**OFFLINE-1**

Fixed: Range of the elements 1~100 Variable: Array Length

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Array Length | Time | | | Swap | | | Comparisons | | |
| 1,000 |  |  |  |  |  |  |  |  |  |
| 5,000 |  |  |  |  |  |  |  |  |  |
| 10,000 |  |  |  |  |  |  |  |  |  |
| 50,000 |  |  |  |  |  |  |  |  |  |
| 1,00,000 |  |  |  |  |  |  |  |  |  |
| 5,00,000 |  |  |  |  |  |  |  |  |  |
|  | Bubble | Insertion | Selection | Bubble | Insertion | Selection | Bubble | Insertion | Selection |

**OFFLINE-2**

Fixed: Length of the Array 1000 Variable: Array Element Density

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Element Range | Time | | | Swap | | | Comparisons | | | |
| 1~100 |  |  |  |  |  |  |  |  |  |
| 1~500 |  |  |  |  |  |  |  |  |  |
| 1~1,000 |  |  |  |  |  |  |  |  |  |
| 1~5,000 |  |  |  |  |  |  |  |  |  |
| 1~10,000 |  |  |  |  |  |  |  |  |  |
| 1~50,000 |  |  |  |  |  |  |  |  |  |
|  | Bubble | Insertion | Selection | Bubble | Insertion | Selection | Bubble | Insertion | Selection |