Dry Run of Sorting Algorithms

Bubble Sort Dry Run

Pass	i	j	arr[j]	arr[j+1]	Swap?	Array After Pass
1	0	0	5	2	Yes	[2, 5, 4, 1]
	0	1	5	4	Yes	[2, 4, 5, 1]
	0	2	5	1	Yes	[2, 4, 1, 5]
2	1	0	2	4	No	[2, 4, 1, 5]
	1	1	4	1	Yes	[2, 1, 4, 5]
3	2	0	2	1	Yes	[1, 2, 4, 5]
4	3	-	-	-	-	Sorted: [1, 2, 4, 5]

Selection Sort Dry Run

Pass	i	j	arr[j]	min_idx	New Min?	Array After Pass
1	0	1	2	1	Yes	[1, 2, 4, 5]
		2	4		No	
		3	1	3	Yes	
		-	-			Swap 5 with 1
2	1	2	4	1	No	[1, 2, 4, 5]
		3	5		No	
3	2	3	5	2	No	[1, 2, 4, 5]
4	3	-	-			Sorted: [1, 2, 4, 5]

Insertion Sort Dry Run

Pass	i	key	j	Compare arr[j] > key	Shift?	Array After Pass	
1	1	2	0	5 > 2	Yes	[5, 5, 4, 1]	
			-1	-		Insert 2 at index 0 =>	[2, 5, 4, 1]
2	2	4	1	5 > 4	Yes	[2, 5, 5, 1]	
			0	2 > 4	No	Insert 4 at index 1 =>	[2, 4, 5, 1]
3	3	1	2	5 > 1	Yes	[2, 4, 5, 5]	
			1	4 > 1	Yes	[2, 4, 4, 5]	
			0	2 > 1	Yes	[2, 2, 4, 5]	
			-1	-		Insert 1 at index 0 =>	[1, 2, 4, 5]