

# ALL INDIA SDE TEST-SERIES ON 2019 HIRING PATTERNS.

*Prepare yourself to be hired  
by Fortune 500 tech companies.*



**WE** CREATE PROBLEMS



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# Overview

## Your career **first.**

We believe in cultivating a career-ready mindset in learners. Our focus is on giving that initial push to learners today, so that they create tons of opportunities for themselves tomorrow. In this fast-paced tech competition, our program mission is to make every learner provident enough to clear a tech hiring test in maximum 3 attempts.

## Our journey with **hiring tests.**

We Create Problems (WeCP) has been creating online hiring tests for many companies since 2016. We understand how they are designed and what mindset goes inside framing questions that are relevant to assess your job success metrics. Use this chance to develop your understanding of the world of tech companies, discover where you fit and how you intend to shape yourself professionally.

## The problem-solving **mindset.**

One of our values comes from the proverb "clarity is power". Learning, observation, intuition and logic development are the key promises of our test series program. You will unlearn factors that sabotage problem-solving skills and strongly focus on learning the core essentials of problem-solving.

## **Connecting** academia to industry.

We believe that there is still a lot of work to be done to bridge the gap between academics and industry professionals. We conduct regular meetups and webinars to bring one-to-one interaction between graduates and hiring professionals.





# What you will learn.

We've been creating hiring tests for companies since 2016. We understand the hiring mindset and the core competencies that learners must have. In this ten-week-long online test series, you will be able to:

- ✓ Gain real experience of online hiring tests conducted by companies on or off campus.
- ✓ Learn high-level problem-solving skills and apply them during your online tests or interviews.
- ✓ Gain experience with logical thinking questions asked in real online hiring drives and solve such questions quickly.
- ✓ Solve complex coding problems by breaking them down into sub-problems.
- ✓ Practice puzzle solving and acquire strong command on approaching puzzles during hiring tests.
- ✓ Identify dynamic programming problems and practice easy/medium/hard DP problems that might appear on hiring tests.
- ✓ Understand and solve system design problems asked as part of machine-round or tech interviews.
- ✓ Identify questions that require high-order thinking and solve them quickly.
- ✓ Discuss and collaborate with tech hiring professionals and other learners every week through meetups and webinars.



# Our **Problem-Solving** Mindset.

Since 2016, we've helped hundreds of companies in actively selecting talents from campuses and through using our hiring tests. For companies, our hiring tests have been a valuable asset in determining true talent. After all, it's much more than a mere set of questions, and that is the problem-solving touch.

The key characteristics of our test series program are:

- ✓ Questions set on the pattern of real hiring tests conducted by companies.
- ✓ Questions endorsed by tech hiring professionals
- ✓ Questions assessing problem-solving skill given priority
- ✓ The style of test empowers confidence-based learning.
- ✓ Early exposure to hiring test platforms used by companies.
- ✓ Weekly test paper revision sessions conducted by professionals.





# Our webinar & podcast

## guest.

Top tech professionals joining us as webinar/podcast guest to interact and motivate you.



**Nirvik Ghosh**  
Software engineer,  
Apple Inc.



**Isha Agrawal**  
Software engineer,  
Facebook



**Pichumani Durairaj**  
Founder/CEO  
InterviewDesk



**Ramesh Kumar**  
CTO Eduquity,  
TedX speaker



**Prashant Mahesh**  
Software engineer  
Google search core team



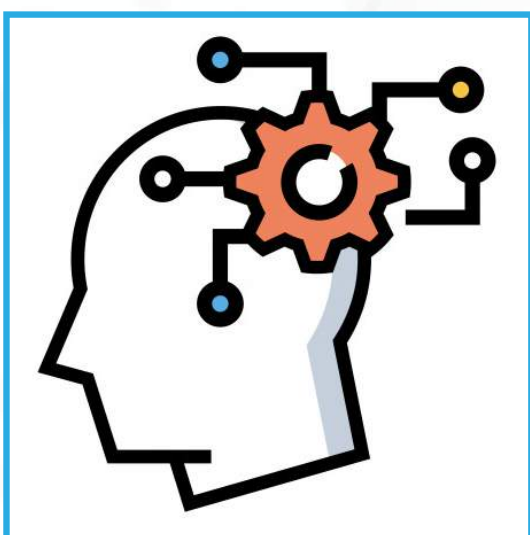
**Vasuman R.**  
Software engineer,  
Google





