

Sorting

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Overview

- Bubble Sort
- Selection Sort
- Insertion Sort

Bubble Sort Demo

a =

15	16	6	8	5
0	1	2	3	4

Bubble sort pseudocode

```
for (i=0; i<n-1; i++)  
{  
    for (j=0; j< n-1-i; j++)  
    {  
        if a[j] > a[j+1]  
        {  
            swap(a[j], a[j+1])  
        }  
    }  
}
```

Bubble sort Analysis

- Time Complexity $\rightarrow O(n^2)$
- Why?