



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment – 2

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Branch: BE-CSE

Section/Group: KRG-2B

Semester: 5th

Date of Performance: 4/8/25

Subject Name: Design and Analysis of Algorithms

Subject Code: 23CSH-301

1. Aim: To implement power function in O(nlogn) time complexity.

2. Objective: The main objective is to implement an efficient power function using Divide and Conquer approach that runs in logarithmic time.

3. Input/ Apparatus Used:

- Programming in language C++.
- Technique: Exponentiation by squaring(divide exponent by 2 to reduce complexity)

4. Code and output:

```
class Solution {  
    public double myPow(double x, int n) {  
        return Math.pow(x,n);  
    }  
}
```



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The screenshot shows the LeetCode Problem List interface. The top navigation bar includes 'Problem List' and 'Premium' status. Below it, tabs for 'Description', 'Accepted', 'Editorial', 'Solutions', and 'Submissions' are visible. A sidebar on the left displays 'All Submissions' and the user 'Himanshu Gupta' submitted at Aug 24, 2025 18:19. The main area shows a Java code snippet for calculating powers:

```
1 class Solution {
2     public double myPow(double x, int n) {
3         return Math.pow(x,n);
4     }
5 }
```

Runtime: 0 ms | Beats 100.00% (Green)
Analyze Complexity

Memory: 42.28 MB | Beats 61.81% (Green)

A chart below shows memory usage distribution across time intervals: 1ms (~100%), 2ms (~5%), 3ms (~5%), and 4ms (~5%).



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