



Fresher's Orientation

Think. Code. Excel.



What is CP?

- CP Stands for Competitive Programming
- Is a sport
- Is a type of problem solving



Why you should do CP?

- It's FUN
- Advantages in Academic
- Software Industry in BD



Programming Competitions

- IOI
- ICPC
- IUPC
- NCPC
- NGPC
- Dhaka regional
- Asia west



IOI

- The International Olympiad in Informatics is the **most prestigious** computer science competition in the world for secondary school students.





IUPC

- Inter University Programming Contest
- Hosted by a particular University
- All the universities participate





ICPC Dhaka Regional

- International Programming Contest
- Hosted by a particular University
- All the universities from Bangladesh and participate





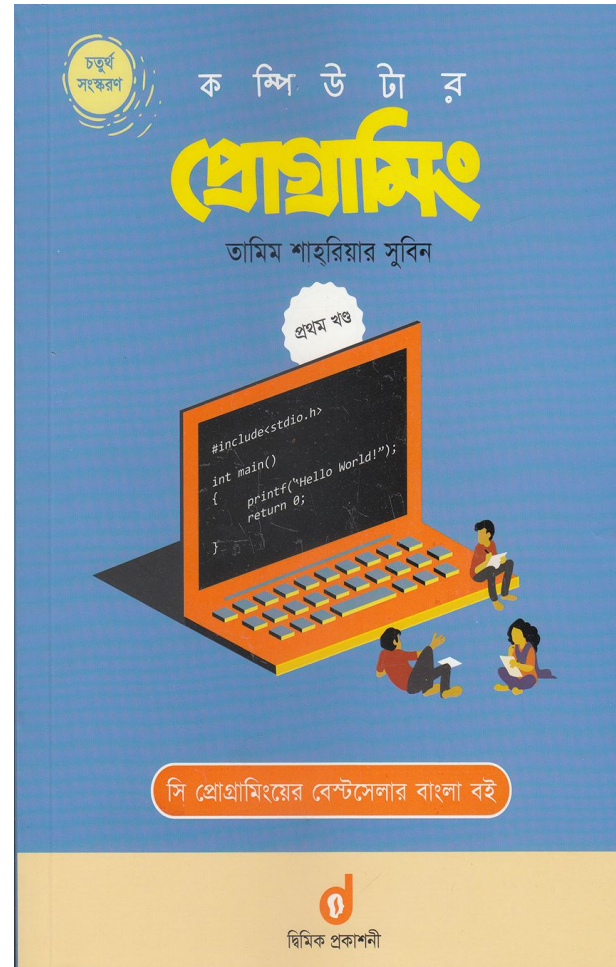
How to get started?

- Any prerequisites? - NO
- You need to choose a language.
- We prefer C/C++



How to get started?

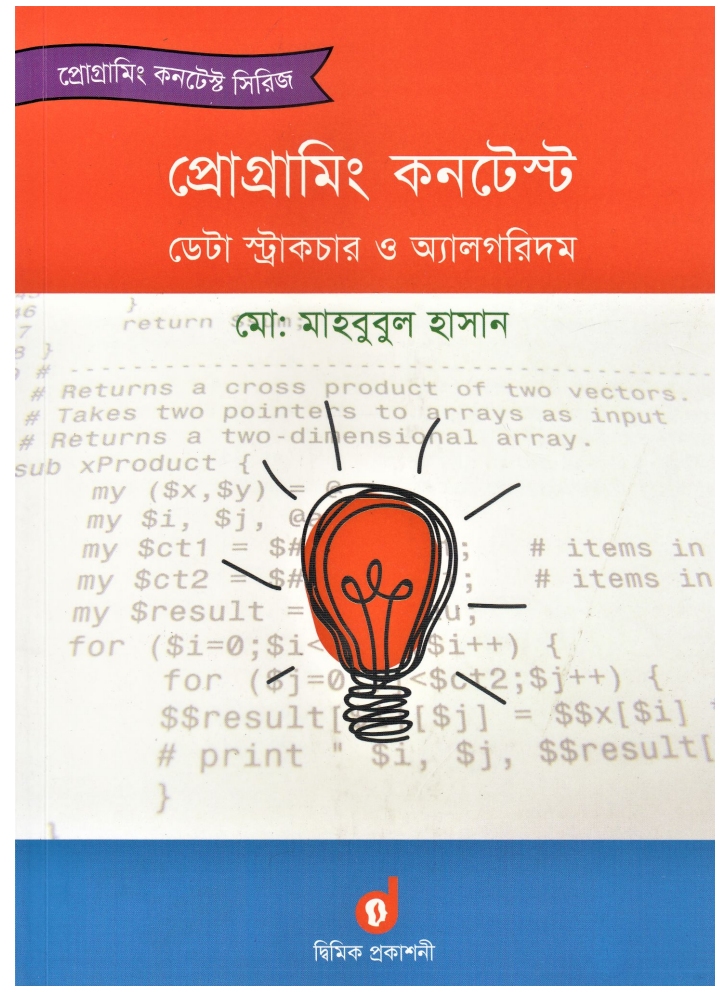
- Books





How to get started?

