



## SHOPEE CODE LEAGUE 2020

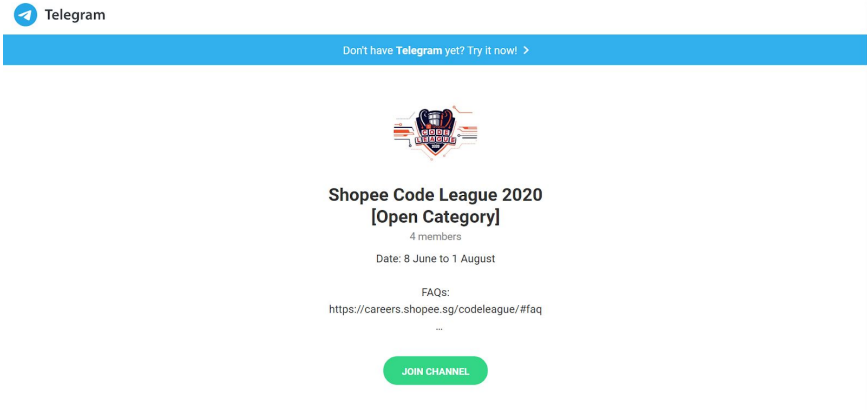
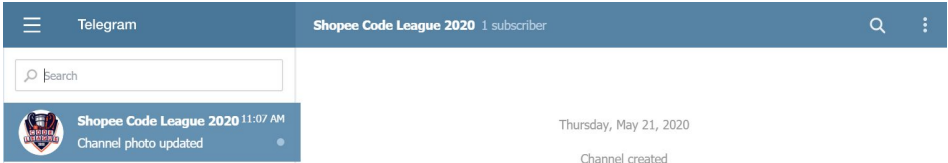
### HACKEREARTH COMPETITION GUIDE

#### Getting Started

To get started, please register on Telegram & Hackerearth prior to the start of the competition.

- (1) **[Compulsory]** Set up your Telegram Channel to receive important updates and announcements.

Steps	Instructions
1	<b>Download the app on your mobile</b> For iOS users: <a href="https://apps.apple.com/us/app/telegram-messenger/id686449807">https://apps.apple.com/us/app/telegram-messenger/id686449807</a>  For Android users: <a href="https://play.google.com/store/apps/details?id=org.telegram.messenger&amp;hl=en_SG">https://play.google.com/store/apps/details?id=org.telegram.messenger&amp;hl=en_SG</a>
2	<b>Enter verification code sent to your mobile</b>
3	<b>Access Telegram Web on your Laptop:</b> <a href="https://web.telegram.org/#/login">https://web.telegram.org/#/login</a>
4	<b>Join the Shopee Code League 2020 Telegram Channel</b>  <b>Open Category:</b> <a href="https://t.me/joinchat/AAAAAE1a4Q3cv3ECS3CHhg">https://t.me/joinchat/AAAAAE1a4Q3cv3ECS3CHhg</a> <b>Students Category:</b> <a href="https://t.me/joinchat/AAAAAFZlqDaDyG9tgmluOg">https://t.me/joinchat/AAAAAFZlqDaDyG9tgmluOg</a> *Please ensure you join the channel of your category (i.e. Open <b>OR</b> Student Category)

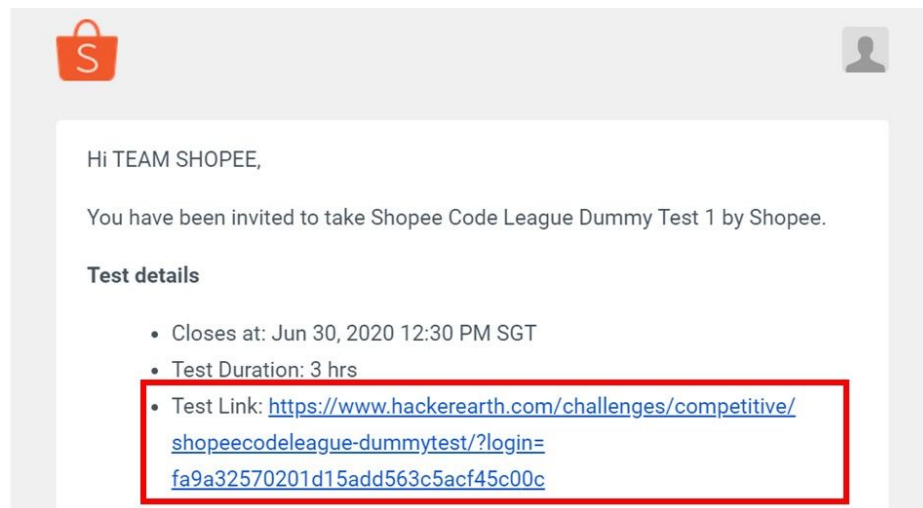
	 <p><b>Shopee Code League 2020</b> [Open Category] 4 members Date: 8 June to 1 August FAQs: <a href="https://careers.shopee.sg/codeleague/#faq">https://careers.shopee.sg/codeleague/#faq</a> ...</p> <p><a href="#">JOIN CHANNEL</a></p>
5	<p><b>Successful Joining</b> This should be the page you see upon joining the Telegram Channel.</p> 

