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### CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

| Course | C | Session | Input & Output | Question Information | Level 1 Challenge 1 |
|--------|---|---------|----------------|----------------------|---------------------|
|--------|---|---------|----------------|----------------------|---------------------|

**Problem Description:**  
Binita was travelling from Chennai to Delhi in Rajdhani Express.  
The train have arrived at the destination later than the estimated time.  
So, Binita wants to know the total number of hours and minutes the train was delayed.

**Problem**  
Can you help Binita in finding the exact hour and time Rajdhani Express was delay on the day of Binita's journey?  
**Constraint:**  
 $100 \leq \text{tot\_mins} \leq 550$   
**Input Format:**  
The only line of input has single value of variable tot\_mins of type integer representing total minutes.  
**Output Format:**  
Print the Number of Hours and Minutes in a single line.

Logical Test Cases

Test Case 1 Test Case 2

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**Code Editor**

```
Code Editor GCC v6.3.0 Light Theme ...  
1 #include <stdio.h>  
2 int main()  
3 {  
4     int tot_mins,hrs,mins;  
5     scanf("%d",&tot_mins);  
6     hrs=tot_mins/60;  
7     mins=tot_mins%60;  
8     printf("%d Hours and %d Minutes",hrs,mins);  
9     return 0;  
10 }
```

**Custom Input (stdin)**

Type Here

**Output**

Match T1 | Ma  
Empty

**Complexity Analysis**

**Test Case Status**

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Course Session Input & Output Question Information Level 1 Challenge 2

Problem Description:  
Nancy bought apples from the fruit shop.  
The shopkeeper specified the bill amount. Nancy also gave some amount to the shopkeeper for paying the bill.  
But she likes to know the quotient and remainder after dividing the amount given by her by the bill amount specified by the shopkeeper.

Can you help nancy in finding it?

Constraint :  
 $5 \leq \text{amtgiven} \leq 2500$   
 $5 \leq \text{billamt} \leq 2500$

Input Format:  
First Line: Integer value of amtgiven representing the amount given by nancy.  
Second Line: Integer value of billamt representing the amount specified by the shop keeper

Output Format:  
First Line: Print the Quotient in integer format.  
Second Line: Print the Remainder in integer format.

Logical Test Cases

| Test Case 1                 | Test Case 2                 |
|-----------------------------|-----------------------------|
| INPUT [STDIN]<br>600<br>520 | INPUT [STDIN]<br>789<br>256 |

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You have already solved this challenge ! Though you can run the code with different logic !

Code Editor GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     int billamt,amtgiven;
5     int q,r;
6     scanf("%d",&amtgiven);
7     scanf("%d",&billamt);
8     q=amtgiven/billamt;
9     r=amtgiven%billamt;
10    printf("Quotient:%d\nRemainder:%d",q,r);
11    return 0;
12 }
```

Custom Input (stdin)  
Type Here

Output

Complexity Analysis

Test Case Status

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### CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

| Course   | C  | Session       | Input & Output | Question Information | Level 1 | Challenge 3 |
|--|--|---------------|----------------|----------------------|---------|-------------|
| Problem Description:<br>Elavennil has a chessboard with N rows and M columns. In one step, he can choose two cells of the chessboard which share a common edge [that has not been cut yet] and cut this edge.<br>Formally, the chessboard is split into two or more pieces if it is possible to partition its cells into two non-empty subsets S1 and S2 ( $S1 \cap S2 = \emptyset$ , $ S1  +  S2  = NM$ ) such that there is no pair of cells $c_1, c_2$ ( $c_1 \in S1, c_2 \in S2$ ) which share a common edge that has not been cut.<br>Elavennil does not want the board to split into two or more pieces. Compute the maximum number of steps he can perform while satisfying this condition. |  |               |                |                      |         |             |
| Problem  | Constraints:<br>$1 \leq N, M \leq 8$<br>Input Format:<br>The only line of input test case contains two space-separated integers N and M.<br>Output Format:<br>In the only line of output print an integer representing the maximum possible number of steps. |               |                |                      |         |             |
| Logical Test Cases   |  |               |                |                      |         |             |
| Test Case 1  |  | Test Case 2   |                |                      |         |             |
| INPUT (STDIN)  |  | INPUT (STDIN) |                |                      |         |             |
| 7 4  |  | 6 2           |                |                      |         |             |
| Custom In Type Here  |  |               |                |                      |         |             |
| Output   |  |               |                |                      |         |             |
| Complexity   |  |               |                |                      |         |             |
| Test Case  |  |               |                |                      |         |             |

SRI

role: student name: abinaya.s ID: 963043074845 dept: school of electronics and communication engineering Date: May 4th 2023, 7:40:29 am Logout

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CHALLENGE INFORMATION

You have already solved this challenge! Though you can run the code with different logic!

| Course | C | Session | Input & Output | Question Information |
|--------|---|---------|----------------|----------------------|
|        |   |         |                | Level 1 Challenge 4  |

Problem Description:

Elavenil runs a popular bakery in his native. Elavenil has now finished baking and frosting his cupcakes, it's time to package them. Elavenil has N cupcakes, and needs to decide how many cupcakes to place in each package.

Each package must contain the same number of cupcakes. Elavenil will choose an integer A between 1 and N, inclusive, and place exactly A cupcakes into each package.

Elavenil makes as many packages as possible. Elavenil then gets to eat the remaining cupcakes. Elavenil enjoys eating cupcakes very much. Help Elavenil choose the package size A that will let him eat as many cupcakes as possible.

Constraints:

$2 \leq N \leq 10000$

Input Format:

Only line of input consists of a single integer N representing the number of cupcakes.

Output Format:

Print the package size that will maximize the number of leftover cupcakes.

If multiple package sizes will result in the same number of leftover cupcakes, print the largest such size.

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int n;

scanf

printf

Complexity Test Cases

Test Case 1: CYCLOMATIC COMPLEXITY 1

Test Case 2: TOKEN COUNT 48

Test Case 3: NLOC 8

You have already solved this challenge! Though you can run the code with different logic!

Code Editor

