A = [23, 14, 25, 0, -14, 31, 32]

-Selection Sort:

-Step 1: - minIndex=0

- A[minIndex] = 23 > A[1] = 14 => minIndex = 1

- A[minIndex] = 14 < A[2] = 25 => minIndex = 1

- A[minIndex] = 14 > A[3] = 0 => minIndex = 3

- A[minIndex] = 0 > A[4] = -14 => minIndex = 4

- A[minIndex] = -14 < A[5] = 31 => minIndex = 4

- A[minIndex] = -14 < A[6] = 32 => minIndex = 4

=> Swap(A, 0, minIndex)

=> A = [-14, 14, 25, 0, 23, 31, 32]

-Step 2: - minIndex=1

- A[minIndex] = 14 < A[2] = 25 => minIndex = 1

- A[minIndex] = 14 > A[3] = 0 => minIndex = 3

- A[minIndex] = 0 < A[4] = 23 => minIndex = 3

- A[minIndex] = 0 < A[5] = 31 => minIndex = 3

- A[minIndex] = 0 < A[6] = 32 => minIndex = 3

=> Swap(A, 1, minIndex)

=> A = [-14, 0, 25, 14, 23, 31, 32]

-Step 3: - minIndex=2

- A[minIndex] = 25 > A[3] = 14 => minIndex = 3

- A[minIndex] = 14 < A[4] = 23 => minIndex = 3

- A[minIndex] = 14 < A[5] = 31 => minIndex = 3

- A[minIndex] = 14 < A[6] = 32 => minIndex = 3

=> Swap(A, 2, minIndex)

=> A = [-14, 0, 14, 25, 23, 31, 32]

-Step 4: - minIndex=3

- A[minIndex] = 25 > A[4] = 23 => minIndex = 4

- A[minIndex] = 23 < A[5] = 31 => minIndex = 4

- A[minIndex] = 23 < A[6] = 32 => minIndex = 4

=> Swap(A, 3, minIndex)

=> A = [-14, 0, 14, 23, 25, 31, 32]

-Step 5: minIndex=4

- A[minIndex]=25 < A[5] = 31 => minIndex = 4

- A[minIndex]=25 < A[6] = 32 => minIndex = 4

=> Swap(A, 4, minIndex)

=> A = [-14, 0, 14, 23, 25, 31, 32]

-Step 6: minIndex=5

- A[minIndex]=31 < A[6] = 32 => minIndex = 5

=> Swap(A, 5, minIndex)

=> A = [-14, 0, 14, 23, 25, 31, 32]

* A = [-14, 0, 14, 23, 25, 31, 32]

A = [23, 14, 25, 0, -14, 31, 32]

-Bubble Sort:

-Step 1:

+ 23 > 14 => swap(23,14)

* **A=[14,23,25,0,-14,31,32]**

+ 23 < 25

* **A=[14,23,25,0,-14,31,32]**

+ 25 > 0 => swap(25,0)

* **A=[14,23,0,25,-14,31,32]**

+ 25 > -14 => swap(25,-14)

* **A=[14,23,0,-14,25,31,32]**

+ 25 < 31

* **A=[14,23,0,-14,25,31,32]**

+ 31 < 32

* **A=[14,23,0,-14,25,31,32]**

-step 2:

+ 14 < 23

* **A=[14,23,0,-14,25,31,32]**

+ 23 > 0 => swap(23,0)

* **A=[14,0,23,-14,25,31,32]**

+ 23 > -14 => swap(23, -14)

* **A=[14,0,-14,23,25,31,32]**

+ 23 < 25

* **A=[14,0,-14,23,25,31,32]**

+ 25 < 31

* **A=[14,0,-14,23,25,31,32]**

-Step 3:

+ 14 > 0 => swap(14, 0)

* **A=[0,14,-14,23,25,31,32]**

+ 14 > -14 => swap(14, -14)

* **A=[0,-14,14,23,25,31,32]**

+ 14 < 23

* **A=[0,-14,14,23,25,31,32]**

+ 23 < 25

* **A=[0,-14,14,23,25,31,32]**

-Step 4:

+ 0 > -14 => swap(0, -14)

* **A=[-14,0,14,23,25,31,32]**

+ 0 < 14

* **A=[-14,0,14,23,25,31,32]**

+ 0 < 23

* **A=[-14,0,14,23,25,31,32]**

-Step 5:

+ -14 < 0

* **A=[-14,0,14,23,25,31,32]**

+ 0 < 14

* **A=[-14,0,14,23,25,31,32]**

Step 6:

+ -14 < 0

* **A=[-14,0,14,23,25,31,32]**

A = [23, 14, 25, 0, -14, 31, 32]

-Insertion Sort :

Step: 1

- currentValue: K

-K < G => false

=> A =[G, K, L, A, J, I, Q, Z, C]

Step: 2

- currentValue: L

-L < K => false

=> A =[G, K, L, A, J, I, Q, Z, C]

Step: 3

- currentValue: A

-A < L => true

-A < K => true

-A < G => true

=> A =[A, G, K, L, J, I, Q, Z, C]

Step: 4

- currentValue: J

-J < L => true

-J < K => true

=> A =[A, G, J, K, L, I, Q, Z, C]

Step: 5

- currentValue: I

-I < L => true

-I < K => true

-I < J => true

=> A =[A, G, I, J, K, L, Q, Z, C]