- (2) **[Compulsory]** Set up and register for your Hackerearth account.

### Step 1: Hackerearth Email Invitation

A Hackerearth invitation will be sent to the **team leader's email address**. Each team will only have access to the Hackerearth account using their team leader's email address. Only invited email addresses will be able to access the competitions. This means that only 1 team will have 1 Hackerearth account.

Only 1 person from each team can access the page and submit at any point in time.



### Step 2: Competition Homepage

Access the competition page via the unique link sent in the email. An account will automatically be generated. Please sign in.

You will see the competition landing page.



### Step 3: Accessing Competition Page

Once the competition has opened, click “Start Now” to access the content page. The timer starts immediately after you click ‘Start Now’.

If you access the invitation link before the competition launch time, you will see “Register” instead of “Start Now”.

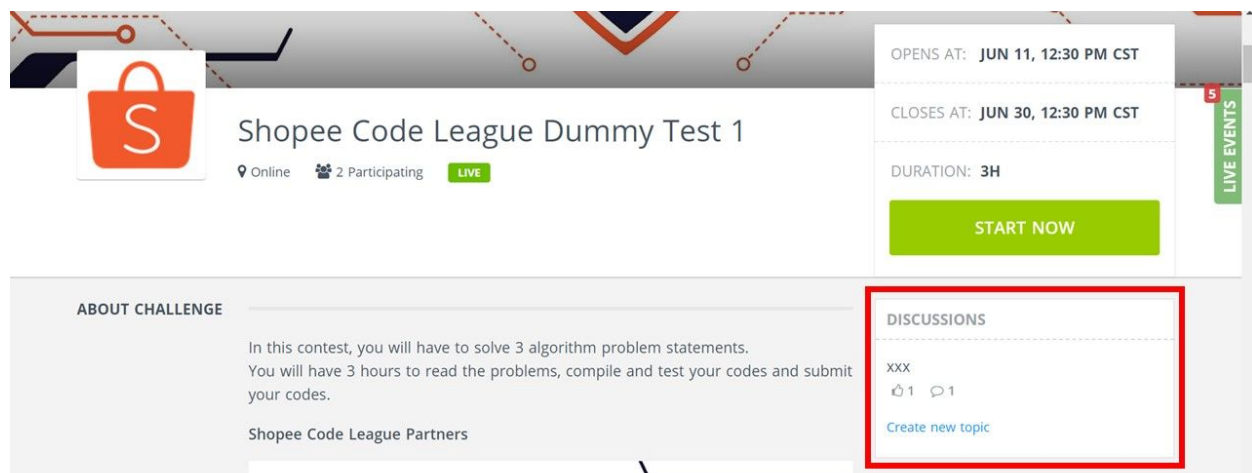
Do note that the “Register” button is invalid, as this is an invite-only competition.  
Only the team leader’s email address will be able to access the competition.