```
1 #include <stdio.h>
2 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     int f;
7     f=n/2;
8     printf("%d",f);
9     return 0;
}
```

Custom Input [stdin] T1 T2

Type here

Output Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

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### CHALLENGE INFORMATION

You have already solved this challenge! Though you can run the code with different logic!

| Course | C | Session | Input & Output | Question Information |
|--------|---|---------|----------------|----------------------|
|        |   |         |                | Level 1 Challenge 5  |

Problem Description:  
During the IPL Match between CSK and MI, as a part of IPL contest the question was asked to the fans.  
Who are all giving the correct answer to that question will get the free VIP box ticket for the Final for which CSK have already qualified.  
The question is convert given integer number to octal and hexadecimal number respectively.

Abilash is an die hard CSK fan. Can you help him answer the question so that he can watch CSK play the final from VIP box?

Constraints:  
1 ≤ ipno ≤ 10000

Input Format:  
Only one line of input has single integer number that need to be converted.

Output Format:  
In the First line of output print the octal number equivalent to the input value.  
In the Second line of output print the hexadecimal number equivalent to the input value.

Logical Test Cases

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>1 | TOKEN COUNT<br>45 | NLOC<br>9   |

You have already solved this challenge! Though you can run the code with different logic!

Code Editor

```
1 #include <stdio.h>
2 int main()
3 {int ipno;
4 ipno = 1000;
5 printf("%o",ipno);
6 printf("\n%#x",ipno);
7 return 0;}
```

Custom Input [stdin] T1 T2

Type Here

Output Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

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You have already solved this challenge! Though you can run the code with different logic!

| Course | C | Session | Input & Output | Question Information  |
|--------|---|---------|----------------|-----------------------|
|        |   |         |                | Level 1   Challenge 6 |

**Problem Description:**  
Professor JD has lots of options. Bottles containing all types of potions are stacked on shelves which cover the entire wall from floor to ceiling.  
Professor JD has broken his bones several times while climbing the top shelf for retrieving a potion. He decided to get a ladder for him.  
But he has no time to visit Charu. So he instructed Bargav to make a ladder for him. Professor JD specifically wants a step ladder that looks like an inverted 'V' from a side view.  
Professor just mentioned two things before vanishing:  
B - separation between left side (LS) and right side (RS) on the ground  
LS - the length of left side  
What should be the length of RS? At one extreme LS can be vertical and at other RS can be vertical.  
Bargav is angry and confused.

**Can you help him find the minimum and maximum length of RS.**

**Constraints:**  
 $1 \leq B < LS \leq 100$

**Input Format:**  
Only one line of input contains 2 integers representing B and LS respectively.

**Output Format:**  
The only line of output contains minimum value of RS and maximum value of RS, separated by space.  
The answer (RS) will be considered correct if it has relative and absolute error less than 10^-2.

**Logical Test Cases**

| CYCLOMATIC COMPLEXITY | TOKEN COUNT | NLOC |
|-----------------------|-------------|------|
| 1                     | 80          | 11   |

You have already solved this challenge! Though you can run the code with different logic!

**Code Editor**

```
1 #include <stdio.h>
2 #include <math.h>
3 int main()
4 {
5     float b,ls,rs1,rs2;
6     scanf("%f %f",&b,&ls);
7     b=b*b;
8     ls=ls*ls;
9     rs1=sqrt(ls-b);
10    rs2=sqrt(ls+b);
11    printf("%.5f %.5f",rs1,rs2);
12    return 0;
}
```

**Custom Input (stdin)**

Type here

**Output**

Match T1 Match T2

Empty

**Complexity Analysis**

**Test Case Status**

07:44 04-05-2023

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You have already solved this challenge ! Though you can run the code with different logic !

Course C Session Input & Output Question Information Level 1 Challenge 7

Problem Description:  
Ramesh is working in an engineering college hostel as a Mess supervisor. There are different messes available based on the years.  
Every day students count is varying in all the hostels due to continuous holidays.  
Since ramesh is in charge of the cooking team. He had trouble with calculating the quantity of food that needs to be prepared because of the varying student count.  
Even if a small quantity of food is prepared by the cooking team, it should be divided equally among the number of Mess.Ramesh needs an automated software to identify the amount of food available (in number of packets ) and Mess count.  
Can you help him to divide the food equally and also calculating the remaining quantity of food that will be available after sharing the food equally ?

Problem Constraints:  
 $1 \leq \text{availableFood} \leq 10000$   
 $1 \leq \text{messcnt} \leq 20$

Input Format:  
Only one line of input has two integers [availableFood, messcnt] separated by space representing the available number of food packets and the available number of messes respectively

Output Format:  
In the only line of output print two values separated by a space representing the number of food packets that are equally shared by "n" number of messes and the remaining number of food packets available.

Logical Test Cases

| Test Case 1   | Test Case 2   |
|---------------|---------------|
| INPUT (STDIN) | INPUT (STDIN) |

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You have already solved this challenge ! Though you can run the code with different logic !

Code Editor GCC v6.3.0 Light Theme

