

### 0OFFLINE-1

Fixed: Range of the elements 1~100

Variable: Array Length

<b>Array Length</b>	<b>Time</b>			<b>Swap</b>			<b>Comparisons</b>		
1,000	0	0	0	240825	249244	989	499500	248245	499500
5,000	0.116	0.071	0.04	6104584	6202462	4944	12497500	6197463	12497500
10,000	0.329	0.063	0.23	24800028	24453848	9892	49995000	24443849	49995000
50,000	8.444	2.476	4.62	619303729	619548177	49528	1249975000	619498178	1249975000
1,00,000	47.704	13.269	19.891	2473914876	2475829279	99004	4999950000	2475729280	4999950000
5,00,000	1209.455	354.535	495.007	61798786052	61920704415	494992	124999750000	61920204416	124999750000
	Bubble	Insertion	Selection	Bubble	Insertion	Selection	Bubble	Insertion	Selection

### OFFLINE-2

Fixed: Length of the Array 1000

Variable: Array Element Density

<b>Element Range</b>	<b>Time</b>			<b>Swap</b>			<b>Comparisons</b>		
1~100	0.008	0	0.018	240131	241038	982	499500	240039	499500
1~500	0	0	0	241066	249548	994	499500	248549	499500
1~1,000	0	0	0.008	248430	248825	993	499500	247826	499500
1~5,000	0	0.002	0	249417	250083	994	499500	249084	499500
1~10,000	0.015	0	0.041	248063	244745	994	499500	243746	499500
1~50,000	0.002	0	0.008	258717	249827	988	499500	248828	499500
	Bubble	Insertion	Selection	Bubble	Insertion	Selection	Bubble	Insertion	Selection