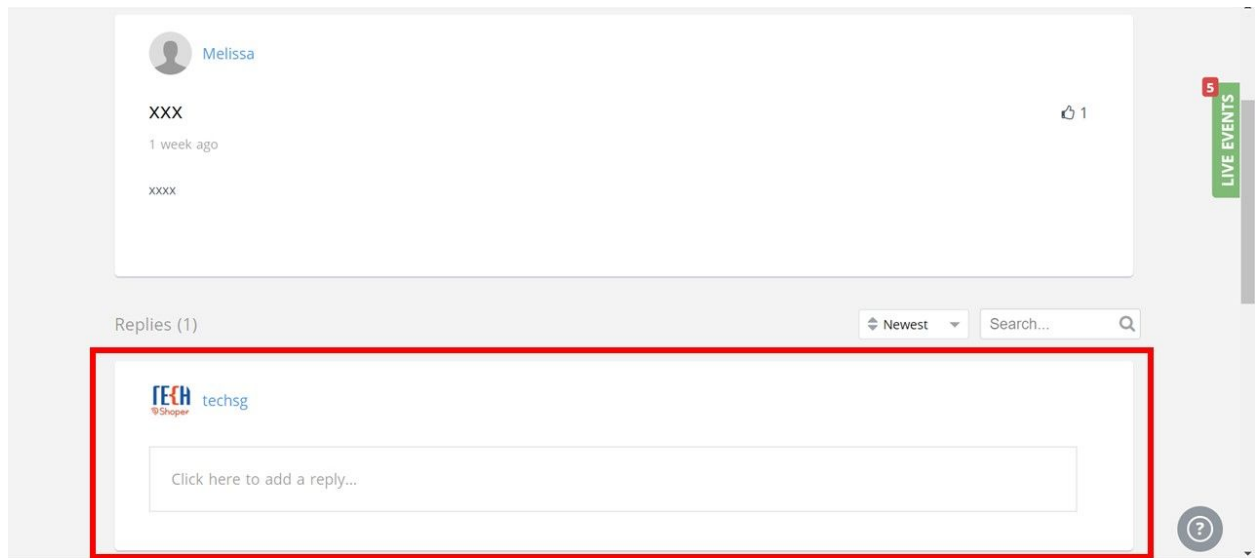
### Step 4: Discussions Forum

On the competition landing page, there is a “Discussions” forum. Please post any problem statement related questions on the forum. **Do not** send any questions regarding the problem statement to techsg@shopee.com.

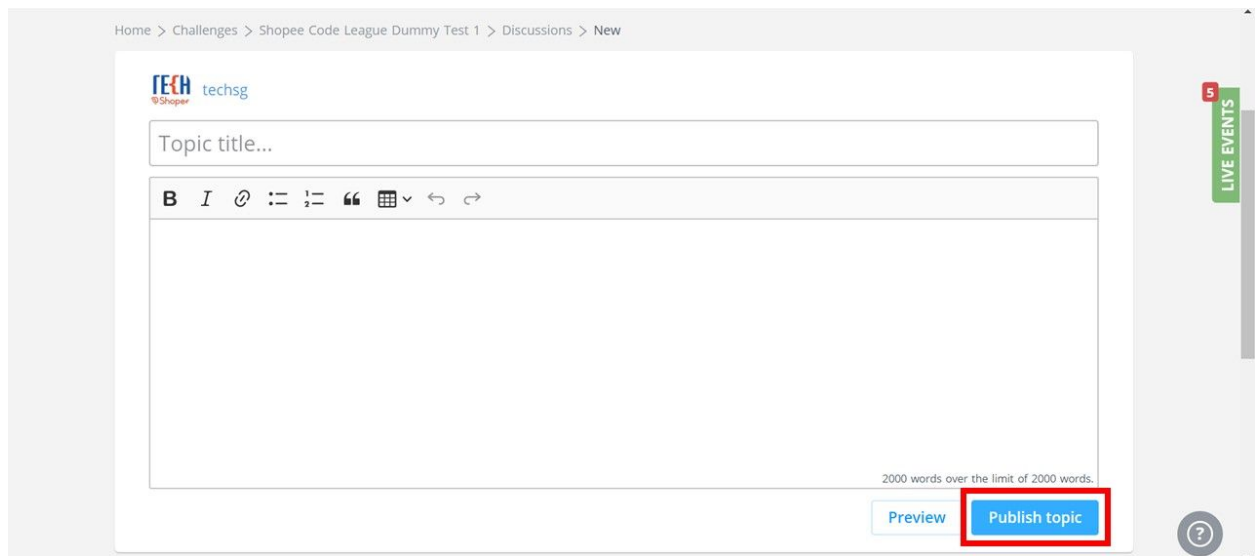
Click on the topics to access the discussions or click “Create new topic” to start a new discussion thread.



To view the full discussion thread, click on the topic title. You may also choose to reply to the thread.