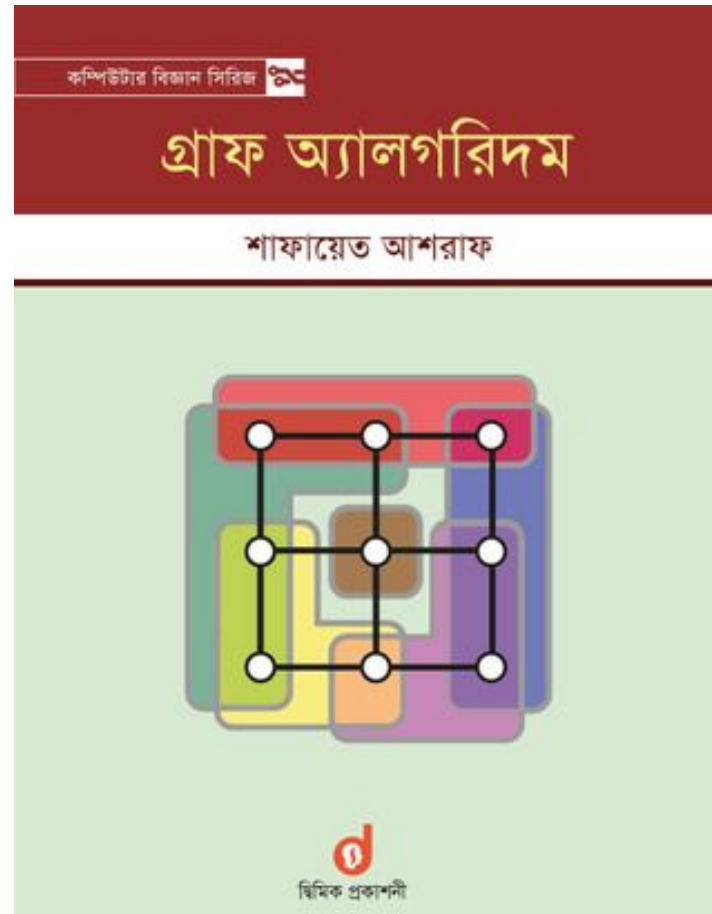
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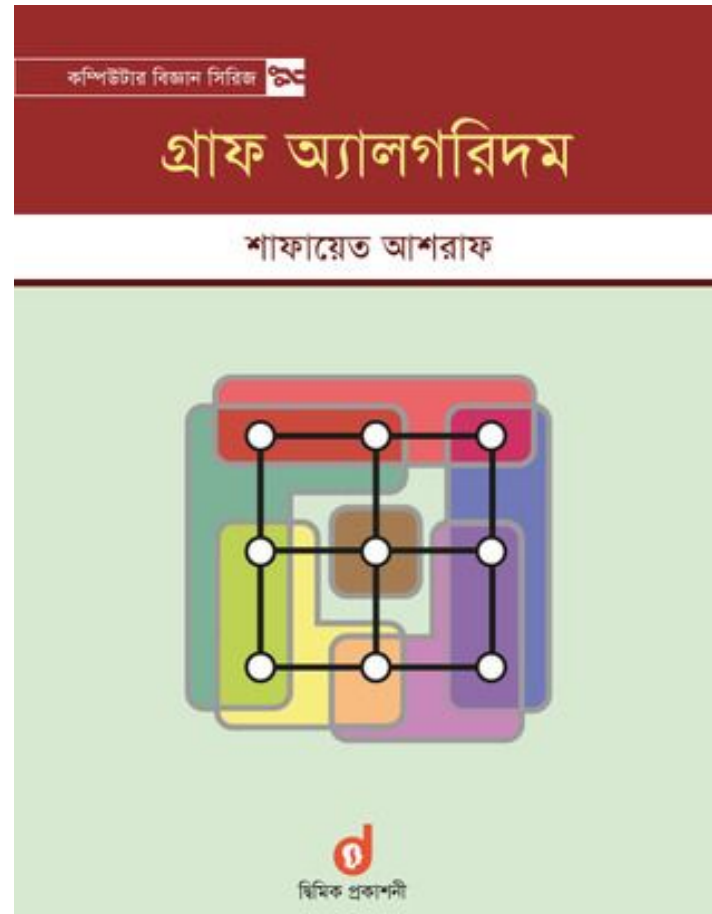
