

# SAMSUNG ADVANCED TEST

Topics :

- ☒ ~~CV~~
- ☐ Gmail
- ☐ HR gmail
- ☐ SRBD ENV
- ☐ PEN, SHEAT, KEY BOARD
- ☐ HEADER FILE
- ☐ Test Time - 3 hr( total 10 submission)
- ☐ Test Submission
- ☐ IDE - Samsung / visual studio
- ☐ Input Test
- ☐ Input File
- ☐ Problems
- ☐ Frequently Asked Q.
- ☐ Links

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**Ramisa Ahmed** <ramisa.a@partner.samsung.com>  
to Arif ▾

Dear Candidates,  
Good Day with Greetings!

It is our great pleasure to inform you that you have been shortlisted in the next stage of the recruitment process at **Samsung** R&D Institute Bangladesh Ltd. (SRBD).

You are invited to appear for the Software Engineer position as per below schedule:

**Date** : 19 October 2023, Thursday  
**Time** : 10:00 AM - 1:00 PM  
**Duration** : 3 hours  
**Platform** : **Samsung's** SWC platform  
**Venue** : Level-3, Monem Business District, [111 Bir Uttam C. R. Dutta Road](#) (Beside Sundarban Hotel), Dhaka-1205  
**Probable Area** : Data structure: Array 1D/2D, Linked List, Tree, Graph (elementary), Algorithm: Simple sorting algorithm, DFS, BFS  
**Language** : C + +, Java only

Your arrival time would be **9:30 AM** (sharp) at the Level 3 of SRBD on the pre-employment assessment.

Please bring your NID/ University ID Card/ Any Photo ID (which contain Photo, Full Name etc.) for verification.

You are requested to make sure your arrival on time.

Thanks a lot for your kind cooperation.

For Practice Purpose, You Can access these below Links;

<https://vjudge.net/contest/473801>

<https://vjudge.net/contest/473802>

<https://vjudge.net/contest/473803>

**Please notify us at your earliest convenience if you are unable to attend the test.**

## ENV: Samsung

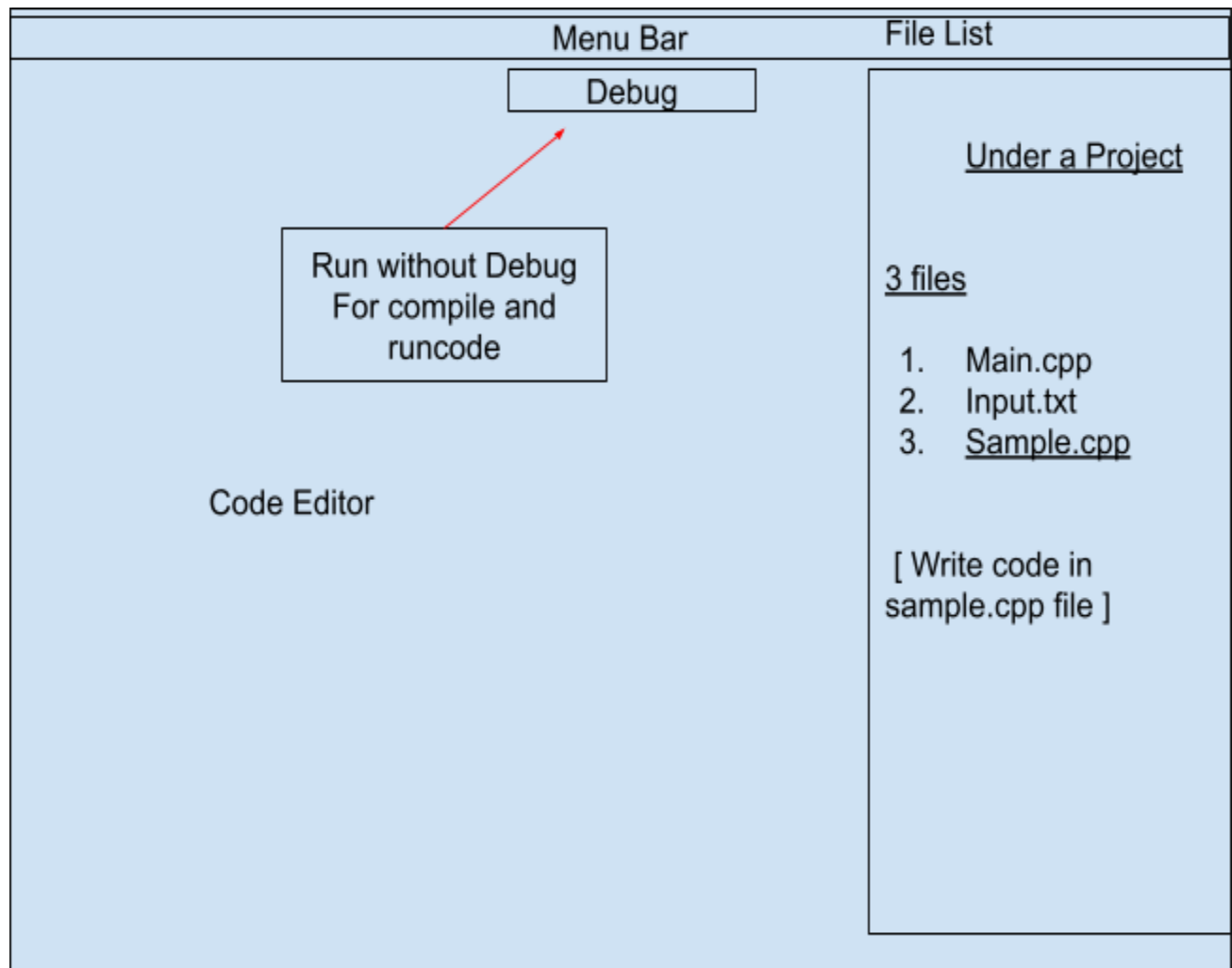
|                             |
|-----------------------------|
| Problem Description         |
| Select Language(c,c++,java) |
| Input File                  |
| Sample input Output         |
| Code Provided               |

