Deadline: 17th October 2022

Sheet Link: [Student Details: DSA for FAANG preparation with Python and JavaScript (21 Aug 2022): By Priya Bhatia (google.com)](https://docs.google.com/forms/d/e/1FAIpQLScqHYjliOCVGPKvsIDgpo_8h6FDqz_mBhbhgY0Uav00Fp79IQ/viewform)

Try to write every code in optimized time complexity and make sure you are mentioning the time and space complexity for the same while making the submissions.

[Strassen’s Matrix Multiplication](https://www.geeksforgeeks.org/strassens-matrix-multiplication/) (Exploration)

1. Given two square matrices of size A and B of size n \* n, find their matrix multiplication. [Hint: Try to solve the given problem using the Divide and Conquer Approach]

[Median of Two Sorted Arrays](https://leetcode.com/problems/median-of-two-sorted-arrays/) (Apple)

1. Given two sorted arrays num1 and num2 of size m and n respectively, return the median of the two sorted arrays.

[Pow(x,n)](https://leetcode.com/problems/powx-n/) (Facebook)

1. Implement pow(x,n) which calculates x raised to the power n (i.e. x^n)

For example: x = 2.00000, n = -2

Output: 0.25000

Explanation: 2^-2 =½^2 = ¼ = 0.25

[Divide Two Integers](https://leetcode.com/problems/divide-two-integers/) (Facebook)

1. Given two integers, dividend and divisor, divide the two integers without using multiplication, division, and mod operator.
2. Do the implementation of the count of a number of inversions, for logical understanding and intuition behind the same, refer live session Lecture 17.