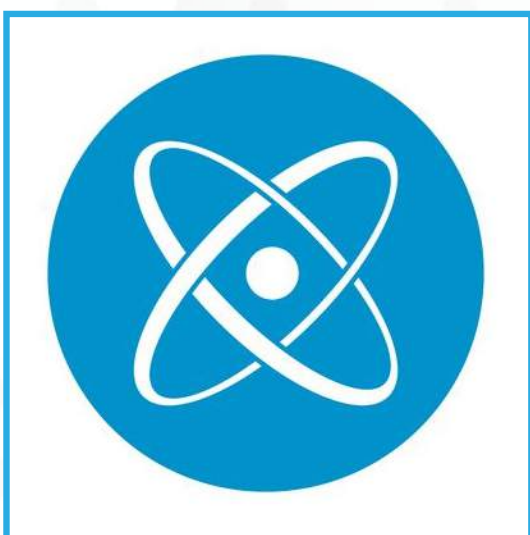
# Detailed Curriculum.

Our test series curriculum is divided into 10 weekly tests - based on online hiring tests patterns. They are split into 8 topic-based hiring tests and 2 combined hiring tests. Each weekly test consists of 4 rounds with 10 topics. The online test starts on May 18th and ends on July 20th.



## Logical round (2 topics)

1. Logic building for programming
2. Logical reasoning



## Core CS round (4 topics)

3. Core CS - Data structures
4. Core CS - Algorithms
5. Core CS - Dynamic programming
6. Core CS - System design



## Cognitive round (2 topics)

7. High-order thinking
8. Communication & cognitive skills



## Interview round (2 topics)

9. Tech interview and tech puzzles
10. HR interview and business puzzles



# Topic #1 - Logic building for programming.

Every tech company admires problem-solving, but have you ever wondered what it is exactly? This module is all about problem-solving and logic development. A problem is made up of rules and constraints that should not be broken, and there are specific ways to solving each problem. As a programmer, your task is understand a problem clearly, think of a solution, validate your logic and write an original program that performs a particular set of tasks and meets the aforementioned constraints/rules/ways.

## LOGIC

Logic building for programming includes questions that will ask you to:

- ✓ Think and apply underlying logic for a given real-world problem/puzzle.
- ✓ Logically solve real-world problems/puzzles using pseudocode.
- ✓ Generate code in (C/C++, Java, Python) to solve real-world problems/puzzles.
- ✓ Solve a problem through general problem-solving techniques such as restating the problem, dividing the problem into sub-problems, looking for analogies, etc.
- ✓ Solve problems logically with arrays.
- ✓ Solve problems logically with pointers and dynamic memory.
- ✓ Solve problems logically with classes.
- ✓ Solve problems logically with recursion.
- ✓ Solve problems logically with code reuse.
- ✓ Figure out the logic from a given set of programs.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs, Pseudocoding, Coding (C/C++,C#,Python,Java), Subjective.

Answer key: Available for download after finishing the test



# Topic #2 - Logical reasoning.

Logical reasoning has been part of numerous hiring tests for a long time. According to recruiters, it is very important for their future employees to be logical in their approach to solving a business problem rather than getting carried away with emotions while solving that problem. The use of consistent reasoning to come to a conclusion of problem makes a true talent stand out from the crowd.

## LOGIC

Logical reasoning includes questions that ask you to:

- ✓ Establish logical relations between various events through logical reasoning.
- ✓ Solve syllogism-based problems to derive a correct conclusion from given premises.
- ✓ Use logical connectives such negation, conjunction, disjunction, and material implication.
- ✓ Solve problems by applying pure binary logic and logical sequence & matching.
- ✓ Solve problems involving logical reasoning around seat arrangement, blood relations, venn diagrams, cubes, clocks, calendars, numbers and letter series.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs

Answer key: Available for download after finishing the test



# Topic #3 - Core computer science - Data structures.

Knowledge of data structures is one of the most demanding CS skills that tech recruiters look for in candidates. Be it a search engine like Google, a database like MySQL, a compiler like GCC, a IDE for programming like Eclipse or a machine learning framework like tensorflow, any software program is a customized implementation of one or more data structures.

