

1: Intro to programming and flowcharts.

Learn about flow charts, pseudocode and programming languages. We will also learn about programming languages and why we use them. After this, we will write our program. This will be our flow whenever we will solve any problem. First question, then given values, then approach and at last we will code it. Bhaiya explains that a flowchart is a diagrammatic approach of that approach known as flow chart. The flow chart constitutes various components, connected with each other. He says that from where a program is starting we have a component called terminator. Terminator is used to show the start and end start of the program. Next block is a simple rectangle, which shows a process. Bhaiya explains how to make a flowchart for the sum of 2 numbers. He says the pseudocode as a whole is a generic way of representing logic. The flow of a flow chart is the same as the flow of the components of the flow chart. We use parallelogram to show the input/output of the program.

We want to make a flowchart for calculating simple interest. This is the formula for simple interest. You must have studied it in your school. We started our program from this start block. I don't know p, r, t , so I need to take them as inputs first. So I asked user to give me the values for p, r and t . Now I have P, R and t . So I made this rectangular block for the calculation part. Here I wrote this formula. After finding this answer in the above calculation, I have to print the output too. So here I will print output with this block print SI and then we will end this program. We started the program, took a, b as input then we checked whether a is less than b or not. If $a < b$ print "YES" else print "NO" and it's done. Simple. You just have to write in English what you are thinking and it is called pseudocode. If any number has 2 as its factor, then it is an even number or ODD number. We have to check whether N is ODD or EVEN, so we will make one block for this condition. Here is the decision making block, Is $N \% 2 = 0$? We will get 2 outputs, YES or NO. If output is YES, then it is an EVEN number, so I printed ODD. Else, I will print ODD. Then I made this end block and ended this program something like this. This is the flowchart for EVEN, ODD. Got it right? Bhaiya, why are you putting these inverting commas again and again, you will come to know soon.

We have to print something and then increment too. You have to Print and then increase the printed number too. You can see here, we printed and then increased the number by 1. But we

5: Bitwise Operators, For Loops, Operator Precedence & Variable Scoping

This is lecture number 5 of our DSA series. We have already covered the while loop, today we will see the FOR loop. We solved 18+ pattern questions in the previous lecture. Today we are going to solve easy and medium level questions on Leetcode. You will learn a lot in this lecture. We have already seen this conversion in the previous lectures. For finding 2's complement, first we have to find 1's complement and then add 1 to it. So we got our answer as -3 Got it Bhaiya says. Now we understand XOR too and implement it once, then we will understand it more. We will talk about left shift and right shift operators. We get this answer in majority cases, but not in every case. For smaller numbers we will get our answer as $2 * n$ But in some cases it creates negative numbers This is your left shift operator. Padding is always done with 0 in case of a positive number But when we take negative numbers Then it is opposite.

Bhaiya: What does post increment mean $i++$ It means that first use the value and then increment it by 1 Let's see with an example If $i=4$ and I write it as $int a = i++$ Now let's check what are the values of 'a' and 'i' Post increment means, increment after using, so it means 'a' will be having the old value of 'i' which is 4 in this case and 'i' is incremented after this operation, it means 'i' is 5 now Got it? No! I must see the 5 questions and you have to tell the output in the comment section. Those who will answer correctly, the top 3 students will get the gifts. You can simply write this also for $(; ;)$ You should also play with these operators because they are very easy and are asked in MCQs. Let's say I want to print the first 10 numbers $N = 10$ Now let's understand the flow of the FOR loop. You come here only once, then you come to this condition. If the condition is true, then you execute all statements inside it. You can use any loop from FOR loop or WHILE loop See it is giving correct output.

Bhaiya: To find whether this n is prime or not, we use to divide it by all numbers from 1 to N. If it gets divided by any number, then it is not a prime number. If we get $n \% i == 0$ (where i is any number between 1 and N) then sum's value to B. If we don't divide then we have to check for other numbers because it may give 0 with them. We know variables but what is this scope? We are going to talk about the lifetime of any variable and where all we can use it. We are familiar with both break and continue. To use any variable, we have to declare it

10: Solving LeetCode/CodeStudio Questions [Arrays]

The first problem is Swap alternate. The answer is 2,1,4,3,6,5. If there is any doubt in previous lectures please go and try to solve the discord server. You can find a discord server link at the description. And the comments sections are all ours and please do ask and will reply. Coding ninja is the largest coding education platform where you can see interesting courses and if you're interested in paid courses and want to develop yourself learn machine learning , android , core subjects , DSA with any language like java and python. The best thing about coding ninja is you can clear your doubts and 1 on 1 doubt support is available. We have an array here So we will deal with both of them. First let 's solve the even array , as its greater. Assume that 6 of them are greater or let "s say 8 are greater. In this way we have made an array of 8 Let 's make the odd one as well. odd [5] = I have written here 11,33,9,76,43 in this way.

The size was 8 but 10 is written here. Therefore it was 8. But why are these extra numbers coming out ? It means something is wrong here. Let 's run it 2 times. So here it would be 2,5,4,9. 6,7 and then 0,1 It 's going perfect. And if do the same thing with the cout array. Then here it is odd and its size would be 5 and then run it. $i+=2$ inside the for loop which means the same as $i=i+2$. That is why I have written $i+=2$ inside a for loop. We have to swap the value of 0th and 1st index. In place of 2 now it is 5 and in array of 0 its array of 1 which means at the 0th index it should be 2. The link to all the questions will be given in the description itself. So when you write the function swap (arr [0] , arr [1]) this is how the internal working is being done. And now I have to update the 0th index which is an array of 0 and inside it should be 2.

It is said that in this array list the 'M ' number is present 2 times and one number is present only once. What do they mean ? They meant to say that in your array the M. that is your count , it appears 2 times. But one single number appears only once and others appear twice. This type of questions will come in all of your assessments if you appear in the test. In this way we have printed 1 why because here 2 is present two times. likewise 3 and 6 so 1 is left out so it is the single output and therefore 1. In this case 2 and 7 appear twice, 4 is left so the desired answer is 4 next. Now you might be thinking how I should store the count of the numbers. But what even is the point of storing it will remain the same. We had learnt a thing called XOR, do you remember ? XOR has a very beautiful property that if you XOR two