

# ANCC SHIVALIK 2023

## WEEK-2

From : 28-Oct-23 Saturday.

To : 03-Nov-23 Friday.

### **Introduction**

As the per the poll, majority need more time to complete the task of week-1, so we are going to use this week as well to cover the content but with some small additions to it.

### **What are we going to learn this week**

1. Complete the tasks of week-1
2. Time complexity
3. Binary search

### **What and from where to do this things**

1. Follow the week-1 PDF for the week-1 tasks
2. Time complexity
  1. Implement  $a^n$ 
    1. Using loops
    2. Using fast power algorithm
      1. [cp-algo Binary Exponentiation](#)
    3. See the difference in speed of evaluation using large values of  $n$ .
      1. Note: value may go out of bound for now only care about the speed and not the ans.
  2. Implement finding  $n^{\text{th}}$  Fibonacci number
    1. Using recursion
    2. Using loop
    3. Using the matrices as discussed in the orientation
      1. [cp-algo Fibonacci Matrix From](#)
    4. See the difference in speed of evaluation by incrementing  $n$ .
  3. Hand book page 17-21 total reading.
3. Binary Search
  1. Hand book page 31-34 complete