**DS**

Data structures includes questions that ask you to:

- ✓ Identify primitive data structures and abstract data structures and apply them into coding.
- ✓ Understand how data structures are defined and how they are allocated memory
- ✓ Implement arrays, linked lists, stacks and queues through real-world coding challenges.
- ✓ Identify data structures in a given real-world application (e.g, Finding data structures used in a dropbox-like application, a notification system like Facebook or a CPU task scheduler)
- ✓ Implement a binary tree, binary search tree, hash table and heaps through real-world coding challenges.
- ✓ Identify data structures in a given real-world application and understand their workings.
- ✓ Implement graph, matrix, and other advanced data structures through real-world coding challenges.
- ✓ Identify data structures in a given real-world application and understand their workings.
- ✓ Understand how a user-defined data structure can be created.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs, Coding (C/C++,C#,Python,Java), Subjective

Answer key: Available for download after finishing the test



# Topic #4 - Core computer science - Algorithms.

Most tech recruiters in today's world love to hire talents who know which data structures and algorithms to apply for a given problem. One fundamental reason why interviewers care about algorithms so much is "to make sure you're not a brute force coder." The necessity to use the right algorithms to write production-ready code for a business software application is driven by the need for design attributes such as performance, optimisation, user experience, etc. Algorithms are an age-old-story and knowledge of them undoubtedly remain one of the most sought after skills for any job.

## ALGORITHMS

Algorithms includes questions that ask you to:

- ✓ Design algorithm/pseudocode for a simple real-world problem.
- ✓ Solve problems using search and sort algorithms.
- ✓ Solve problems using divide and conquer algorithms.
- ✓ Solve problems using and greedy algorithms.
- ✓ Solve problems using string and pattern searching algorithms.
- ✓ Solve problems involving number theory and bitwise algorithms.
- ✓ Solve problems involving tree or binary-search-based-tree algorithms.
- ✓ Solve problems involving graph algorithms.
- ✓ Analyze different algorithms and study their performance and optimization techniques.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs, Coding (C/C++,C#,Python,Java), Subjective

Answer key: Available for download after finishing the test



# Topic #5 - Core computer science - Dynamic programming.

DP is one of the favorite topics of tech interviewers. In the current scheme of online hiring tests, dynamic programming can not only assess the strong coding skill of a candidate but can also judge who is best in writing quality and high-performing code. For example, interviewers want to check whether you use recursion, memoization or tabulation for a given situation of problem. DP is also a hot topic among students seriously preparing for placements. Cracking DP challenges highly increases your selection chance by recruiters.

## DP

Dynamic programming includes questions that ask you to:

- ✓ Answer what exactly dynamic programming is.
- ✓ Identify problems that can be solved using dynamic programming.
- ✓ Write code to implement dynamic programming for a given DP-based problem.
- ✓ Solve most popular dynamic programming problems such as dice throw, coin change, knapsack and the subset sum problem.
- ✓ Code dynamic programming challenges using recursion techniques.
- ✓ Code dynamic programming challenges using memoization techniques.
- ✓ Code dynamic programming challenges using tabulation techniques.
- ✓ Improve the time and memory complexity of a DP problem.

**Detailed breakdown** for each test for this module would be sent to you over email.

**Learning resources and materials** for this module would be sent to you over email.

**Question types:** MCQs, Coding (C/C++,C#,Python,Java), Subjective

**Answer key:** Available for download after finishing the test



# Topic #6 - Core computer science - System design.

With frequent change in technologies and the growing footprint of experience-driven economy, tech companies give special importance to system design. Most freshers experience struggle with system design interviews due to a lack of production application. The better you perform in system design tests/interviews, the higher the chance of your success in the tech industry. This test was created and reviewed by tech hiring managers of top companies like Google, Facebook, Apple and Microsoft. The set of questions within this test are commonly asked, and we highly recommend our learners to master system design concepts.

