Agenda for today's live session

1. Introduction

2. What is Data Structure and Algorithm

Data Structure : In computer science, a data structure is a data organization, management, and storage format that enables efficient access and modification. More precisely, a data structure is a collection of data values, the relationships among them, and the functions or operations that can be applied to the data.

Algorithms : It is a combination of sequence of finite steps to solve a particular problem.

for example : Multiplication of two numbers

```
Mul() {
    1. Take two numbers (a,b)
    2. Multiply two numbers a and b and store the value of result in c
    3. return c
}
```

Properties of Algorithms :

- **It should terminate after finite time.**
- **It should produce atleast one output.**
- **It is independent of any sort of programming language.**
- **It should be unambiguous (Deterministic)**

Deterministic - For the same input same output will come always.

Not Deterministic - For the same input different output will come. And this is not at all preferrable whenever we write any sort of algorithms.

3. Why should we study this ?

- **If you want to work for any Product Based Company like Google,Facebook etc. the very first step of selection criteria of any candidate is to check their coding skills(First Round of interview). The more you confident in these subjects, more are the chances to get selected.**
- **If you want to persue MS/Mtech(Higher Studies) in the domain of Computer Science or any field related to Computer Science. They also took various interviews in order to check how much you are comfortable with Data Structure and Algorithms.**
- **So, overall if your dream is to work for really good product based company or to do higher studies from a very good college, data structure and algorithm is must.**

P.S. I am saying all these things from my own experience in the past. So, please be serious from the very starting of this course and if you follow all the guidelines and study very hard. I can assure you there is no looking back.

4. Insights of Course Structure of DSA

5. What we will start tomorrow ?

- **We will start tomorrow with Time complexity analysis which is the core of DSA. In this we will discuss mainly about the best case, average case and worst case complexity.**

6. Few tips and tricks before starting of this course : Github repo, coding skills improvement, Interview books...

Five Major Steps to improve your Programming Skills:

1. Good Understanding Of Algorithms and Data Structure.

2. Read other's code and editorials from various platforms like github.

3. Competitive Programming (Platforms like Codechef, Hackerrank, LeetCode etc.)

4. Do not stick to one Programming Language.

5. Build projects. (Not necessary to build large projects)

7. Best of luck to you all and queries related to that....

8. Ending with some sayings :

> **"Success is no accident. It is hard work, preserverance, learning, studying, sacrifice and most of all, love of what you are doing."**
>
> **- Pele**

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