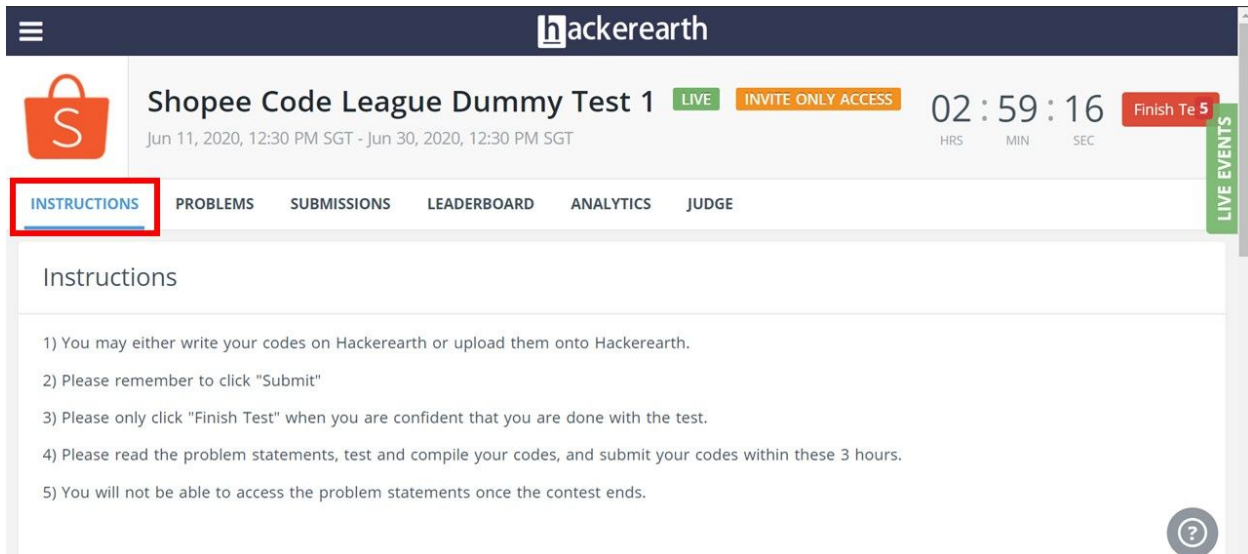


To start a new discussion thread, click “Create a new topic”. Remember to “Publish topic”. Other participants will be able to reply to your discussion thread.



## Step 5: Begin the Competition

Please read the competition instructions carefully.



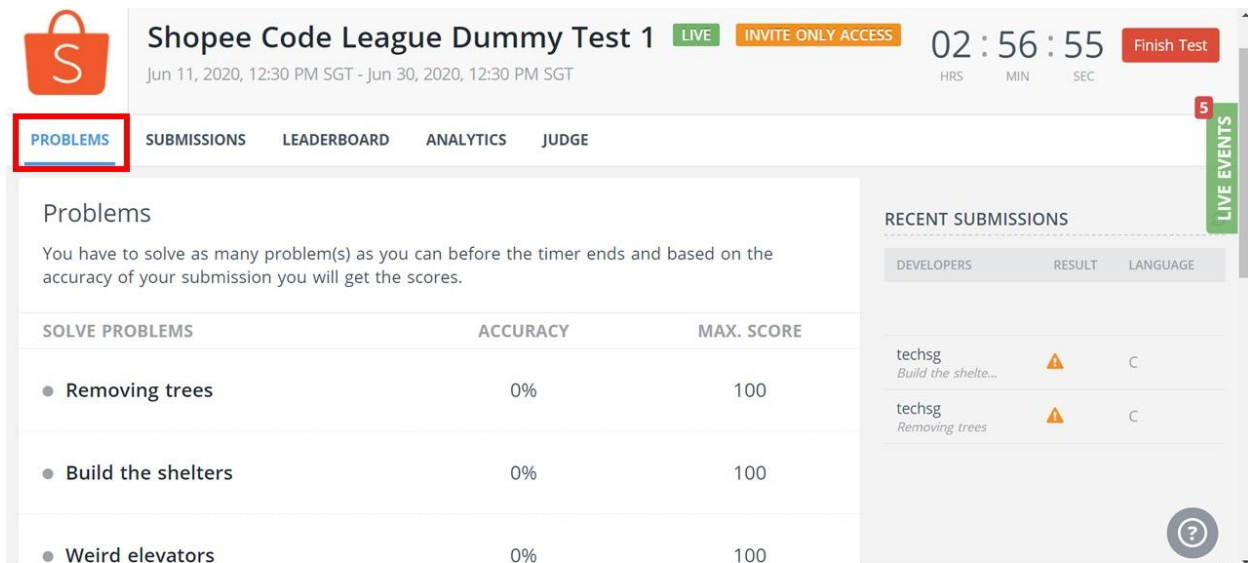
The screenshot shows the Hackerearth interface for the "Shopee Code League Dummy Test 1". The top navigation bar includes a menu icon, the Hackerearth logo, and the competition title. Below the title, there is a timer showing 02:59:16 and a "Finish Test" button. The "INSTRUCTIONS" tab is highlighted in the navigation bar. The instructions list five points: 1) You may either write your codes on Hackerearth or upload them onto Hackerearth. 2) Please remember to click "Submit". 3) Please only click "Finish Test" when you are confident that you are done with the test. 4) Please read the problem statements, test and compile your codes, and submit your codes within these 3 hours. 5) You will not be able to access the problem statements once the contest ends.