## SYSTEM DESIGN

System design includes questions that ask you to:

- ✓ Understand the design logic of globally popular products like Google Drive, Uber and Dropbox.
- ✓ Establish your confidence and skills in performing the gathering and clarifying of requirements.
- ✓ Solve problems related to system interface definition.
- ✓ Answer problems related to back-of-the envelope calculation.
- ✓ Define data model of a software system.
- ✓ Answer problems related to high-level and component design.
- ✓ Identify and resolve system design bottlenecks using computer science skills.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs, Coding (C/C++, C#, Python, Java), Subjective

Answer key: Available for download after finishing the test



# Topic #7 - High-order thinking.

In the world of competitive talent, high-order thinking skills, also known as critical thinking skills, are becoming more sought after. Employers are fond of critical thinkers that help them create a creative and innovative ecosystem in the workplace. Gone are the days of the memorization and regurgitation of facts. The world is adapting to high-order thinking skills in all aspects of learning and practice. For aspirants preparing for world-class jobs, this skill could be is key in professional life.

## HIGH ORDER THINKING

High order thinking includes questions that ask you to:

- ✓ Read a case study and analyze it holistically to answer some open-ended questions.
- ✓ Use the knowledge level of bloom taxonomy and comprehend the knowledge to justify certain possibilities.
- ✓ Think of an application level from the knowledge and comprehension level of bloom taxonomy for the given case study
- ✓ Perform analysis based on #2 and #3.
- ✓ Perform evaluation based on #2, #3 and #4.
- ✓ Perform creation based on #2, #3, #4 and #5.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs, Caselets (i.e Small case study)

Answer key: Available for download after finishing the test

# Topic #8 - Communication and cognitive skills.

For employers, the ability to communicate effectively in the workplace is not only important but mandatory despite employees possessing great technical skills. To stand out against the competition, essential communication skills such as listening, friendliness, open-mindedness, articulation, clarity and conciseness are becoming as important as data structures and algorithms. Our research with recruiters put high priority on the soft skills listed above. Practicing this test will give you more confidence in interacting with your interviewers during hiring tests and with your colleagues in future.

## COMMUNICATION

Communication and cognitive skills includes questions that ask you to:

- ✓ Answer workplace-like situational or scenario-based questions that involve best practices for communication.
- ✓ Answer situational questions that check your cognitive skills.
- ✓ Play a game to show your sustained attention and concentration skills.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: MCQs, A quick interactive game

Answer key: Available for download after finishing the test



# Topic #9 - Tech interview round & tech puzzles.

Recruiters are fond of conducting face-to-face tech interview rounds to check the ability of candidates to solve actual technical problems that they would be likely to face if employed. This test will provide the most likely asked tech interview questions involving technical puzzles and the best ways to easily crack the tech interview rounds. Our test series program will conduct live webinars with tech hiring managers from top companies to give you best tips to pass this round.

## TECH INTERVIEW

Tech interview round & tech puzzles includes questions that ask you to:

- ✓ Answer common technical questions asked from candidates' recent projects.
- ✓ Answer architecture-based questions concerning your views on performance and optimization.
- ✓ Solve a technical puzzle with pen and paper.
- ✓ Write a pseudocode for a given technical question or a technical programming puzzle.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: Subjective (discussion during webinar with hiring professional)

Answer key: Available for download after finishing the test

# Topic #10 - HR interview round & business puzzles.

After the genius in you clears most of the hiring rounds, the HR round will be put to you to finally assess your alignment with the company's values. In HR interviews, you're most likely to be asked competency-based questions using the STAR (Situation, Task, Action, Result) technique, such as: "Tell us about a time when you experienced conflict at work and how you dealt with it". On the other hand, in some companies, the HR interview takes place before the tech interview. This means that HR can act as a powerful influence on the next round. Our test series program would conduct live webinars with senior hiring managers from top companies to give you best tips to crack this round.

## HR INTERVIEW

HR interview round & business puzzles includes questions that ask you to:

- ✓ Answer common HR round questions asked in most interviews.
- ✓ Answer STAR-based questions asked by HR managers.
- ✓ Solve a business puzzle using pen and paper.

Detailed breakdown for each test for this module would be sent to you over email.

Learning resources and materials for this module would be sent to you over email.