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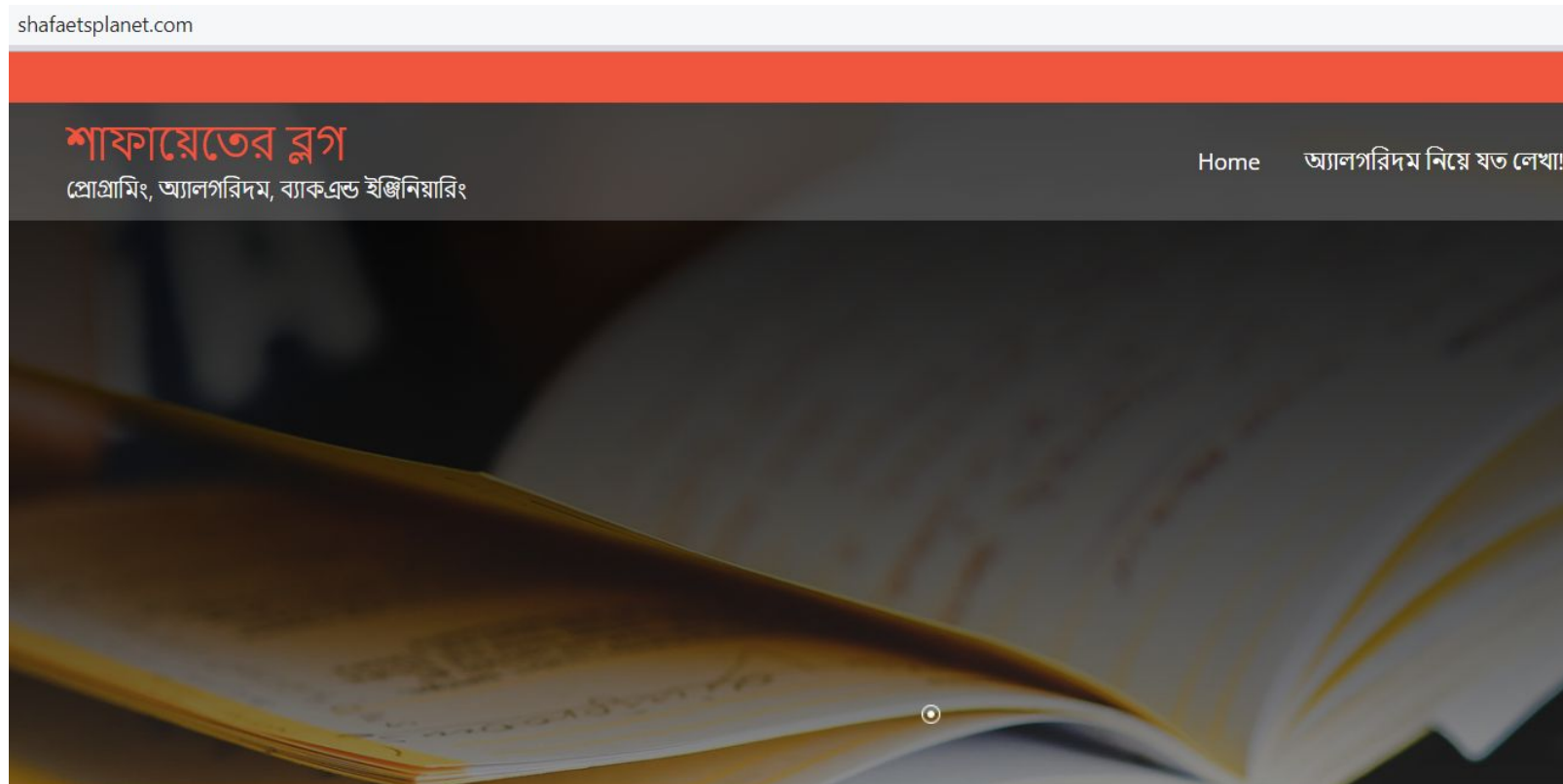
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How to get started?