|      |     |        |
|------|-----|--------|
| Save | RUN | Submit |
|------|-----|--------|

|        |        |
|--------|--------|
| Sample | Custom |
|--------|--------|



## Env: visual Studio



# My problem statement:

19-10-2023

given a series  $f(k) = a*k + b*k*\lceil \log_2 k \rceil + c*k^3$

you have to find a value  $k$  such that  $f(k) = x$ ;  
here  $\log_2 k$  is 2 base log which return absolute value of  $k$ ;

if  $a < 10$  ,  $b < 10$  ,  $c > 0$  then it is guaranteed that Answer does not exit 1000  
if  $a < 100$  ,  $b < 100$  ,  $c > 0$  then it is guaranteed that Answer does not exit 1000000 or  
1000000(can't remember exactly)  
all value will be in range  $2^{63}-1$ ; for c++ long long will be enough  
Answer is always in range of 54/56(can't remember exactly) bit range

if no such  $k$  value found for the series then Answer will be 0

input:

given  $a, b, c, x$

find  $k$

\*\*\*\*\* Total 10 test case\*\*\*\*\*  
\*\*\* 4 input output already given in statement \*\*\*

**// can't use #include <bits/stdc++.h>  
but all other c++ header can be use**

given source code:

```
#include<iostream>
long long a,b,c,x,Answer;

int log2(long long k){
    // i can't remember but already implemented.....
}

int main(){
    int test_case;

    //freopen("input.txt","r",stdin);

    for(test_case = 1;test_case<=10;test_case++){
        cin>>a>>b>>c>>x;
        //Answer = -1;

        //////////////////////////////////////////*****

        your code here.....
        // just make a solve function to find appropriate k

        //////////////////////////////////////////*****

        cout<<"# "<<test_case<<" "<<Answer<<endl;
        return 0;
    }
```

Main Problem link:

<https://www.hackerrank.com/contests/target-samsung-13-nov19/challenges>

Github

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<https://github.com/rsenwar/Samsung-Interview-Problems>

<https://github.com/s-kachroo/SamsungPractice>

Top (Github Nahid)

## Problem List

- [x] \*Equation Solve\* - (Binary Search) - সুহান, রিফাত
- [x] \*\*Physical Energy(DP) - \* সুহান\*
- [x] \*Burst Balloon - (DP)\* \*নাদিম, রাজু, সাদাহ, রাকিব, অরুণ, আবির, অনিক\*
- [x] \*Research Team / Rare Element\* - \*সাদাহ, রাকিব, শাফকাত, আহাদ\*
- [x] \*Rock Climbing - \* \*নাদিম, রাজু, ইব্রাহিম, সোহান প্রামানিক\*
- [x] \*Fisher Man - \* \*ইব্রাহিম, সোহান প্রামানিক\*
- [x] \*Doctors probability - \* \*সাদাহ, রাকিব\*
- [x] \*Spaceship / Bomb Explosion (DP)\*
- [x] \*Spaceship/Bomb Explosion - (Recursion)\*
- [x] \*Bipartite Graph/ Bicoloring\*
- [x] \*Men Restroom\*
- [x] \*Endoscopy\*
- [x] \*Detect Cycle in a Directed Graph\*
- [x] \*Detect Cycle in an undirected Graph\*

- [x] Flip Column
- [x] Jewel in Maze
- [ ] \*Mr. Lee\*
- [x] Mr. Kim
- [x] \*Wormhole\*
- [x] Ominous Number

## MUST DO Problems

## Problems:

1. Traveling SalesMan / Kim & Refrigerators / Mr lee
2. Flip Columns
3. Endoscope
4. Kim and Refrigerators
5. Wormholes
6. Burst Balloons Optimally ( modification)
7. Fisherman ( input change)
8. Aeroplane Bombing / coin collection / SpaceShip
9. Rock Climbing
10. Sum of nodes at kth level
11. Detect cycle in directed graph
12. Equation
13. Research Team
14. Bicoloring
15. **DR Probability**
16. **Physical Energy**

1 2 3 4 5 6 n

1 3 4 5 6 n



## Technical Interview

- ☐ c++ java w3 school
- ☐ oop interview
- ☐ ds linkedlist,tree,trie,heap,hashmap
- ☐ basic algo
- ☐ search,sort
- ☐ bfs,dfs
- ☐ cv