Question types: Subjective (Discussion during webinar with hiring professional)

Answer explanation: Available for download after finishing the test



# Test series **calendar.**

Week Number	Test Start Date	Test Theme	Test Syllabus
Week 1	18th May, 2019	My innings <b>starter</b>	Week 1 topics
Week 2	25th May, 2019	Laying my <b>foundation</b>	Week 2 topics
Week 3	1st June, 2019	The <b>enhancements</b> in me	Week 3 topics
Week 4	8th June, 2019	Through <b>my actions</b>	Week 4 topics
<b>Week 5</b>	<b>15th June, 2019</b>	Showing <b>my strength</b>	Combined test (W1 + W2 + W3 + W4)
Week 6	22nd June, 2019	<b>Honing</b> my weak areas	Week 6 topics
Week 7	29th June, 2019	My <b>progressive paths</b>	Week 7 topics
Week 8	6th July, 2019	I'm <b>emerging</b>	Week 8 topics
Week 9	13th July, 2019	The <b>determined</b> self	Week 9 topics
<b>Week 10</b>	<b>20th July, 2019</b>	I'm <b>ready &amp; confident!</b>	Combined test (W1 + W2 + W3 + W4)

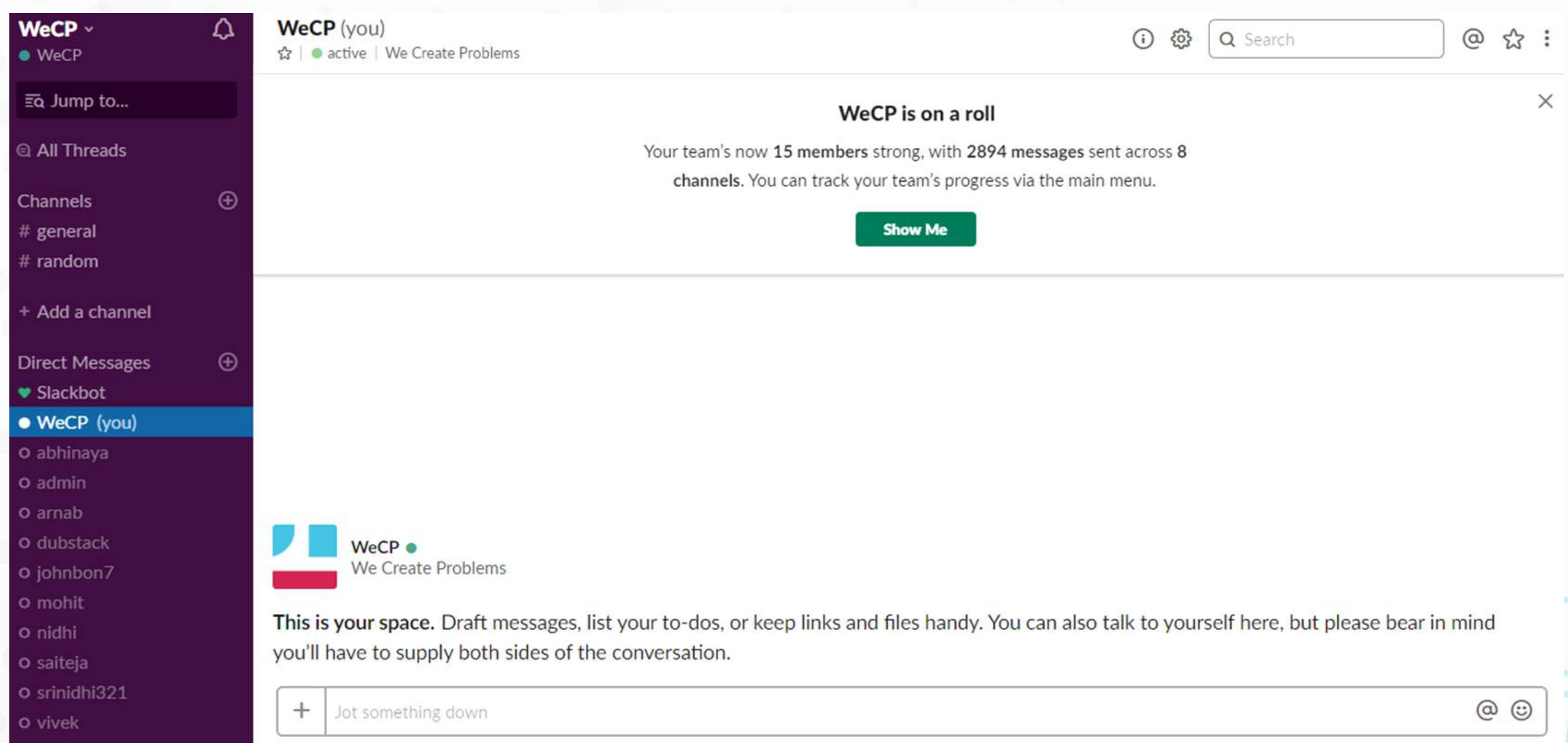
(Week wise breakup of topics for each test above date will be e\_mailed to each enrollee)