Step: 6

- currentValue: Q

-Q < L => false

=> A =[A, G, I, J, K, L, Q, Z, C]

Step: 7

- currentValue: Z

-Z < Q => false

=> A =[A, G, I, J, K, L, Q, Z, C]

Step: 8

- currentValue: C

-C < Z => true

-C < Q => true

-C < L => true

-C < K => true

-C < J => true

-C < I => true

-C < G => true

=> A =[A, C, G, I, J, K, L, Q, Z]

[23, 14, 25, 0, -14, 31, 32]

B =[ G, K, L, A, J, I, Q, Z, C]

* SelectionSort:

Step: 1

minIndex = 0

G > K => false

G > L => false

G > A => true => minIndex = 3

A > J => false

A > I => false

A > Q => false

A > Z => false

A > C => false

Swap(A, G)

B = [A, K, L, G, J, I, Q, Z, C]

Step: 2

minIndex = 1

K > L => false

K > G => true => minIndex = 3

G > J => false

G > I => false

G > Q => false

G > Z => false

G > C => true => minIndex = 8

Swap(C, K)

B = [A, C, L, G, J, I, Q, Z, K]

Step:3

minIndex = 2

L > G => true => minIndex = 3

G > J => false

G > I => false

G > Q => false

G > Z => false

G > K => false

Swap(G, L)

B = [A, C, G, L, J, I, Q, Z, K]

Step: 4

minIndex = 3

L > J => true => minIndex = 4

J > I => true => minIndex = 5

I > Q => false

I > Z => false

I > K => false

Swap(I, L)

B = [A, C, G, I, J, L, Q, Z, K]

Step: 5

minIndex = 4

J > L => false

J > Q => false

J > Z => false

J > K => false

Swap(J, J)

B = [A, C, G, I, J, L, Q, Z, K]

Step: 6

minIndex = 5

L > Q => false

L > Z => false

L > K => true => minIndex = 8

Swap(K, L)

B = [A, C, G, I, J, K, Q, Z, L]

Step: 61

minIndex = 6

Q > Z => false

Q > L => true => minIndex = 8

Swap(L, Q)

B = [A, C, G, I, J, K, L, Z, Q]

Step: 7

minIndex = 7

Z > Q => true => minIndex = 8

Swap(Q, Z)

B = [A, C, G, I, J, K, L, Q, Z]

Step: 8

minIndex = 8

Swap(Z, Z)

B = [A, C, G, I, J, K, L, Q, Z]

[A, C, G, I, J, K, L, Q, Z]

* Bubble Sort:

Step: 1

G > K => false

K > L => false

L > A => true => Swap(L, A)

L > J => true => Swap(L, J)

L > I => true => Swap(L, I)

L > Q => false

Q > Z => false

Z > C => true => Swap(Z, C)

=> B = [G, K, A, J, I, L, Q, C, Z]

Step: 2

G > K => false

K > A => true => Swap(K, A)

K > J => true => Swap(K, J)

K > I => true => Swap(K, I)

K > L => false

L > Q => false

Q > C => true => Swap(Q, C)

=> B = [G, A, J, I, K, L, C, Q, Z]

Step: 3

G > A => true => Swap(G, A)

G > J => false

J > I => true => Swap(J, I)

J > K => false

K > L => false

L > C => true => Swap(L, C)

=> B = [A, G, I, J, K, C, L, Q, Z]

Step: 4

A > G => false

G > I => false

I > J => false

J > K => false

K > C => true => Swap(K, C)

=> B = [A, G, I, J, C, K, L, Q, Z]

Step: 5

A > G => false

G > I => false

I > J => false

J > C => true => Swap(J, C)

=> B = [A, G, I, C, J, K, L, Q, Z]

Step: 6

A > G => false

G > I => false

I > C => true => Swap(I, C)

=> B = [A, G, C, I, J, K, L, Q, Z]

Step: 7

A > G => false

G > C => true =>Swap(G, C)

=> B = [A, C, G, I, J, K, L, Q, Z]

Step: 8

A > C => false

=> B = [A, C, G, I, J, K, L, Q, Z]

[A, C, G, I, J, K, L, Q, Z]

* Insertion Sort:

Step: 1

- currentValue: K

-K < G => false

=> A =[G, K, L, A, J, I, Q, Z, C]

Step: 2

- currentValue: L

-L < K => false

=> A =[G, K, L, A, J, I, Q, Z, C]

Step: 3

- currentValue: A

-A < L => true

-A < K => true

-A < G => true

=> A =[A, G, K, L, J, I, Q, Z, C]

Step: 4

- currentValue: J

-J < L => true

-J < K => true

=> A =[A, G, J, K, L, I, Q, Z, C]

Step: 5

- currentValue: I

-I < L => true

-I < K => true

-I < J => true

=> A =[A, G, I, J, K, L, Q, Z, C]

Step: 6

- currentValue: Q

-Q < L => false

=> A =[A, G, I, J, K, L, Q, Z, C]

Step: 7

- currentValue: Z

-Z < Q => false

=> A =[A, G, I, J, K, L, Q, Z, C]

Step: 8

- currentValue: C

-C < Z => true

-C < Q => true

-C < L => true

-C < K => true

-C < J => true

-C < I => true

-C < G => true

=> A =[A, C, G, I, J, K, L, Q, Z]

A = [A, C, G, I, J, K, L, Q, Z]