```
#include <stdio.h>
int main()
{
    int availableFood, messcnt, dividedQnt, remFood;
    scanf("%d %d", &availableFood, &messcnt);
    dividedQnt = availableFood / messcnt;
    remFood = availableFood % messcnt;
    printf("%d %d", dividedQnt, remFood);
    return 0;
}
```

Custom Input (stdin) T1 T2

Type Here

Output Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

Code Editor

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### CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

| Course   | C                      | Session              | Input & Output    | Question Information | Level 1 Challenge 8 |             |             |   |     |    |  |
|--|------------------------|----------------------|-------------------|----------------------|---------------------|-------------|-------------|---|-----|----|--|
| Problem Description:<br>Rathik organized technical round interview in Macrost for the set of computer science candidates.<br>The problem is to perform addition, subtraction, multiplication, and division of given two numbers.<br>Rathik has given the deadline of only 5 minutes to complete the problem.<br>Can you help the candidates to complete the problem within the specified time limit ?<br>Constraint:<br>Problem<br>$1 \leq \text{testnum1} \leq 50$<br>$1 \leq \text{testnum2} \leq 50$<br>Input Format :<br>The only line of input has two numbers a and b of type integers separated by a comma.<br>Output Format :<br>Print Addition, Subtraction, Multiplication, Division, and Modulus of given two numbers in a separate line respectively.<br>Note: Rathik instructed his candidates to print the result of the division with 3 values after decimal point. |                        |                      |                   |                      |                     |             |             |   |     |    |  |
| Logical Test Cases   |                        |                      |                   |                      |                     |             |             |   |     |    |  |
| <table border="1"><tr><td>Test Case 1</td><td>Test Case 2</td></tr><tr><td>1</td><td>138</td></tr><tr><td>21</td><td></td></tr></table>  |                        |                      |                   |                      |                     | Test Case 1 | Test Case 2 | 1 | 138 | 21 |  |
| Test Case 1  | Test Case 2            |                      |                   |                      |                     |             |             |   |     |    |  |
| 1  | 138                    |                      |                   |                      |                     |             |             |   |     |    |  |
| 21   |                        |                      |                   |                      |                     |             |             |   |     |    |  |
| You have already solved this challenge ! Though you can run the code with different logic !  |                        |                      |                   |                      |                     |             |             |   |     |    |  |
| Code Editor  | GCC v6.3.0 Light Theme | Custom Input [stdin] | Output            | Complexity Analysis  | Test Case Status    |             |             |   |     |    |  |
| <pre>1 #include &lt;stdio.h&gt; 2 #include &lt;math.h&gt; 3 int main() 4 { 5     int testnum1,testnum2; 6     int sum,sub,mult,mod; 7     float div; 8     scanf("%d,%d",&amp;testnum1); 9     scanf("%d",&amp;testnum2); 10    sum=testnum1+testnum2; 11    sub=testnum1-testnum2; 12    div=(float)testnum1/(float)testnum2; 13    mult=testnum1*testnum2; 14    mod=testnum1%testnum2; 15    printf("\nAddition : %d",sum); 16    printf("\nSubtraction : %d",sub); 17    printf("\nMultiplication : %d",mult); 18    printf("\nDivision : %.3f",div); 19    printf("\nModulus : %d",mod); 20 } 21 }</pre>  | T1 T2                  | Type Here            | Match T1 Match T2 | Empty                |                     |             |             |   |     |    |  |
| Code Editor  | Reset Run Evaluate     | ENG IN               | 07:47             | 04-05-2023           | 07:47               |             |             |   |     |    |  |

You have already solved this challenge! Though you can run the code with different logic!

**Course**    C    **Session**    Input & Output    **Question Information**    Level 1 • Challenge 9

**Problem Description:**  
Lasya bought a new volleyball in the sports shop. It looks like a medium size.  
She somehow found the radius of the sphere.  
But she would like to know the volume of that ball.  
Can you help him in finding the Volume of the ball?

**Functional Description:**  
**Problem**  
Volume =  $(4/3)\pi r^3$   
 $\pi = 3.14$

**Constraint:**  
 $1.00 \leq r \leq 5.00$   
**Input Format:**  
The only line of input has a single value of type float representing the radius of the ball.

**Output Format:**  
Print the volume of the ball in a single line.

Logical Test Cases

| Test Case 1           | Test Case 2          | Test Case 3 |
|-----------------------|----------------------|-------------|
| INPUT (STDIN)<br>2.56 | INPUT (STDIN)<br>3.1 |             |

Test Case 1  
CYCLOMATIC COMPLEXITY  
1

Test Case 2  
TOKEN COUNT  
65

Test Case 3  
NLOC  
15

You have already solved this challenge! Though you can run the code with different logic!

**Code Editor**    GCC v6.3.0    Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     float radiusofball,volumeofball;
5     scanf("%f",&radiusofball);
6     volumeofball=(4.0/3.0)*3.14*radiusofball*radiusofball*radiusofball;
7     printf("\n %f",volumeofball);
8     return 0;
9 }
```

**Custom Input (stdin)**    T1 - T2  
Type Here

**Output**    Match T1 Match T2  
Empty

**Complexity Analysis**

**Test Case Status**

You have already solved this challenge! Though you can run the code with different logic!

| Course  | C                 | Session       | Input & Output | Question Information | Level 1 • Challenge 10 |             |             |             |                            |                   |               |
|---|-------------------|---------------|----------------|----------------------|------------------------|-------------|-------------|-------------|----------------------------|-------------------|---------------|
| Problem Description:<br>The employees of one million dollar profit company TeamZilla organised the strike because they want to have additional salary increment, the strike is continuing for more than a month now.<br>Rathik the CEO of TeamZilla has found the solution to break the strike, so he organised a small technical competition for his employees.<br>Most of the employees who were part of the strike have participated in the technical event announced and in that there was a task of printing the ASCII Value of the character inputted.<br>Can you help them to complete the task and win the competition? |                   |               |                |                      |                        |             |             |             |                            |                   |               |
| <b>Problem</b><br>Constraint:<br>$a \leq Asc \leq z$<br>$A \leq Asc \leq Z$<br>Input format:<br>Only one line of input represents a single alphabetic character.<br>Output format:<br>Print the integer ASCII value corresponding to the input alphabet.  |                   |               |                |                      |                        |             |             |             |                            |                   |               |
| <b>Logical Test Cases</b><br><table border="1"><thead><tr><th>Test Case 1</th><th>Test Case 2</th><th>Test Case 3</th></tr></thead><tbody><tr><td>INPUT [STDIN]</td><td>INPUT [STDIN]</td><td>INPUT [STDIN]</td></tr></tbody></table>   |                   |               |                |                      |                        | Test Case 1 | Test Case 2 | Test Case 3 | INPUT [STDIN]              | INPUT [STDIN]     | INPUT [STDIN] |
| Test Case 1   | Test Case 2       | Test Case 3   |                |                      |                        |             |             |             |                            |                   |               |
| INPUT [STDIN]   | INPUT [STDIN]     | INPUT [STDIN] |                |                      |                        |             |             |             |                            |                   |               |
| <b>Complexity Test Cases</b><br><table border="1"><thead><tr><th>Test Case 1</th><th>Test Case 2</th><th>Test Case 3</th></tr></thead><tbody><tr><td>CYCLOMATIC COMPLEXITY<br/>1</td><td>TOKEN COUNT<br/>35</td><td>NLOC<br/>9</td></tr></tbody></table>  |                   |               |                |                      |                        | Test Case 1 | Test Case 2 | Test Case 3 | CYCLOMATIC COMPLEXITY<br>1 | TOKEN COUNT<br>35 | NLOC<br>9     |
| Test Case 1   | Test Case 2       | Test Case 3   |                |                      |                        |             |             |             |                            |                   |               |
| CYCLOMATIC COMPLEXITY<br>1  | TOKEN COUNT<br>35 | NLOC<br>9     |                |                      |                        |             |             |             |                            |                   |               |
| <p>You have already solved this challenge! Though you can run the code with different logic!</p> <p><b>Code Editor</b></p> <pre>1 #include &lt;stdio.h&gt; 2 int main() 3 { 4     char Asc; 5     scanf("%c", &amp;Asc); 6     printf("%d", (int)Asc); 7     return 0; 8 }</pre> <p><b>Custom Input (stdin)</b></p> <p><b>Output</b></p> <p><b>Complexity Analysis</b></p> <p><b>Test Case Status</b></p>   |                   |               |                |                      |                        |             |             |             |                            |                   |               |