**Instructions**

- 1) You may either write your codes on Hackerearth or upload them onto Hackerearth.
- 2) Please remember to click "Submit"
- 3) Please only click "Finish Test" when you are confident that you are done with the test.
- 4) Please read the problem statements, test and compile your codes, and submit your codes within these 3 hours.
- 5) You will not be able to access the problem statements once the contest ends.

To view the problem statements, click "Problems". The entire competition is 3 hours 15 minutes long. There are a few problems in each competition. You will need to complete solving all problems in 3 hours 15 minutes. Additional 15 minutes have been given for you to navigate the competition platform.

Please attempt and submit your answers within the timeframe.



The screenshot shows the Hackerearth interface for the "Shopee Code League Dummy Test 1". The top navigation bar includes a menu icon, the Hackerearth logo, and the competition title. Below the title, there is a timer showing 02:56:55 and a "Finish Test" button. The "PROBLEMS" tab is highlighted in the navigation bar. The "Problems" section lists three problems: "Removing trees", "Build the shelters", and "Weird elevators". The "RECENT SUBMISSIONS" section shows two submissions by "techsg" for the "Build the shelters" problem, both with a warning icon and a score of 0.

**Problems**

You have to solve as many problem(s) as you can before the timer ends and based on the accuracy of your submission you will get the scores.

SOLVE PROBLEMS	ACCURACY	MAX. SCORE
● Removing trees	0%	100
● Build the shelters	0%	100
● Weird elevators	0%	100

**RECENT SUBMISSIONS**

DEVELOPERS	RESULT	LANGUAGE
techsg Build the shelte...	⚠	C
techsg Removing trees	⚠	C

[← Problems / Removing trees](#)

## Removing trees

Max. score: 100

You are given a tree consisting of  $N$  vertices. What is the minimum number of vertices that should be removed such that all the remaining parts of the initial tree contain less than  $K$  vertices?

**Input format**

- The first line contains one integer  $K$ .
- The second line contains one integer  $N$ .
- The third line contains  $N - 1$  space-separated integers  $a_i$  for  $2 \leq i \leq N$  which means that vertices  $i$  and  $a_i$  are connected by an edge.

**Output format**

Print one number denoting the answer to the question.

**Constraints**

RECENT SUBMISSIONS

DEVELOPERSRESULTLANGUAGE

5

LIVE EVENTS

View All

?

### Step 6: Submission

You are allowed multiple attempts for each problem statement.

To test your code, please **click “Compile & Test”**. To save your code, please **click “Submit”**.

Please note that the competition will **NOT** end when you click “Compile & Test” or “Submit”. You can still attempt it again.

```
7
8 }
9
10 int main() {
11     int K;
12     scanf("%d", &K);
13     int N;
14     scanf("%d", &N);
15     int i_arr;
16     int *arr = (int *)malloc(sizeof(int)*(N-1));
17     for(i_arr = 0; i_arr < N-1; i_arr++)
18         scanf("%d", &arr[i_arr]);
19
20     int out_ = solve(K, N, arr);
21     printf("%d", out_);
22 }
```

1:1 vscode

☒ Provide custom input

COMPILE & TESTSUBMIT

5

LIVE EVENTS

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Click “Submissions” to view all your submissions.

