



About Us

From coming together as a diverse group of individuals to a team that worked as a family with one cherished vision, the members of CodeChef-VIT have trudged a beautiful insightful path. We, the new board members of CodeChef-VIT proudly publish our first ever newsletter, as a testimonial to our work and vision. We hope to equip the developers out there with skills necessary to shine in this competitive world.

Congratulations on being a part of the community & welcome aboard to the Competitive Edge. Happy Reading!

INTERVIEW Q & A

Q. Given a string s , partition s such that every substring of the partition is a palindrome. Return the minimum cuts needed for a palindrome partitioning of s .

Eg: Given $s = \text{"aab"}$, Return 1 since the palindrome partitioning $[\text{"aa"}, \text{"b"}]$ could be produced using 1 cut.

We will solve the problem by using the optimization of the dynamic programming technique. The pseudocode is as follows:-

- Create a function to get a minimum of two integers. ($a > b : a ? b$).
- Create a function which Returns the minimum number of cuts needed to partition a string such that every part is a palindrome.
- $n = \text{len}(s)$
- Create two 2-D arrays of size $n \times n$ to build the solution in bottom-up manner
 $C[i][j]$ = Minimum number of cuts needed for palindrome partitioning of substring $s[i..j]$
- $P[i][j]$ = true if substring $s[i..j]$ is palindrome, else false
- Point to be considered that whenever $C[i][j]$ is 0 if $P[i][j]$ is true
- Every substring of length 1 is a palindrome
for ($i = 0; i < n; i++$) {
 $P[i][i] = \text{true};$
 $C[i][i] = 0;$

- }
- L is substring length. Build the solution in bottom up manner by considering all substrings of length starting from 2 to n .
for ($L = 2; L \leq n; L++$) {
//For substring of length L , set different possible starting indexes
for ($i = 0; i < n - L + 1; i++$) {
 $j = i + L - 1;$ //Set ending index

//If L is 2, then we just need to compare two characters. Else need to check two corner characters and value of $P[i+1][j-1]$

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if ( $L == 2$ )
     $P[i][j] = (\text{str}[i] == \text{str}[j]);$ 
else
     $P[i][j] = (\text{str}[i] == \text{str}[j]) \&\& P[i+1][j-1];$ 
if ( $P[i][j] == \text{true}$ )
     $C[i][j] = 0;$ 
else
{
//Make a cut at every possible location starting from  $i$  to  $j$ , and get the min. cost cut.
 $C[i][j] = \text{INT\_MAX};$ 
for ( $k = i; k \leq j - 1; k++$ )
     $C[i][j] = \min(C[i][j], C[i][k] + C[k+1][j] + 1);$ 
}
}
}

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Return the min cut value for complete string. i.e., $\text{str}[0..n-1]$
Return $C[0][n-1];$

The time complexity of the solution is $O(n^2)$. This problem is a variation of Matrix Chain Multiplication problem.

" Engineering is the closest thing to magic that exists in the world. "

- Elon Musk

Q. What is the probability that the temperature of your room is 26 degree Celsius?

Probability = $\frac{\text{No. of favourable outcomes}}{\text{Sample space}}$

Here the favourable outcome is 26 degree Celsius, therefore there is only one favourable outcome.

The tricky part is finding the Sample space. Even if the place you stay has temperatures between 17-40 or 25-27, there are infinite numbers in that range. The temperature need not always be a whole number. So your sample space is infinity.

Thus, the probability of the temperature of your room being 26 is 1 divided by infinity which is not defined.

#What's Trending

Top Website Builders

1. Wix
2. GoDaddy
3. SiteBuilder
4. Wordpress
5. Squarespace

Top Mobile App Development Tools

1. Appcelerator
2. Xamarin
3. PhoneGap
4. Appery.io
5. AppyPie

BLOG RECAP: Articles from our members

Interview Hacks

Jiya Gupta and Damayanti Chattopadhyay

Core Committee members

One might believe that being good at what they do would be enough for them to get their dream job.

Unfortunately, it's not that easy.

Preparing for an interview takes a lot more than being good at your job or googling the most asked interview questions. It primarily requires you to take time to think about your expectations from the job, your goals and your qualification relative to the employer and the position that you're applying for. So, the more you prepare for it, the better.

Here is a compilation of the all-time best interview tips to make sure you bring in your A-game. Be it how to handle the toughest questions or what to carry along, we've got you covered!

