

Friday, 07 October
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Launchpad

Lecture -11

Time Complexity

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Doubts ?

Order Complexity Analysis

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

Experimental Analysis

- Selection Sort vs Merge Sort

Theoretical Analysis

- Bubble Sort
- Binary Search
- Factorial
- Polynomial Evaluation

Your turn

- Insertion sort
- Fibonacci
- Assignment 3 and assignment 4 solutions

Complexity Analysis Examples

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

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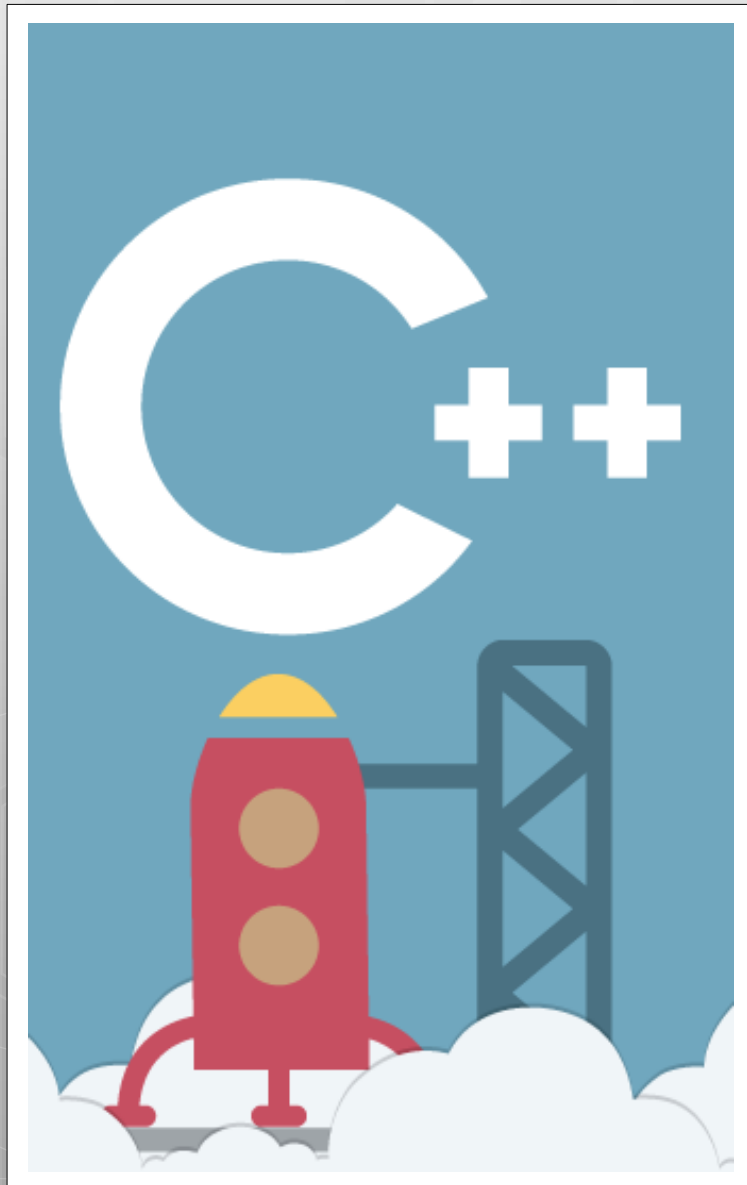

Complexity Analysis Examples

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

What is space complexity?

What in case of recursion?

Lets go through the
assignments



Thank You!

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