You have already solved this challenge! Though you can run the code with different logic!

Course C Session Flow Control & Operators Question Information Level 1 Challenge 11

Problem Description:  
The window of Vinod's room has a width of 'A'.  
There are two screens hung over the window, each of which has a horizontal length of 'B'. [Vertically, the screens are long enough to cover the whole window.]  
We will close the window so as to minimize the total horizontal length of the uncovered part of the window.  
Find the total horizontal length of the uncovered parts of the window.

Problem Constraints:  
 $1 \leq A \leq 100$   
 $1 \leq B \leq 100$   
A and B are integers.

Input Format:  
Only one line of input has two integers representing A and B respectively separated by a space.

Output Format:  
Print the output in a single line the total horizontal length of the uncovered parts of the window.

Logical Test Cases

| Test Case 1           | Test Case 2           |
|-----------------------|-----------------------|
| INPUT (STDIN)<br>32 8 | INPUT (STDIN)<br>93 9 |
| EXPECTED OUTPUT<br>16 | EXPECTED OUTPUT<br>75 |

Complexity Test Cases

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>2 | TOKEN COUNT<br>70 | NLOC<br>11  |

You have already solved this challenge! Though you can run the code with different logic!

Code Editor GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     int A,B,c;
5     scanf("%d %d",&A,&B);
6     c=A-B/2;
7     printf("%d",c);
8     return 0;
9 }
10
11 }
```

Custom Input (stdin) T1 T2  
Type here

Output Match T1 Match T2  
Empty

Complexity Analysis

Test Case Status

Code Editor

ENG IN 07:55 04-05-2023

You have already solved this challenge! Though you can run the code with different logic!

Course C Session Flow Control & Operators Question Information Level 1 Challenge 12

Problem Description:  
Given is an integer N. Simon chooses an integer 'a' from the positive integers not greater than 'N' with equal probability.

Find the probability that 'a' is odd.

Constraints:  
 $1 \leq N \leq 100$

Input Format:  
Input is given from Standard Input in the following format: N

Output Format:  
Print the probability that 'a' is odd.

Your output will be considered correct when its absolute or relative error from the judge's output is at most  $10^{-6}$ .

Explanation:  
Assume  $N=4$  then  
There are four positive integers not greater than 4: 1, 2, 3, and 4. Among them, we have two odd numbers: 1 and 3. Thus, the answer is  $2/4=0.5$ .

Logical Test Cases

| Test Case 1         | Test Case 2         |
|---------------------|---------------------|
| INPUT [STDIN]<br>39 | INPUT [STDIN]<br>79 |

Complexity Test Cases

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>2 | TOKEN COUNT<br>75 | NLOC<br>15  |

You have already solved this challenge! Though you can run the code with different logic!

Code Editor GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     int n;
5     float t;
6     scanf("%d", &n);
7     if(n%2==0)
8         printf("%d", (n/2)/n);
9     else
10        {t=(n/2);
11         t=(t+1)/n;
12         printf("%.9f", t);
13     }
14 }
15 }
```

Custom Input (stdin) T1 T2  
Type Here

Output Match T1 Match T2  
Empty

Complexity Analysis

Test Case Status

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You have already solved this challenge! Though you can run the code with different logic!

| Course | C | Session | Flow Control & Operators |
|--------|---|---------|--------------------------|
|        |   |         | Question Information     |
|        |   |         | • Level 1 • Challenge 13 |

**Problem Description**  
Vikram has just started Programming, he is in first year of Engineering. Vikram is reading about Relational Operators. Relational Operators are operators which check relationship between two values.

Given two numerical values A and B you need to help Vikram in finding the relationship between them that is,  
First one is greater than second or,  
First one is less than second or,  
First and second one are equal.

**Problem Constraints**  
 $1 \leq \text{number1}, \text{number2} \leq 50000$

**Input Format:**  
First line contains an integer T, which denotes the number of testcases.  
Each of the T lines contain two integers A and B separated by a space.

**Output Format:**  
For each line of input produce one line of output. This line contains any one of the relational operators '`<`', '`>`', '`=`'.

**Logical Test Cases**

| Test Case 1                             | Test Case 2                               |
|---|---|
| INPUT [STDIN]<br><code>7845 9825</code> | INPUT [STDIN]<br><code>19752 14895</code> |

**Complexity Test Cases**

| Test Case 1                             | Test Case 2                    | Test Case 3             |
|---|--------------------------------|-------------------------|
| CYCLOMATIC COMPLEXITY<br><code>3</code> | TOKEN COUNT<br><code>80</code> | NLOC<br><code>13</code> |

You have already solved this challenge! Though you can run the code with different logic!

