

# Complete Competitive Programming Course

## Orientation Class

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**BATCH-6**

# Course Featurs

- 100+ Live classes
- 100+ programming contests (Topicwise marathon + codeforces speed contest)
- 1000+ Practice Problems ( Video Solution will be given )
- 70+ Topics
- Industry-Specific Interview Guideline classes
- Problem Understanding and Code Debugging Help in Discord
- Guidelines and CF Profile Review
- CV Review
- 1 year of Live class ( 4 Years of course access and Guidelines )
- Topicwise marathon/long contest
- weekly codeforces speed contest
- Videos of each live class will be given
- Videos of the previous batch will be given
- The course is divided into 6 modules

# Our Trainers



**Sayeef Mahmud (RUET, CSE)**

*5th in ICPC West continent  
finals, 2021*

*ICPC World Finalist, 2022*

CF: **thisIsMorningstar** (max. **master**, **2183**)



**Adnan Zawad Toky (RUET, CSE)**

*5th in ICPC West continent  
finals, 2021*

*ICPC World Finalist, 2022*

CF: **adnan\_toky** (max. **master**, **2269**)



**Rakib Joy (CoU, CSE)**

*ICPC Dhaka Regional 2024, 4th  
Asia West Finalist, 2025*

CF: **RakibJoy** (max. **master**, **2136**)



**Nafiul Islam (BUET, CSE)**

*5th in ICPC Preliminary 2022  
4th BUET IUUPC*

CF: **Ami\_Nafi** (max. **candidate master**, **2034**)



**Ushan Ghosh (SUST, CSE)**

*2 times ICPC Asia West Finalist  
(2021, 2022)*

CF: **UshanGhosh** (max. **master**, **2108**)



**Sajjad Sadi (KUET, CSE)**

*3 Times ICPC Asia West Finalist*

CF: **Sadi\_74** (max. **candidate master**, **1994**)



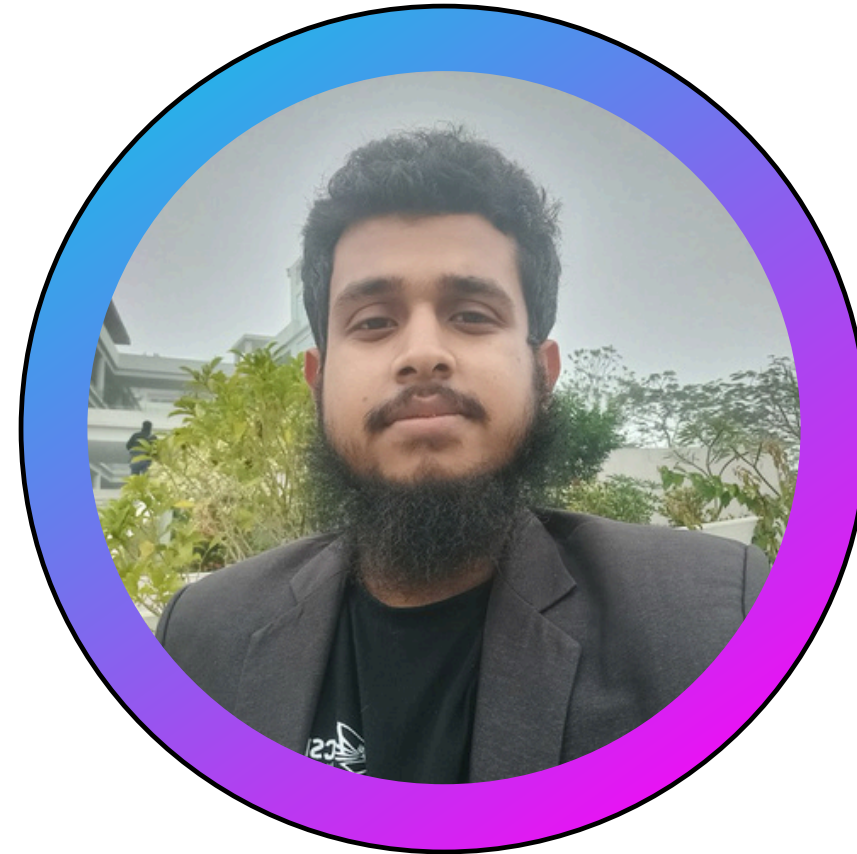
**Regdwan Utshab (RUET, CSE)**

*8th, ACM-ICPC Dhaka Regional  
Contest 2024*

CF: **utshab1618** (max. **candidate master**, **1905**)

# Support System:

- Coding Problem Help
- Problem Understanding
- Code Debugging



**Tahsin Arafat (JUST, CSE)**

CF: [TahsinArafat](#) (max. [candidate master](#), [1957](#))