The screenshot shows the 'Submissions' page for the 'Shopee Code League Dummy Test 1'. The page header includes navigation links for CHALLENGES, PRACTICE, COMPANIES, and a search bar. The main header displays the event title, status (LIVE), access type (INVITE ONLY ACCESS), a timer (02:53:27), and a 'Finish Test' button. Below the header, a navigation bar highlights the 'SUBMISSIONS' tab. The main content area shows 'My Submissions / All Submissions' and a message: 'You have not made any submissions yet. Solve Problems'.

### Step 7: Leaderboard

Click “Leaderboard” to see where your team ranks against the other teams.

You will be able to see your total score, effective time, and scores for each problem statement on the leaderboard.

The screenshot shows the 'Leaderboard' page for the 'Shopee Code League Dummy Test 1'. The page header includes navigation links for INSTRUCTIONS, PROBLEMS, SUBMISSIONS, and JUDGE. The main header displays the event title, status (LIVE), access type (INVITE ONLY ACCESS), a timer (02:51:56), and a 'Finish Test' button. Below the header, a navigation bar highlights the 'LEADERBOARD' tab. The main content area shows the 'Leaderboard' title and a table of team rankings. The table has columns for DEVELOPERS, SCORE (300), EFFECTIVE TIME (HH:MM:SS), and three problem-specific scores (P0, P1, P2). The first team listed is 'techsg' with a score of 0 and an effective time of 0:00:00.

DEVELOPERS	SCORE (300) Problems Solved (3)	EFFECTIVE TIME (HH:MM:SS)	P0 Removing trees (100)	P1 Build the sh... (100)	P2 Weird elevators (100)
1.  techsg	0 (0)	0:00:00	N/A	N/A	N/A

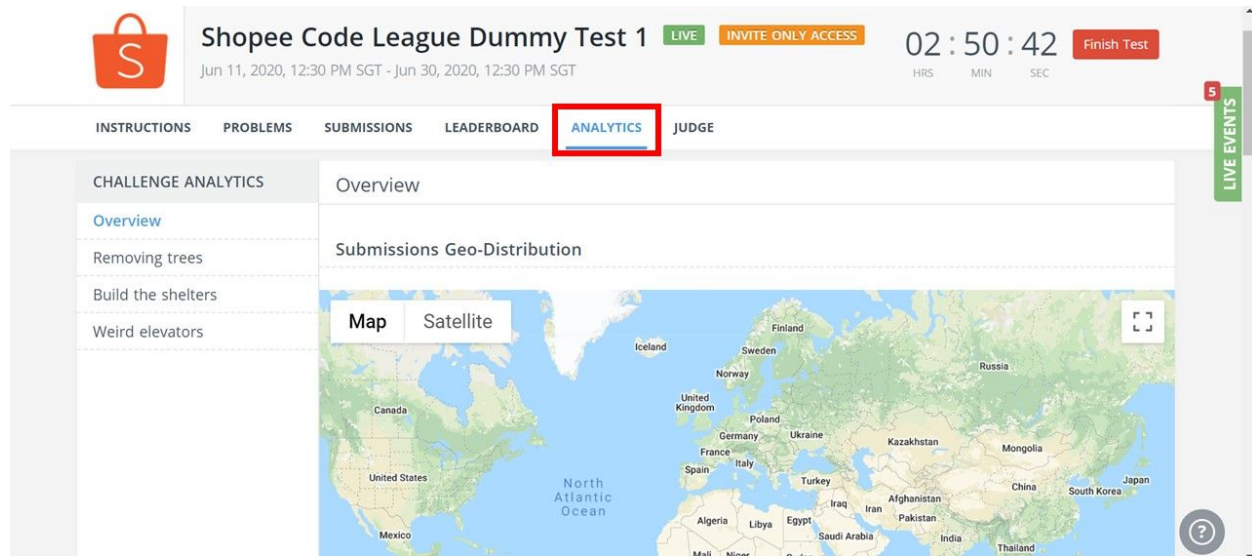
Team scoring and ranking will follow the below criteria:

- There is no partial scoring for each problem, it is either a full score or zero.
- There is no penalty time.
- Participants are ranked according to the total score. Participants who have the same total score are ranked by least effective time.
- The effective time is the total time taken to solve all the problems. The time taken for a solved problem is the time elapsed from the beginning of the challenge to the submission of the accepted solution. There is no time added for a problem that is not correctly solved.