**Code Editor**

```
1 #include <stdio.h>
2 int main()
3 {
4     int number1,number2;
5     scanf("%d%d",&number1,&number2);
6     if(number1>number2)
7         printf("<");
8     else if (number1==number2)
9         printf("=");
10    else
11        printf(">");
12    return 0;
13 }
```

GCC v6.3.0 Light Theme

**Custom Input [stdin]**

| T1        | T2 |
|-----------|----|
| Type here |    |

**Output**

| Match T1 | Match T2 |
|----------|----------|
| Empty    |          |

**Complexity Analysis**

**Test Case Status**

07:57 ENG IN 04-05-2023

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Course C Session Flow Control & Operators Question Information Level 1 Challenge 14

Problem Description:  
Yasir a techie working in a military camp was checking the landmine as per their sequence of numbers.  
Whatever the number the major gives yasir has to :  
Check if [number < 0], then need to print as negative.  
Check if [number > 0], then need to print as positive.

Functional Description:  
But Major Simon imposes a strict constraint that he should use if else concept to complete the task.  
Since he doesn't know the if else concept he is frustrated.

Problem  
Can you help him to complete his task?

Constraints :  
 $1 \leq \text{num} \leq 500$   
 $-1 \leq \text{num} \leq 500$

Input Format:  
Single Line Containing the value of number given by Major Simon

Output Format:  
Print either POSITIVE or NEGATIVE based on the input of Major Simon.

Logical Test Cases

Test Case 1    Test Case 2

INPUT (stdin)    INPUT (stdin)

Test Case 1    Test Case 2    Test Case 3

CYCLOMATIC COMPLEXITY    TOKEN COUNT    NLOC

3    65    28

You have already solved this challenge ! Though you can run the code with different logic !

Code Editor    GCC v6.3.0    Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     int number;
5     scanf("%d",&number);
6     if (number<0)
7         printf("NEGATIVE");
8     else
9         printf("POSITIVE");
10    return 0;
11 }
```

Custom Input (stdin)    T1 T2

Type here

Output    Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

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ENG IN 07:57 04-05-2023



You have already solved this challenge! Though you can run the code with different logic!

| Course               | C  | Session | Flow Control & Operators | Question Information | Level 1 | Challenge 15 |
|----------------------|--|---------|--------------------------|----------------------|---------|--------------|
| Problem Description: | Tamil Selvan wanted to help the needy people on his birthday. So he started that from the temple where beggars are high in numbers. He checked his wallet to give them the money evenly. But only after taking out the wallet noticed he doesn't have enough money. But he has the amount in his UPI App. One person nearby noticed it and said he will provide him the minimum number of currency required if he transfers the amount to him through UPI App. Tamil Selvan thought it would be better if there is any logic available to verify the correctness of the amount he gets from that person. |         |                          |                      |         |              |
| Note:                | Tamil Selvan needs the amount only in the form of Rs.50, 20, 10, 5, 2, 1.  |         |                          |                      |         |              |
| Problem:             | Can you help Tamil Selvan in doing that?   |         |                          |                      |         |              |
| Constraints:         | 1 <= amount <= 100000  |         |                          |                      |         |              |
| Input Format:        | Single line Containing an integer representing the amount.   |         |                          |                      |         |              |
| Output Format:       | Print the minimum required combination of currency.  |         |                          |                      |         |              |

A screenshot of a Microsoft Edge browser window. The address bar shows the URL: https://care.srmtrichy.edu.in/srmtrichyelab/#/srmtrichyelab/student/home. The main content area displays a 'Code Editor' for challenge 15. The code editor shows a C program using the GCC v6.3.0 compiler. The code uses a greedy algorithm to find the minimum number of notes required to make up a given amount. It starts with the largest note (50) and repeatedly subtracts it from the amount until it reaches zero, then moves to the next largest note (20, 10, 5, 2) in that order. The code editor also includes a 'Custom Input (stdin)' section for testing, an 'Output' section showing the results of the execution, and sections for 'Complexity Analysis' and 'Test Case Status'.

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### CHALLENGE INFORMATION

You have already solved this challenge! Though you can run the code with different logic!

| Course   | C | Session | Flow Control & Operators | Question Information | Level 1 Challenge 16 |
|--|---|---------|--------------------------|----------------------|----------------------|
| Problem Description:<br>Anegan is a member of a programming competition site, Awesome Coder.<br><br>Each member of the Awesome Coder is assigned two values: Inner Rating and Displayed Rating.<br><br>The Displayed Rating of a member is equal to their Inner Rating if the member has participated in 10 or more contests.<br>Otherwise, the Displayed Rating will be their Inner Rating minus $100 \times (10 - K)$ when the member has participated in K contests.<br><br>Anegan has participated in N contests, and his Displayed Rating is R.<br><br>Find his Inner Rating. |   |         |                          |                      |                      |
| Constraints:<br>All values in input are integers<br>$1 \leq N \leq 100$<br>$0 \leq R \leq 4111$  |   |         |                          |                      |                      |
| Input Format:<br>Only one line of input has two values N R of type integer separated by a space.   |   |         |                          |                      |                      |
| Output Format:<br>Print the Inner Rating.  |   |         |                          |                      |                      |

Logical Test Cases

if else

Complexity Test Cases

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>2 | TOKEN COUNT<br>70 | NLOC<br>9   |

You have already solved this challenge! Though you can run the code with different logic!

Code Editor

