [2] \rightarrow [2, 3]$

one iteration:
- $a = [4, 5] \rightarrow [5]$
- $b = [2, 3] \rightarrow [2, 3, 4]$

one iteration:
- $a = [5] \rightarrow []$
- $b = [2, 3, 4, 5]$

a is empty, we stop and b is our final result

↳ return b

CODE

Date No.

```
def my_sort(a):
    b = []
    while (len(a) > 0):
        val = min(a)
        b.append(val)
        a.remove(val)
    return b
```