## Step 8: Analytics

Click “Analytics” to find out where the participants are coding from!



To read up more on the programmes supported by Hackerearth, you can click “Judge” .

DEVELOPERS WIKI

Solution Guide

Judge Environment

HackerEarth Contests

College Contests

Problem Setter Guide

Bot Problem Judge

Math formatting guide

SQL Judge

Hackerearth Ratings

HackerEarth API v3

HackerEarth API v2

Judge Environment

Language Compilers

Language	Version	Flags/Notes	Max Memory Limit
Bash	gnu bash v4.3.11	Time Limit: 0.5X	256 MB
C	gcc 5.4.0	Time Limit: X Flags: -std=gnu99 -w -O2 -fomit-frame-pointer -lm	256 MB
C++	g++ 5.4.0	Time Limit: X Flags: -std=c++11 -w -O2 -fomit-frame-pointer -lm	256 MB
C++ 14	g++ 5.4.0	Time Limit: X Flags: -std=c++14 -w -O2 -fomit-frame-pointer -lm	256 MB
C++ 17	g++ 5.4.0	Time Limit: X Flags: -std=c++14 -w -O2 -fomit-frame-pointer -lm	256 MB
C#	mcs 5.4.0.201	Time Limit: 2X Flags: -unsafe+ -warn:0 Runtime: .Net 4.0	256 MB

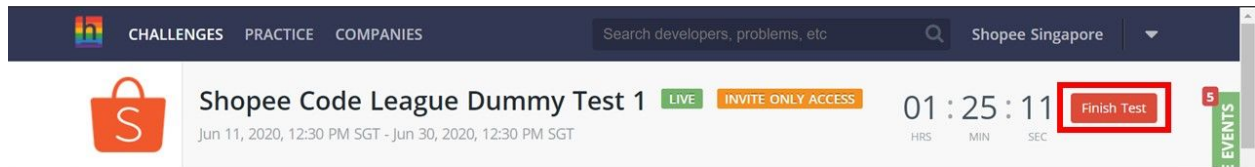
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LIVE EVENTS

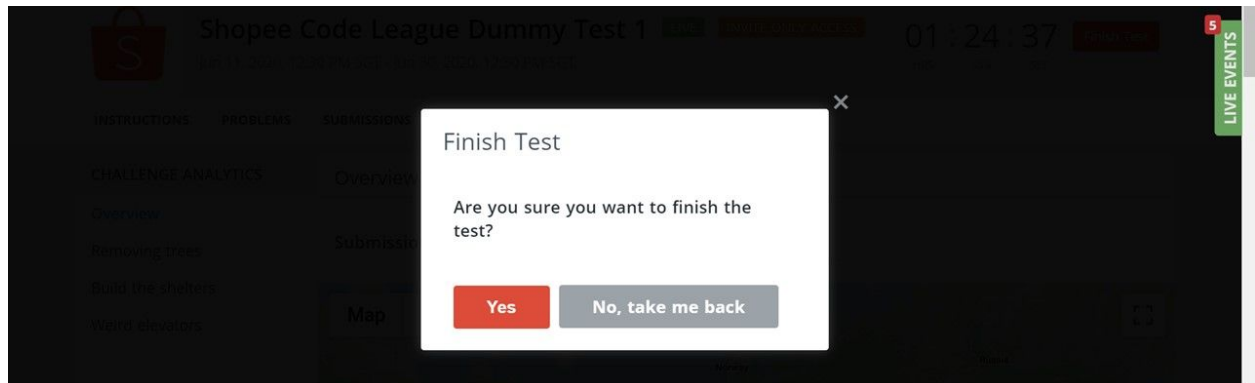
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## Step 9: End Competition