```
1 #include <stdio.h>
2 int main()
3 {int n,r,i;
4 scanf("%d %d",&n,&r);
5 if(10>n)
6 {i=r+100*(10-n);printf("%d",i);}
7 else
8 printf("%d",r);
9 return 0;}
```

Custom Input (stdin)

Type here

Output Match T1 Match T2

Empty

Complexity Analysis

Code

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### CHALLENGE INFORMATION

You have already solved this challenge! Though you can run the code with different logic!

| Course  | C   | Session | Flow Control & Operators | Question Information | Level 1 Challenge 17 |
|---|---|---------|--------------------------|----------------------|----------------------|
| Problem Description:<br>In the Attacking war game Amit and Arun will have a battle using their monsters.  |   |         |                          |                      |                      |
| The health and strength of Amit's monster are A and B, respectively, and those of Arun's monster are C and D, respectively.   |   |         |                          |                      |                      |
| The two monsters will take turns attacking, in the order Amit's, Arun's, Amit's, Arun's, ... Here, an attack decreases the opponent's health by the value equal to the attacker's strength. |   |         |                          |                      |                      |
| The monsters keep attacking until the health of one monster becomes 0 or below.   |   |         |                          |                      |                      |
| The person with the monster whose health becomes 0 or below loses, and the other person wins.   |   |         |                          |                      |                      |
| Problem Constraints:<br>$1 \leq A, B, C, D \leq 50$   |   |         |                          |                      |                      |
| Input Format:<br>Only line of input has 4 integers A B C and D separated by a space representing the strengths of Amit and Arun's monsters.   |   |         |                          |                      |                      |
| Output Format:<br>In the only line of output if Amit will win, print Yes; if he will lose, print No.  |   |         |                          |                      |                      |
| Logical Test Cases  |   |         |                          |                      |                      |
| Test Case 1 Test Case 2   |   |         |                          |                      |                      |
| CYCLOMATIC COMPLEXITY: 2 TOKEN COUNT: 85 NLOC: 11   |   |         |                          |                      |                      |
| You have already solved this challenge! Though you can run the code with different logic!   |   |         |                          |                      |                      |
| Code Editor   | <p>Code Editor GCC v6.3.0 Light Theme</p> <pre>1 #include &lt;stdio.h&gt; 2 int main() 3 { 4     int a,b,c,d; 5     scanf("%d%d%d%d",&amp;a,&amp;b,&amp;c,&amp;d); 6     if(d&gt;b) 7         printf("No"); 8     else 9         printf("Yes"); 10    return 0; 11 }</pre> <p>Custom Input (stdin) T1 T2<br/>Type here</p> <p>Output Match T1 Match T2<br/>Empty</p> <p>Complexity Analysis</p> <p>Test Case Status</p> |         |                          |                      |                      |
| ENG IN 08:00 04-05-2023   |   |         |                          |                      |                      |

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### CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

| Course | C | Session | Flow Control & Operators | Question Information | Level 1 Challenge 18 |
|--------|---|---------|--------------------------|----------------------|----------------------|
|--------|---|---------|--------------------------|----------------------|----------------------|

Problem Description:  
A triple of numbers is said to be poor when two of those numbers are equal but the other number is different from those two numbers.

You will be given three integers A, B, and C.

Constraints:  
1 <= A, B, and C <= 50

Input Format:  
Only line of input has three integers A B C separated by a space.

Output Format:  
Print the output in a single line If the given triple is poor, print Yes; otherwise, print No.

Logical Test Cases

| Test Case 1                            | Test Case 2                            |
|--|--|
| INPUT [STDIN]<br><code>23 18 34</code> | INPUT [STDIN]<br><code>39 28 39</code> |
| EXPECTED OUTPUT<br><code>No</code>     | EXPECTED OUTPUT<br><code>Yes</code>    |

ENG IN 08:00 04-05-2023

You have already solved this challenge! Though you can run the code with different logic!

**Code Editor**

```
1 #include <stdio.h>
2 int main()
3 {
4     int a,b,c;
5     scanf("%d %d %d",&a,&b,&c);
6     if ((a==c&&b==c)||((b==c)&&c==a))
7         printf("Yes");
8     else
9         printf("No");
10    return 0;
11 }
```

**Custom Input (stdin)**

Type Here

**Output**

Match T1 Match T2

Empty

**Complexity Analysis**

**Test Case Status**

Code Editor

Save Reset Run Evaluate

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Search

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08:12 04-05-2023

Problem Description:

There are two monkeys on an x-axis ready to jump in the positive direction [i.e., toward positive infinity].

The first monkey starts at location  $x_1$  and moves at a rate of  $v_1$  meters per jump.

The second monkey starts at location  $x_2$  and moves at a rate of  $v_2$  meters per jump.

Given the starting locations and movement rates for each monkey, can you determine if they'll ever land at the same location at the same time?

Constraints:

- $0 \leq x_1 < x_2 \leq 10000$
- $1 \leq v_1 \leq 10000$
- $1 \leq v_2 \leq 10000$

Input Format:

A single line of four space-separated integers denoting the respective values of  $x_1$ ,  $v_1$ ,  $x_2$  and  $v_2$ .

Output Format:

Print YES if they can land on the same location at the same time; otherwise, print NO.

Note: The two monkeys must land at the same location after making the same number of jumps.

Logical Test Cases

**Test Case 1**

INPUT [STDIN]

0 3 4 2

EXPECTED OUTPUT

YES

**Test Case 2**

INPUT [STDIN]

0 2 5 3

EXPECTED OUTPUT

NO

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08:12 04-05-2023



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CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

Course: C Session: Flow Control & Operators Question Information Level 1 Challenge 20

Problem Description:  
Sivan's is teaching his son Vigneshwaran his daily lessons in their home. Vigneshwaran's mathematics homework note had a question named Mad angles where he need to check if some angles are given it is valid one to form a triangle.  
To make his son understand the problem sivan planned to write a simple programming logic for the same.  
Can you help sivan in doing so?

Functional Description:  
The angles are valid to form a triangle if:  
Sum of all three angles are equal to 180 degree as well as angle1,angle2 and angle3 > 0

Problem Constraints:  
 $1 \leq \text{angle1} \leq 90$   
 $1 \leq \text{angle2} \leq 90$   
 $1 \leq \text{angle3} \leq 90$

Input Format:  
Three separate Lines representing three angles of the triangle

Output Format:  
Print "Angles are valid" or "Angles are not valid" accordingly.

Logical Test Cases

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### CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

| Course | C | Session | Arrays & Loops | Question Information |
|--------|---|---------|----------------|----------------------|
|        |   |         |                | Level 1 Challenge 21 |

Problem Description:  
Ganapathy the Mathematics professor distributed the answer sheets for his students after the examination.  
His class had students who have passed the exam as well as the students who have failed in the exam.  
In order to have the proper analysis of individual student performances in his class he has ordered them to sit in the order where the students passed the exam should sit in ODD numbered row and the students who have failed in exam should sit in EVEN numbered row.  
The total number of rows in which students have to sit will be given by the professor.  
But since the dimension of the class is triangular in shape the students got confused.

Can you help them with the order in which they have to sit if the number of rows is given by the professor?

Constraints:  
 $1 \leq \text{noofrowsinclass} \leq 15$

Input Format:  
Only one line of input has single integer representing the number of rows in which students have to sit.

Output Format:  
Print the seating layout in a triangular shaped class according to the number of rows.

Refer sample testcases for format specification.

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### Complexity Test Cases

Test Case 1 CYCLOMATIC COMPLEXITY 4  
Test Case 2 TOKEN COUNT 92  
Test Case 3 NLOC 23

You have already solved this challenge ! Though you can run the code with different logic !

Code Editor GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     int noofrowsinclass;
5     int i,j;
6     scanf("%d",&noofrowsinclass);
7     for(i=1;i<noofrowsinclass;i++)
8     {for(j=1;j<i;j++)
9      {if(i%2==0)
10         printf("Fail ");
11      else
12         printf("Pass ");
13     printf("\n");
14     }
15 }
```

