



SPADES



Code Rumble Study Guide

Introduction

Say Hello to the electrifying arena of "Code Rumble," where lines of code become your arsenal, algorithms your battle strategy, and speed your closest ally. Here, the clock is your relentless adversary, the challenges are formidable, and only the agilest, most innovative, and resolute coders will emerge as champions. "Code Rumble" isn't merely a test of speed; it's a crucible for your ability to think on your feet, adapt to dynamic scenarios, and transform lines of code into magnificent creations while under the intense pressure of the battlefield. So, are you prepared to step into the coding ring and rumble your way to victory?

Round 1: Coding Blitz

Are you eager to flaunt your coding skills? Brace yourself for an exciting challenge where your skills take center stage! This exhilarating speed coding round will test your mettle as you dive into an adrenaline-fueled sprint to crack complex problems against the ticking clock.

Gear up to unravel intricate algorithms, push the boundaries of your coding finesse, and unveil ingenious solutions. It's a race against time that's perfect for tech enthusiasts like you.

Choose your weapon:



C++



Java



Python.

Unleash your coding prowess and show us what you've got!

Round Details

- Duration: 3 Hours
- Challenge Structure: Participants will face six meticulously crafted questions, each designed to assess various aspects of algorithmic thinking and programming expertise.
- Winning Criterion: The delegation that successfully completes the questions in the shortest cumulative time will emerge victorious. Speed and accuracy are paramount, so strategize wisely to maximize efficiency without compromising accuracy.
- Participants are not allowed to use any external libraries/packages

Round 2: Optimization

Do you have what it takes to compete under immense pressure? Are you the right coder for the right job? Are you capable of coming up with solutions when required immediately? The optimization code will test your limit as you will be put to the sword trying to find the most optimal way of solving a problem.

Optimization is a very useful skill to have as it allows you to write efficient code that not only will run faster but will also use less memory.

Round Details

- Duration: 3 hours
- Challenge: Participants will have to solve a large scale problem in the most efficient way possible whilst keeping the solution simple but effective.
- Winning Criterion: The delegation that has the least Big (O) time notation and has the most optimal solution will be crowned the winner.

Tips & Strategies

- Time Complexity: Understand the concept of time complexity, which measures the amount of time an algorithm takes to complete as a function of the size of the input. Learn to analyze and express time complexity using Big O notation
- Divide and Conquer: Break down complex problems into smaller, more manageable sub problems. Solve these sub problems independently and combine their solutions to solve the original problem.
- Greedy Algorithms: Make locally optimal choices at each stage with the hope of finding a global optimum.