

# Algorithms

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## Contents

<b>1</b>	<b>Sorting</b>	<b>2</b>
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# 1 Sorting

## Insertion sort

- Start with an empty hand of data
- Open data from left to right, each time placing it in the right order
- To find correct position, compare the data at hand with all other sorted data in the stack

### Code Snippet:

```
for j = 2 to A.len
    key = A[j];
    i = j - 1;
    while i > 0 and A[i] > key
        A[i + 1] = A[i];
        i = i - 1;
    A[i + 1] = key;
```

### Example:

Suppose we are given the array 8, 2, 5, 10, 1, 3

Iteration 1: j=2 key = 2 i = 1

8,8

2,8

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