- Online Materials





How to get started?

- Online Materials

The screenshot shows the website cp-algorithms.com/#articles. The page has a dark purple header with a "Main Page" link, a search bar, and a GitHub repository link (2.5k stars, 726 forks). The main content area is titled "Articles" and "Algebra". Under "Algebra", there are two main categories: "Fundamentals" and "Prime numbers".

- **Fundamentals**
 - Binary Exponentiation
 - Factoring Exponentiation
 - Euclidean algorithm for computing the greatest common divisor
 - Extended Euclidean Algorithm
 - Linear Diophantine Equations
 - Fibonacci Numbers
- **Prime numbers**
 - Sieve of Eratosthenes
 - Linear Sieve
 - Primality tests
 - Integer factorization

On the right side, there is a "Table of contents" section with links to various topics:

- Changelog
- New articles
- Contributing
- Articles
 - Algebra
 - Data Structures
 - Dynamic Programming
 - String Processing
 - Linear Algebra
 - Combinatorics
 - Numerical Methods
 - Geometry
 - Graphs
 - Miscellaneous



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Articles

Algebra

- **Fundamentals**
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Table of contents

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- Online Materials

Courses ▾Tutorials ▾Jobs ▾Practice ▾

GeeksforGeeks

Data StructuresAlgorithmsInterview PreparationTopic-wise PracticeC++JavaPythonCompetitive ProgrammingMachine LearningHTML

Table of Contents

Competitive Programming – A Complete Guide

What is Competitive Programming and How to Prepare for It?

5 Best Languages for Competitive Programming

5 Best Books for Competitive Programming

What Are The Best Resources For Competitive Programming?

Resume Writing For Internship

Must Do Coding Questions for Companies like Amazon, Microsoft, Adobe, ...

Must Do Coding Questions Company-

Practice for cracking any coding

Competitive Programming – A Complete Guide

Difficulty Level : Easy

Last Updated : 31 May, 2022

Competitive Programming is a mental sport which enables you to code a given problem under provided constraints. The purpose of this article is to guide every individual possessing a desire to excel in this sport. This article provides a detailed syllabus for Competitive Programming designed by industry experts to boost the preparation of the readers.

COMPETITIVE PROGRAMMING

COMPLETE GUIDE

LEVEL 4

LEVEL 5

BIT MANIPULATION

NUMERIC THEORY

SORTING

STACK QUEUE

GRAPH



How to get started?

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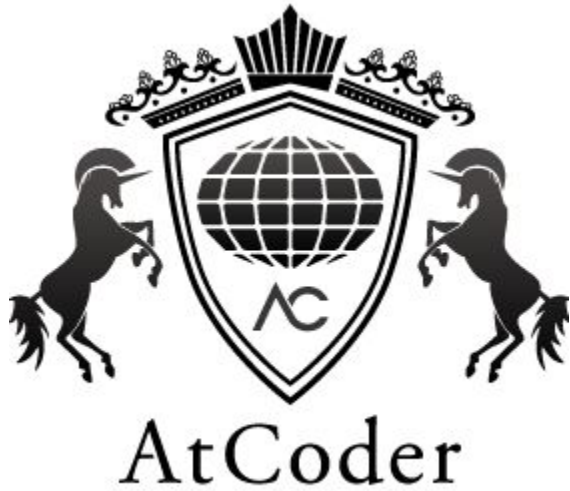
The screenshot shows the YouTube channel page for Errichto, a well-known competitive programming YouTuber. The channel has 274K subscribers and is marked as 'SUBSCRIBED'. The 'PLAYLISTS' tab is selected, displaying a grid of video thumbnails for various playlists. The playlists include:

- BINARY SEARCH** (17 videos)
- GOOGLE CODE JAM QUAL' ROUND A B & C FAST** (5 videos)
- LEETCODE CHALLENGE DAY 1** (30 videos, 00:00:19 duration)
- LEETCODE CODING INTERVIEW PROBLEMS** (12 videos)
- DYNAMIC PROGRAMMING LECTURES** (3 videos)

Each playlist entry includes a 'VIEW FULL PLAYLIST' link. The channel banner features a 'code jam' logo and a Discord link.



Online Judges





CODEFORCES Demo



Hall of Fame

- JU_Assasins
- ACM ICPC World
Finalists 2015
- Solved **6** problems!
- Secured **51**th position





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Hall of Fame

- JU_O(n^3)
- ACM ICPC World Finalists 2016
- Solved **6** problems!
- Secured **44th** position
- Defeated all IITs





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Hall of Fame

- JU_Circavex
- ACM ICPC World Finalists 2017
- Solved 3 problems!
- Honorable mention





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Hall of Fame

- JU_Jabians
- NGPC 2018 Champions





Hall of Fame

- JU_Jabians
- NGPC 2018 Champions





Hall of Fame

- NGPC 2019
- Runner Up





Welcome 12th Batch!
