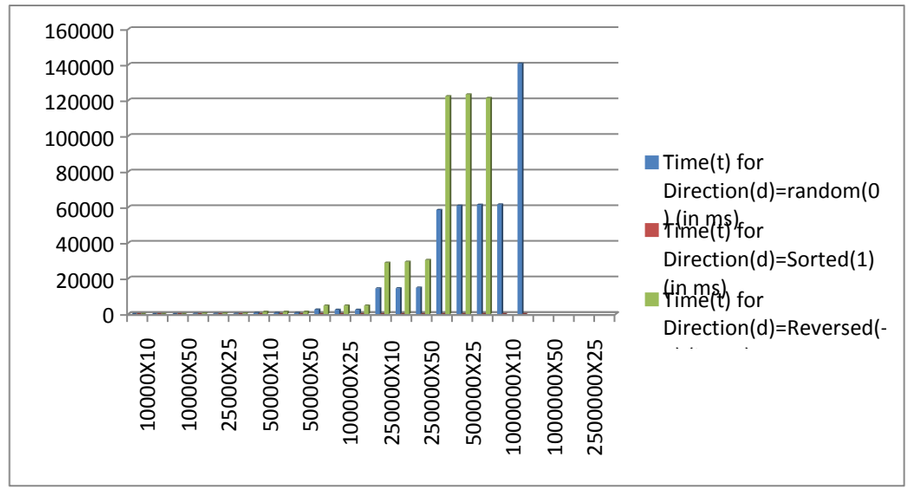
Improved Insertion Sort

Input Size(m) X dimenstion(n)	Time(t) for Direction(d)=random(0) (in ms)	Time(t) for Direction(d)=Sorted(1) (in ms)	Time(t) for Direction(d)=Reversed(-1) (in ms)
10000X10	45.6	0	74.1
10000X25	40.4	8	73.9
10000X50	39.4	1.2	74
25000X10	200.8	0.6	388.4
25000X25	191.3	1.3	385
25000X50	194.6	2.6	387.8
50000X10	700	1.3	1265.3
50000X25	688.5	2.2	1282.4
50000X50	698.8	4.8	1318.2
100000X10	2547.1	2.6	4749.7
100000X25	2431.5	4.3	4787.5
100000X50	2419.3	8	4765
250000X10	14438.8	5.6	28852
250000X25	14518.2	9.1	29401.3
250000X50	14857.3	16.7	30401.6
500000X10	58476.9	9.3	122358
500000X25	60882.7	20	123341.3
500000X50	61407.3	38	121379.7
1000000X10	61567.7	32	
1000000X25	140625.2	53.9	
1000000X50			
2500000X10			
2500000X25			
2500000X50			



Observations:

1) Improved insertion sort is executing faster than naïve insertion sort.

2) When input size reached 1000000X50, for random(0) improved insertion sort algorithm took more than 10 minutes. Hence execution is stopped.

3) Naïve insertion sort took 82756 for 50000X50, whereas improved insertion took 698.8ms.