Custom Input (stdin) T1 T2  
Type here

Output Match T1 Match T2  
Empty

Complexity Analysis

Test Case Status

Code Editor

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Course C Session Arrays & Loops Question Information Level 1 Challenge 22

Problem Description:  
After completing some serious investigation, Arif and Simon are now chilling themselves in the Ooty hills. Very soon Simon became bored. Simon lived entirely for his profession. We know he is a workaholic. So Simon wants to stop his vacation and get back to work. But after a tiresome session, Arif is in no mood to return soon. So to keep Simon engaged, he decided to give pull the idea of restarting the admissions of the academy they started last year for the new academic year-2021.

Now Simon and Arif have decided to start the new admissions to the academy. As a part of the first round, the applied students had to solve a small puzzle. The puzzle was very simple. Arif has arranged N dummy statues in some order of height H.

Now Simon have made up the question asking to the applicants that In how many ways they can choose the sequence of consecutive dummy statues, where the tallest and shortest statue in the selected sequence is the same.

If you would like to get admission into his academy, your first step is to solve the question. Give it a try :)

Problem Constraints:  
 $1 \leq n \leq 10$   
 $1 \leq n \leq 100000$   
 $1 \leq h_i \leq 10^9$

Input Format:  
First line of the input will contain  $n$  denoting the number of test-cases.  
For every test case, first line will contain  $n$ . Next line will contain  $n$  space separated integers denoting  $h_i$ .

The input need not be in sorted order

Output Format:  
Print the required answer in a separate line.

Logical Test Cases

Test Case 1 Test Case 2

Complexity Test Cases

Test Case 1 CYCLOMATIC COMPLEXITY 5  
Test Case 2 TOKEN COUNT 122  
Test Case 3 NLOC 28

Code Editor GCC v6.3.0 Light Theme

```
#include <stdio.h>
int main()
{
    int t,n,h,i,l=1,count;
    scanf("%d",&t);
    while(t--)
    {
        scanf("%d",&n);
        count=0;
        for(i=1;i<n;i++)
            scanf("%d",&h);
        if(h==l)
            count++;
        i=h;
        l--;
    }
    printf("%d\n",count);
    return 0;
}
```

Custom Input (stdin) T1 T2

Type Here

Output Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

Code Editor

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Course C Session Arrays & Loops Question Information Level 1 Challenge 23

Problem Description:

Mukesh and Solima was looking to buy Organic Apples in the nearest fruits shop.

But Shop Owner mixed the Hybrid apples in that Apple box.

After sometimes Mukesh checking the box, he was confused among organic and hybrid apple.

He started to count the hybrid apples.

Please help to Mukesh Count the total number of hybrid apples in the box.

Constraints:

1<= numofapples<=50

Functional Description:

If two apples are given the same number then one of them is hybrid.Likewise count the number of hybrid apples.

Input Format:

First line contains the positive integer n representing the number of apples.

Second line of the input contains the unique integer representing the apple.

Output Format:

Print the number of hybrid apples in the box.

Logical Test Cases

Test Case 1 INPUT [STDIN] Test Case 2 INPUT [STDIN]