Do your homework!

Inquire about the company as much as you can. Talk to friends, acquaintances or even employees on LinkedIn. Researching the company and role as much as possible will give you an edge over the competition. Three major things that you should research about are the service, role and the company culture.

The more you can tell them about the product from both a company and customer standpoint, the better you'll perform in your interview. Researching the role before an interview will help you to decide whether or not the position is right for you. Companies usually have social media accounts and blogs that discuss their company culture and industry. This information can give you an overview of the personality of the company, as well as what they value. No matter how good a job seems, it's important that you fit within the company culture and share a similar personality and values.

Anticipate the interview questions

No matter how well versed you are with the interview process, you need to make time for thinking of answers to questions that your employer might ask. You need to think of the answers that resonate most with the role and the company. Your management abilities? Your programming skills? The examples you share should be slightly different everywhere you interview and should cater to the job requirement.

Here are a few commonly asked interview questions and how you should answer them-

Tell me about yourself.

What seems like such a simple question can really make you sweat, especially in an interview. What, exactly, should you share—not just to build rapport, but to show that you're the perfect fit for the job?

You should mostly focus on your skills, experience, education & achievements. Also, tell them a little about your personal life. All in all prepare a 2 minute answer that works as an ice breaker and also as the best first impression that you can have on a recruiter.

Tell us about your strengths and weaknesses.

Answering this question without sounding braggy can be kind of tricky. Questions about strengths and weaknesses can provide an opportunity to show how your skills are a perfect match for the job – or they can be a trap. Give the wrong answer, and the interview might go south in a minute. You should make sure that the strengths you talk about are the strengths that matter for the job and the weaknesses that you talk about do not affect the role that much.

Why should we hire you?

You should be prepared with a well-thought answer for this question beforehand. Simon Sinek says and I quote, "We are all selling something". Imagine yourself to be a salesman who is selling a product. Here, the product is you. You've worked on yourself for your whole life and this is the opportunity to sell that. So, make a list of 4-5 things that you think make you the perfect fit for that job. Mentioning a unique combination of skills and having a proof of those skills is important. For example, being a good programmer and also being a good manager can be showed by a certain Hackathon that you participated in and also managed your team.

What salary are you expecting?

From the employer's perspective, they naturally want to pay as little as possible. From your perspective, neither would you want to say a number that's too high nor would you want to undermine your value by saying a number too low. The bottom line is that you should have a number ready to share, based on your research and the total compensation this employer provides. If you do not answer this question, you will probably not be considered for this job. Evaluate the whole package that your employer has to offer and then give the answer.

Where do you see yourself in the next five years?

Before answering this question, remain brutally honest to yourself. Understand the growth pattern in the industry that you want to get into. Speak to professionals and analyze the time and skills that are required to reach a certain position and also get promoted in the field. Be specific with your answer. Do not sound vague. It gives off the vibes of under-confidence in an applicant. If possible, try and get to know more about the office environment, culture and the human resource policies from the employees of the company.

Did you Know ?

Ubuntu is one of the more popular distributions of Linux. The word Ubuntu comes from an African word meaning "I am because of you"

ACHIEVEMENTS OF OUR MEMBERS

Numerous Accolades were brought in by the CodeChef committee members this year:

Akshat Gupta and Sai Sandeep with their team recently won the IBM challenge at AngelHack Bangalore 2019 Global series event for their idea of a voice to code assistant that helps coders to migrate to other programming languages

The Vinhack, which was organised by Vinnovate IT, saw **Muskan Rastogi**, a core committee member of CodeChef, winning the 1st prize along with her team. Their ideation and creation of an application to act as a communication portal for the elderly, surely won hearts.

An intelligent warehouse management system, aiming at optimization by reducing labour costs and space wastage, had put **Akshat Gupta, Sai Sandeep, Gauransh Arora and Jatin Rathee**, all members of CodeChef-VIT chapter, on a pedestal, as they rose to win the third prize in Vinhack.

The Access Denied Hackathon also saw **Sai Sandeep**, win the Rest UI/UX 2nd place.



Resources to help you out

This month's domain:

Python Programming

Python YouTube channels

1. TheNewBoston
2. Clever Programmer
3. CS Dojo

Python Blogs

1. Planet Python
2. RealPython
3. Love-Python

Python Books

1. Learn Python 3 the hard way
2. Head first python
3. Dive into Python