# Our Professional Community.

One of our missions is to bridge the gap between the professional community and students preparing for placements. We regularly invite professionals to have 1-to-1 conversation with students. With more than 100 creators from educational, professional and communities, WeCP is marching towards creating one of the most effective communities of professionals & learners in the world to create impactful outcomes in the professional industry.

Connect with us on Facebook, LinkedIn, Twitter, Meetup, Instagram





# Our **Online Test** Platform.

WeCP's online testing platform and evaluation APIs are powering the businesses of multiple assessment companies throughout India. We're trying to solve some core challenges for the automated evaluation of programming skills, such as automatically evaluating:

- Automatically evaluating a front-end and back-end API/Framework-based code.
- Automatically evaluating the code of a full-stack project.
- Automatically evaluating the core knowledge of a specific programming language.
- Automatically evaluating data science coding skills.
- Automatically evaluating logical and algorithmic coding skills.

Our platform brings the experience of a real online hiring test with all the features of a modern evaluation platform. It helps to become exposed to online hiring test platforms.





## Online Test - WeCP Wintern'18 SDE Internship

Start Test

## INSTRUCTIONS

- It is recommended to have a stable internet connection
- Sign Up on the platform before clicking Start Test
- The test duration is 90 minutes
- There are 15 MCQs (in two separate sections) and 2 Programming Questions
- The test is being proctored
- The test will automatically finish in 90 minutes
- Click 'Finish Test' to finish the test before the stipulated time

WeCP Test Mangemenet Portal x +

← → ↺ https://assess.wecreateproblems.com/tests/2c48b2ff-8f39-4d3f-b9ab-c2fe7b851fa6 ☆ ⚙

WeCP Screen Guest Online Test - WeCP Wintern'18 SDE Internship Time Left - 149 : 55 : 8 Finish Test

12%

Test Navigator

Objective

1 2 3

4 5 6

7 8 9

10

Algorithmic programming

1 2

Advanced Objective

1 2 3

4 5

Flag

Problem Description - 8 / 10

The family tree of a hypothetical lifeform is represented in a tree structure, with the root of the tree having the lifeform with the name 1. The progeny of this tree are named in level order numerically. For example, the root's child can be 2 and 3, and if they have 2 children each, they will be named 3, 4, 5, 6 etc.

But there is a catch. Every lifeform in this tree has the exact same number of children as the name assigned to them. that is, lifeform one will have one child, lifeform two will have two children etc.

What is the generation at which the 10000th lifeform will be born assuming that the root lifeform is the 0th generation

+5 -1

Options

☐ 44

☐ 45

☐ 46

☐ Cannot be determined

Clear Answer

← Prev Next →

WeCP Test Mangemenet Portal x +

← → ↺ https://assess.wecreateproblems.com/tests/2c48b2ff-8f39-4d3f-b9ab-c2fe7b851fa6 ☆ ⚙

Problem Statement

The digits of integers in decimal system can be grouped into two : One consisting of even digits {0,2,4,6,8} and the other consisting of odd digits {1,3,5,7,9}. Any integer is made up of digits from the above two sets. An integer in decimal system representation is said to be interesting if the following two conditions hold true after removing all leading zeroes from it :

a) The count of odd digits is even.

b) The count of even digits is odd.

e.g. some interesting integers are 2 (count of odd digits = 0, which is even, count of even digits = 1, which is odd) , 455 (count of odd digits = 2, which is even, count of even digits = 1, which is odd) and many others.

You are given two integers L and R, and you have to find the number of interesting number in the range [L,R] (L, R inclusive).

Input Format

The first line of input contains two integers L and R.

Output Format

Output a single integer denoting the number of interesting numbers between L and R.

Constraints

$1 \leq L \leq R \leq 10^{18}$

Sample Input

1 9

Sample Output

4

Sample Output Explanation

The interesting integers between 1 and 9 are 2,4,6, and 8.