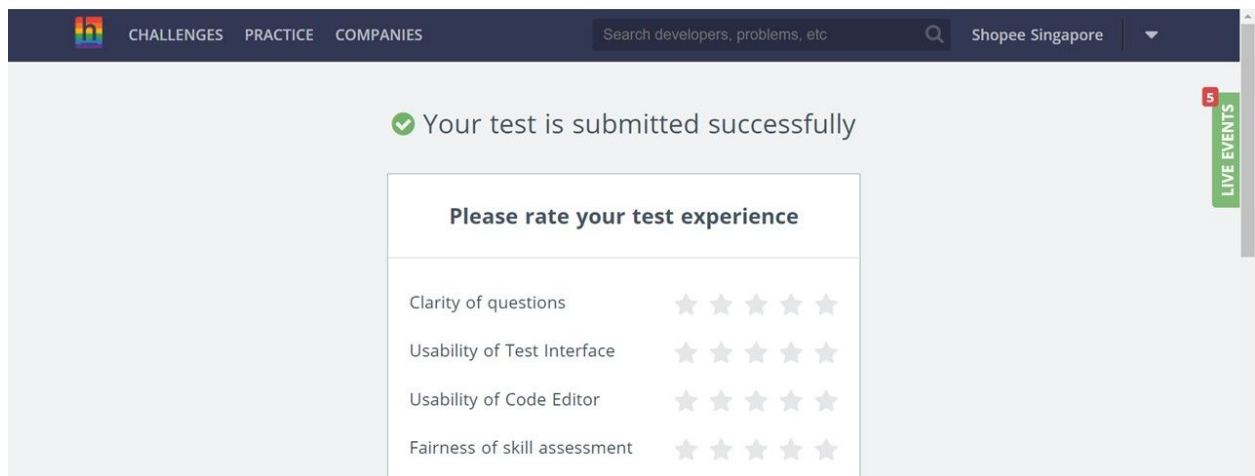
Once you are confident and ready to end the competition, please click “Finish Test”.



You will be prompted to confirm your decision.



Congratulations, your competition has been submitted successfully!



### **Important to take note:**

1. Even if you close your browser/ are logged out of your Hackerearth account, the timer will still continue counting down.
2. Please log into your Hackerearth account to submit before the timer ends.
3. Once the timer runs out, the competition will end. Even if you did not click 'Finish Test', your codes will be saved and submitted for grading.

## **HACKEREARTH FREQUENTLY-ASKED QUESTIONS (FAQs)**

This section outlines the Frequently-Asked Questions about the Hackearth Platform. This section has been separated into the following categories:

1. [Joining Competition](#)
2. [Registration](#)
3. [Submission](#)
4. [Others](#)

### **1. Joining Competition**

Questions	Answers
How to join the competition?	The competition can only be accessed via the <b><u>UNIQUE link</u></b> sent to the team leader's email.
Why do I see a "Register" instead of a "Start Now" button?	<p>If you access the invitation link before the competition launch time, you will see "Register" instead of "Start Now".</p> <p><u>Do note that the "Register" button is invalid, as this is an invite-only competition.</u></p> <p>Refresh the page when the competition is launched and you should see the 'Start Now' button.</p>

### **2. Registration**

Questions	Answers
How do I register for Hackerearth?	<p>No registration is required. Each team is to only have one Hackerearth account.</p> <p>The team leader will receive a <u>unique link</u> for access to the competition platform.</p>
What happens if there are multiple sign-ins using 1 Hackerearth account?	<p>If another team member tries to log into the same account, a warning will be displayed on the second team member's system stating that the test is already open on another system.</p> <p>If the second team member chooses to proceed logging in, the test will end on the other system.</p>



### 3. Submission

Questions	Answers
How to submit the codes on the Hackerearth platform?	<p>To run and save your code, please <b>click “Submit”</b> at the bottom of the problem statement.</p> <p>Please note that the competition will <b>NOT</b> end when you click “Compile &amp; Test” or “Submit”. You can still attempt it again.</p>
Can I run the codes on my local machine instead of Hackerearth?	Yes, you may run your codes on your local machine. However, you will have to copy your codes over to the Hackerearth platform for submission.
How many times can we submit each day on Hackerearth?	You may submit up to 200 times a day.
For the top 100 teams are we required to send the codes written or only submit the result generated?	For Hackerearth, there is no need to send in the codes since each team has to submit their codes on the platform.
I am unable to make my submission on Hackerearth. What do I do?	<p>Please email <a href="mailto:techsg@shopee.com">techsg@shopee.com</a> with the email subject: Submission Issue (Your Team Name)</p> <p>Include your Team Name and members details.</p> <p>Only emails received <b>BEFORE</b> the deadline of the competition will be taken into consideration.</p>

### 4. Others

Questions	Answers
Why is the competition launch time so short?	<p>The launch time is the time bracket where participants can start the competition. As long as you start the competition within the launch time, you will be given the full set of time to complete the competition.</p> <p>The amount of time for each competition is indicated by the countdown timer in the platform.</p>