# TechBairn
Let's accelerate the future

# CODESLAYER
## A PLACEMENT PREPARATION PROGRAM

## PROGRAM HANDOUT

C++

PHP

**Name of the Program:**

Codeslayer - A Complete Placement Preparation Program

**About the program:**

In recent times, programming is one of the major criteria to crack in the exams of the recruitment process. But most students face difficulties grasping the subject. That is why TechBairn brings you a complete placement program for the students, which will suffice the preparation for the top MNC companies like Google, Amazon, Microsoft, Goldman Sachs and many more. If you are hoping to amplify your coding skills and learn an efficient and optimised way of coding, this program is made for you. You will not only design algorithms and estimate their complexity, but also have a deeper understanding of algorithms by implementing them in C++/Python Programming Languages. The students will be guided by top coders of India throughout this program with tips and tricks to ace these exams. They will be introduced to the vast world of competitive programming with hands-on experience and learn about the various competitive programming platforms.

**Our Goal:**

After completion of this program, you will be able to solve the problem statements asked in the recruitment process of big tech companies such as Tesla, Amazon, Facebook, Directi and many more. Apart from this, the program will enable you to solve complex coding problems with which you can participate in coding competitions like ACM-ICPC, Google Code Jam etc.

**Prerequisite:**

No pre-requisites for this program, as it will start from scratch with the basics of algorithms and C++, making the concepts simple so that anyone with minimum or no prior knowledge can understand, learn and master them easily. This program covers algorithmic techniques for solving problems arising in the field of computer science.

**Duration of the program:**

2 months

**Syllabus of the program:**

## 1. Language Fundamentals (C++)
i.     Introduction to c++ control flow
ii.    Functions
iii.   Array & strings
iv.    Structures
v.     Objects & classes
vi.    Pointers
vii.   Inheritance

## 2. Time and Space Complexity

## 3. Some Binary Stuffs

## 4. Data Structures – 1
i. Linked List
ii. Stacks
iii. Queues
iv. Graphs
v. Trees
vi. Heaps – sets, priority queues
vii.  Vectors

## 5. Competitive Maths :
i. Prime Numbers
ii. Permutations and Combination
iii. GCD
iv.  Number Theory
v. Probability
vi. Modular Arithmetic
vii.  LCM
viii.  Game Theory
ix. Binary Exponentiation
x. Matrix Exponentiation

## 6. Algorithms :

i. Searching

ii. Sorting

iii. Hashing

iv. Greedy

v. DFS

vi. BFS

vii. Recursion

viii. Divide and Conquer

ix. Dynamic Programming

x. String matching

## 7. Introduction of DBMS (Database Management System)

i. Introduction to Database?

ii. Types of Databases

iii. What is RDBMS (Relational Database Management System)

iv. Difference between DBMS and RDBMS

v. Data Models

vi. Introduction to SQL

### Highlights:–

✓ Online Live sessions by industry experts.

✓ Community-based learning.

✓ No pre-recorded videos.

✓ Interactive sessions and doubt-clearing classes.

✓ Solving multiple company-specific coding questions.

✓ Certificate after Completion to bolster your resume.

✓ Placement-oriented training like solving various competitive coding questions and pseudo codes.

✓ Weekly online coding challenges among the students and top performers will be rewarded.

**Program Outcome:**

After completion of the program, you can easily solve the coding questions from different coding platforms like Codeforces, CodeChef, HackerEarth, HackerRank, Topcoder and many more which will eventually prepare you for the Placements as well as Competitive exams. You will also have knowledge of database management and statistics that will help you proceed ahead in the field of Data Science.

**Internship and Job Opportunities After Program Completion:**

After successful completion of the program, students will get an internship or full-time offers from our 25+ hiring partners. We do in-house recruitment aswell.

**Contact Details:**

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