

Wednesday, 16
March 16

Crux

Order Complexity Analysis

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Assignment ?

Merge Sort

Print Keypad

Order Complexity Analysis

Amount of time/space taken by the algorithm
to run as a function of the input size

Experimental Analysis

- Bubble Sort vs Merge Sort

Theoretical Analysis

- Bubble Sort
- Binary Search
- Factorial
- Polynomial Evaluation

Your turn

- Insertion sort
- Fibonacci
- Assignment solutions

Complexity Analysis Examples

```
for (i=0; i<=n-1; i++){  
    for (j=i+1; j<=n; j++){  
        constant number of operations.  
    }  
}
```

Complexity Analysis Examples

```
for (i=0; i<=n-1; i++){  
    for (j=i+1; j<=k; j++){  
        constant number of operations.  
    }  
}
```

Complexity Analysis Examples

```
for (i=0; i<=n-1; i++){  
    for (; i<=n; i++){  
        constant number of operations.  
    }  
}
```

Your turn

- Pair sum problem
- Triplets

What is space complexity?

What in case of recursion?

Time and Space Complexity analysis of Assignments

Print Subsequences

Quick Sort



Thank You !! 😊

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