**How to prepare for Google Kickstart - a CodeJam competition**

Google Kickstart, formerly known as APAC is a test designed to hire people who are looking for a career in Google. The major difference between its former form and Kickstart is that there will be more testing rounds than before and is targeted to any age group rather than graduating students.

Designed to hire the best minds of Asia Pacific region, the test primarily focuses on problem solving abilities, Data Structures and algorithms. Preparing for Kickstart involves getting familiar with its judging environment because it is quite different from other problems.

Format

There will be six online rounds of algorithmic quizzes designed by Google engineers

The top participants from each round may be invited to interview for a role at Google

Schedule of the Contest

FAQs of Contest

Registration Link

Getting familiar with the Judging Environment

You can use any programming language or IDE if they are licensed.

Judging environment is quite different, instead of just uploading your code, you need to upload an output text file also.

Competition arena consists of problems to be solved.

For any single problem there exist 2 subparts

Small Input with small constraints.

Large Input with large constraints.

When you have coded the problem and want to submit it for small inputs, download the text file, as soon as the file is downloaded a timer of 4 min starts and you have to run your inputs over your code and upload the text file within the time limit.

You will immediately get to know if your submission was correct .

In case of more than 1 submissions, the submission which fetched the most points first (small or large) will be considered and a penalty will be awarded for wrong submissions. Each time you download the file, a new set of test file is generated.

Submitting for large inputs, a timer of 8 minutes start and you have to submit your code and output file along with it within the time limit but in this case the output file will remain the same in contrast to the small inputs.

To get acquainted with the environment, please refer this QuickStart guide .

Preparation Strategy

Google kickstart heavily focuses on proficiency in Data Structures and Algorithms and to prepare for it is not an easy task but sure an enjoyable one. This article is written assuming that the reader has a mild experience in programming because only then he/she is aiming for a career.

Brushing up the basics: Solve various easy-medium level problems so you grasp the important small tips and tweaks. This will also increase your efficiency, accuracy and speed.

Practice previous Contest Problems at CodeJam

Practice at GeeksforGeeks

Practice at Codechef

Solving many problems from here will build up your base

What to study?

a) Learn Number Theory

Practice Number Theory Problems

Learn art of Problem Solving

Important topics of number theory – Quora

b) Greedy algorithms: Although questions from greedy are seldom asked but are important as they lay foundation for various algorithms. Refer this to find greedy algorithm problems.

c) Binary Search: Is a very important tool when it comes to problem solving and problems based on it are asked repetitively. Good articles to be read:

Binary Search – TopCoder

Binary Search – GeeksforGeeks

The Ubiquitous Binary Search

d) Graphs: Google kickstart is an easy-medium test hence basic-medium level questions from the graphs can be asked. Do practice questions based on: DFS, BFS, Dijkstra, Flloyd Warshall, MST and flow problems.

Practice Questions on Graph

e) Dynamic programming: Although variety of questions can be designed from the DP domain but fairly easy to medium questions are predicted. Practice DP a lot and do read:

Dynamic Programming – GeeksforGeeks

Dynamic Programming – Codechef

f) Divide and Conquer : This topic also helps solving problems in KickStart.

g) More Advance Topics:

Though problems from advanced data structures are seldom asked do read about Trie, BIT tree, BST. Also read:-

Hashing

Bit Algorithms

String Algorithms (Rabin Karp, KMP, Aho-Crosaick)

Extra Pointers

Google Kickstart is all about speed and accuracy, focus on your speed rather than solving very tough problems and solve easy-medium problems as much as you can.

Get familiar with Big-O notation and calculation of computation time.

Start preparing beforehand and don’t lose hope if you don’t perform well in a round, there are 5 more rounds after the first round.

Excellent Performance can get you a call from Google for interview.

Aim to get within 100 in first few APAC tests (A, B or C) . It will brighten your chances for interview shortlisting.