

Better Sort

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```
for(i=0; i<size; i++){  
    for(j=i+1; j<size; j++){  
        if (array[i]>array[j]){  
            temp = array[i];  
            array[i] = array[j];  
            array[j] = temp;  
        }  
    }  
}
```

size = 5 , i = 0 , j = 0

← will run 5 times

← sets up a subarray loop - the first element will become lowest. The $i+1$ for j truncates the space left to sort

we don't want to compare an element in the array to itself. In the first loop, we are comparing array [0] to [1] we then compare array [0] to the rest of the elements in the array. If something is bigger than array [0], we swap out the value that was in array [0] and replace it with the bigger value from array [j]. Our old big value moves to array [j]. Then we continue the loop to see if anything else was bigger.

When we finish the inner loop, i becomes 1 array [0] is the maximum / biggest value, we don't need to check it again. $j = i+1$, which will start at 2 the explanation here will repeat for array [1] comparing to array [2] through array [4]