Code Editor

Theme Size C

```
1 #include <stdio.h>
2 #include <string.h>
3 #include <math.h>
4 #include <stdlib.h>
5
6 int main() {
7     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
8     return 0;
9 }
```

Custom Input

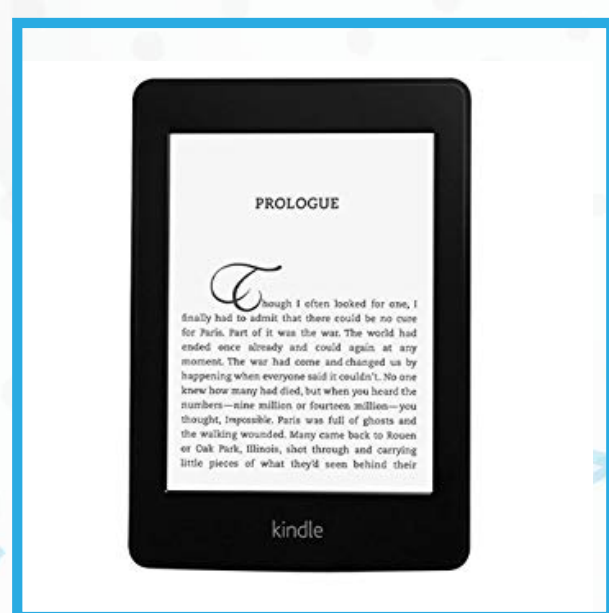
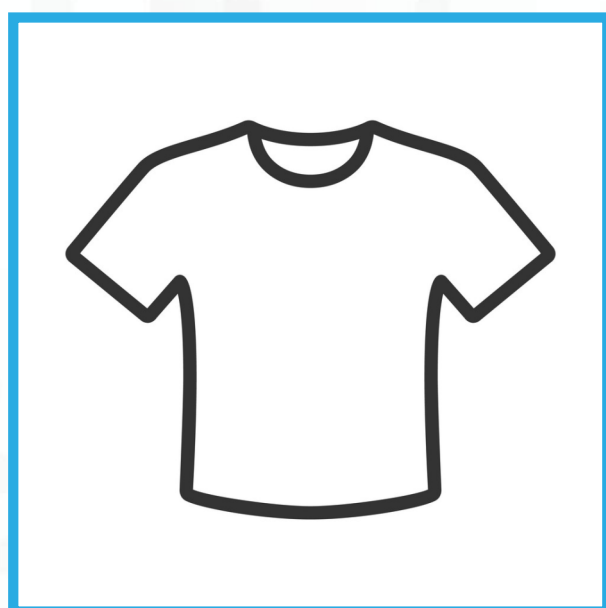
Execute



# Prizes & Goodies.

If your performance in any individual test or the entire test series collectively is impressive, you have a change to win any of these below goodies:

1. A tee printed with "I was a champion of WeCP's All India Test Series"
2. Amazon gift vouchers up to 5,000 INR.
3. A wireless/bt earphone
4. \$100 AWS credits
5. Amazon whitepaper waterproof Kindle



# FAQ.

## Test series fee

**How much does the subscription to the tests series cost?**

You can find the test series fee by visiting <https://series.wecreateproblems.com>.

**How can I pay? What are the available payment methods?**

The payment of the test series subscription can be done via online banking, credit/debit cards, etc.

**Can I download paper question and answer solutions after the test?**

Yes, after the test you'll automatically receive your performance report, paper questions and the answer key with explanations.

**What is the duration of each test?**

Each test lasts at least 60 mins and at most 120 minutes.

**Does the test expires if I do not take it on time?**

No, the test doesn't expire. You can take the test anytime after its start date as you wish.

**Does WeCP provide learning resources/materials for each test?**

Yes, you receive learning resources and materials for each test in your email right after subscribing to the test series.

**How are the questions set?**

The test series questions are set by WeCP in consultation with tech interviewers and hiring managers of different tech companies.

**For more inquiries join our community channels:**

Whatsapp group:

<https://chat.whatsapp.com/KJSXEdsglQbKn5FQ92RgBG>

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Connect with us on Facebook & LinkedIn

<https://www.facebook.com/wecreprob/>

<https://www.linkedin.com/company/wecp---we-create-problems/>