**Ahsanul Haque (JUST, CSE)**

CF: [\\_AhSaN\\_](#) (max. [expert](#), [1701](#))



# Course Modules



1

## Basic Programming and Problem-Solving Techniques

25 Live classes  
12 Topics  
300+ practice problems  
10+ Topicwise marathon/long Programming Contest

3

## Basic Algorithms And Data Structures

20 Live classes  
16 Topics  
200+ practice problems  
8+ Topic marathon/long Programming Contest

5

## Basic number theory

10 Live classes  
8 Topics  
100+ practice problems  
5+ Topicwise marathon/long Programming Contest

2

## C++ Standard Template Library

8 Live classes  
10 Topics  
100+ practice problems  
3+ Topicwise marathon/long Programming Contest

4

## Basic graph theory and dynamic programming

15 Live classes  
12 Topics  
100+ practice problems  
5+ Topicwise marathon/long Programming Contest

6

## Intermediate graph theory, Dynamic programming, and Segment tree

30 Live classes  
12 Topics  
200+ practice problems  
10+ Topic marathon/long Programming Contest

# Our Success



**115 Pupils**

Our 115 students become  
codeforces **Pupli**



**32 Specialists**

Our 32 students become  
codeforces **Specialist**



**5 Expert**

Our 5 students become  
codeforces **Expert**

**17 Students BD Big  
Tech**

1 Samsung  
2 Pathao  
2 Wellddev  
1 Selies  
1 Viva soft  
6 Brain station

1 Kona SL  
1 Appify Labs  
1 BJIT  
TechnoNext 1

# Module-1: Basic Programming and Problem-Solving Techniques



## Features

- 25 Live classes
- 12 Topics
- 300+ practice problems
- 10+ Topicwise marathon/long Programming Contest

## Topics

- Basic I/O
- Datatypes, and Variables, Operations
- Conditions
- Loops
- Array
- String
- Functions
- Built-in Functions
- Converting to C++
- Complexity Analysis
- Brute Force
- Greedy
- Constructive Algorithms

# Module-2: C++ STL video course



## Features

- 8 Live classes
- 100+ practice problems
- 3+ Topicwise marathon/long Programming Contest

## Topics

- Vector
- String
- Map
- Pair
- Set
- Multiset
- Queue
- Priority Queue
- Deque
- Programming Contest Template With Debugger



# Module 3: Basic Algorithms And Data Structures



## Features

- 20 Classes
- 16 Topics
- 200+ practice problems
- 8+ Topic marathon/long Programming Contest

## Topics

- Recursion
- Basic Dynamic Programming
- Merge Sort
- Partial Sum
- Contribution Technique
- Binary Search
- Upper Bound
- Lower Bound,
- Integer Bisection
- Fractional Bisection
- Binary Search With Prefix Sum)
- Policy-Based Data Structure
- Sliding Windows
- Two-Pointer
- Structure and Structure Sorting

# Module-4 : Basic graph theory and dynamic programming



## Features

- 15 Classes
- 12 Topics
- 100+ practice problems
- 5+ Topicwise marathon/long Programming Contest

## Topics

- Graph, Tree
- Adjacency Matrix
- Adjacency List
- Depth-First Search (DFS)
- Breadth-First Search (BFS)
- The Shortest Path On The Unweighted Graph
- Bi-Coloring of Bipartite Graph
- Topological Sort
- Cycle Finding
- 0-1 Knapsack
- Coin Change
- DP Solution Print
- Shortest Path in Graph

# Module-5: Basic number theory



## Features

- 10 Classes
- 8 Topics
- 100+ practice problems
- 5+ Topicwise marathon/long Programming Contest

## Topics

- Harmony Series
- Prime Generation
- Sieve of Eratosthenes
- Prime Factorization
- Number of Divisors
- The sum of Divisors
- Euler Phi Function
- Modular Arithmetic
- Fermat's Little Theorem

# Module-6: Intermediate graph theory, Dynamic programming, and Segment tree



## Features

- 30 Classes
- 12 Topics
- 200+ practice problems
- 10+ Topic marathon/long Programming Contest

## Topics

- Dijkstra, Belman Ford
- Floyd Warshal
- Disjoint Set Union
- Minimum Spanning Tree
- Longest Common Subsequence
- Longest Increasing Subsequence in Both DP and Binary Search,
- Bitmask DP
- Digit DP
- Segment Tree
- Lazy Propagation
- Merge Sort Tree

# Support system



01

## Discord Server

Server: <https://discord.gg/JmDaWV8cDk>

02

## Facebook Group

Group: <https://www.facebook.com/groups/bd.cpsacademy>

03

## Facebook Page

<https://www.facebook.com/bd.cpsacademy>



**Jajakumuallahu Khairan**

**THANK  
YOU**