Test Case 1 CYCLOMATIC COMPLEXITY 5

Test Case 2 TOKEN COUNT 128

Test Case 3 NLOC 25

Code Editor GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 { int numofapples,x,i,c=0;
4   scanf("%d",&numofapples);
5   int arr[100]={0};
6   for(i=0;i<numofapples;++i)
7   {scanf("%d",&x);
8    arr[x]++;
9    print("%d",c)
10
11
12 } return 0;
13 }
```

Custom Input [stdin] T1 T2

Type Here

Output Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

26°C Mostly cloudy

Search

ENG IN 08:22 04-05-2023

The screenshot shows a web browser window with the URL <https://care.srmtrichy.edu.in/srmtrichyleab/#/srmtrichyleab/student/home>. The page displays a programming challenge titled "Challenge 24".

**Problem Description:**  
Araf has N lights, arranged in a line, with him.  
A[i] denotes the initial state of  $i^{\text{th}}$  light.  
He wants to toggle some lights, but he can only toggle the lights in ranges.  
Toggling a light means changing the state of the light. That is, if the light was ON then after toggling it becomes OFF.  
He does this "range toggling" Q times.  
In the  $i^{\text{th}}$  range toggling, he toggles the lights all the lights between L $_i$  and R $_i$  lights ( $L_i$  and  $R_i$  inclusive).  
You need to find the final states of all the N lights after these Q toggles.

**A[i] = 1** means the light is ON and **A[i] = 0** means the light is OFF.

**Problem**

**Constraints:**  
1 <= N <= 10<sup>5</sup>  
1 <= Q <= 10<sup>5</sup>  
1 <= L $_i$  <= R $_i$  <= N  
0 <= A[i] <= 1

**Input Format:**  
First line contains N and Q.  
The next line contains N integers showing the initial state of the bulbs.  
The next Q line contains the queries where  $i^{\text{th}}$  line contains L $_i$  and R $_i$ .

**Output Format:**  
In a single line, output N integers showing the final state of the bulbs.

**Complexity Test Cases**

| Test Case 1           | Test Case 2 | Test Case 3 |
|-----------------------|-------------|-------------|
| CYCLOMATIC COMPLEXITY | TOKEN COUNT | NLOC        |
| 5                     | 178         | 23          |

**Code Editor**

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

**Custom Input (stdin)**

Type Here

**Output**

Match T1 Match T2

Empty

**Complexity Analysis**

**Test Case Status**

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Course C Session Arrays & Loops Question Information Level 1 Challenge 25

**Problem Description:**  
The hero of this story is Johan.

Inspired by the legendary competitive coder Hardik, Johan has also started preparing to race to the top of the ranks.

Johan is going to practice N different problems in the exact given order over the next M days. For each problem, he writes down the amount of time 'qi' he will take to think and code the "ith" problem [He is quite good at estimating].

Before starting on the problems, he took advice from experienced competitive programmers on his practice routine and almost all of them advised him to keep his daily load at the minimum possible and avoid overtraining.

Since Johan already has N problems to solve, he asks you to find the minimum time T such that training every day for a time  $\sum_{i=1}^N q_i$  is sufficient to solve all the N problems in M days.

**Note :**  
Unlike in the real world, you cannot think about a problem one day and solve it on the other day. You need to do it on the very same day!

**Constraints:**  
 $1 \leq N \leq 10^5$   
 $1 \leq M \leq N$   
 $1 \leq q_i \leq 10^4$

**Input Format:**  
The first line contains two space-separated integers N and M.

The next line contains N space-separated integers denoting the time  $q_i$  required to solve the "ith" problem.

**Output Format:**  
The output consists of one integer, the minimum time T as described in the problem statement.

Logical Test Cases

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Complexity Test Cases

Test Case 1 CYCLOMATIC COMPLEXITY 11  
Test Case 2 TOKEN COUNT 278  
Test Case 3 NLOC 52

Code Editor GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

Custom Input [stdin] T1 T2  
Type Here

Output Match T1 Match T2  
Empty

Complexity Analysis

Test Case Status

Code Editor

26°C Afternoon rain ENG IN 08:24 04-05-2023

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Course    C    Session    Arrays & Loops    Question Information    Level 1 • Challenge 26

https://care.srmtrichy.edu.in/srmtrichyelab/#/srmtrichyelab/student/home

Problem Description:

This is the competition between Memory and Crow.

Memory initially has  $n$  integers  $b_1, b_2, \dots, b_n$  written in a row.

For all  $i$  from 1 to  $n$ , values  $a_i$  are defined by the crows performing the following procedure:

The crow sets  $a_i$  initially 0.

The crow then adds  $b_i$  to  $a_i$ , subtracts  $b_{i+1}$ , adds the  $b_{i+2}$  number, and so on until the  $n$ 'th number.

Thus,  $a_i = b_i + b_{i+1} + b_{i+2} + \dots + b_n$

Memory gives you the values  $a_1, a_2, \dots, a_n$ , and he now wants you to find the initial numbers  $b_1, b_2, \dots, b_n$  written in the row.

Can you do it?

Constraints:  
 $1 < n < 10$

Input Format:

The first line of the input contains a single integer  $n$  ( $2 \leq n \leq 100,000$ ) — the number of integers written in the row.

The next line contains  $n$ , the  $i$ 'th of which is  $a_i$  ( $-10^9 \leq a_i \leq 10^9$ ) — the value of the  $i$ 'th number.

Output Format:

Print  $n$  integers corresponding to the sequence  $b_1, b_2, \dots, b_n$ .

It's guaranteed that the answer is unique and fits in 32-bit integer type.

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Test Case 1    CYCLOMATIC COMPLEXITY: 3

Test Case 2    TOKEN COUNT: 121

Test Case 3    NLOC: 19

Code Editor    GCC v6.3.0    Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

Custom Input (stdin)    T1 - T2

Type Here

Output    Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

Code Editor

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08:25 04-05-2023

Screenshot of a challenge interface on a web browser.

**CHALLENGE INFORMATION**

Course: C Session: Arrays & Loops Question Information: Level 1 Challenge 27

**Problem Description:**  
You like tracking airplane flights a lot. Specifically, you maintain history of an airplane's flight at several instants and record them in your notebook. Today, you have recorded N such records h<sub>1</sub>, h<sub>2</sub>, ..., h<sub>N</sub>, denoting the heights of some airplane at several instants. These records mean that airplane was first flying on height h<sub>1</sub>, then started changing its height to h<sub>2</sub>, then from h<sub>2</sub> to h<sub>3</sub> and so on.  
The airplanes are usually on cruise control while descending or ascending, so you can assume that plane will smoothly increase/decrease its height from h<sub>i</sub> to h<sub>i+1</sub> with a constant speed. You can see that during this period, the airplane will cover all possible heights in the range [min(h<sub>i</sub>, h<sub>i+1</sub>), max(h<sub>i</sub>, h<sub>i+1</sub>)]. It is easy to see that the plane will be at all possible heights in the range exactly a single instant of time during this ascend/descent.

You are interested in finding the maximum integer K such that the plane was at some height exactly K times during the flight.

**Problem:**  
**Constraints:**  
h<sub>i</sub> ≠ h<sub>i+1</sub>  
1 ≤ N ≤ 1000  
1 ≤ h<sub>i</sub> ≤ 1000

**Input Format:**  
First line of the input contains an integer N denoting the number of records of heights of the plane.  
Second line contains N space separated integers denoting h<sub>1</sub>, h<sub>2</sub>, ..., h<sub>N</sub>.

**Output Format:**  
Print the single maximum integer K in one line as output, such that the plane was at some height exactly K times during the flight.

**Logical Test Cases**

Test Case 1 Test Case 2

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Test Cases

Mandatory Test Cases

| Test Case 1    | Test Case 2         |
|----------------|---------------------|
| KEYWORD<br>for | KEYWORD<br>h[10000] |

Complexity Test Cases

| Test Case 1                 | Test Case 2        | Test Case 3 |
|-----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>12 | TOKEN COUNT<br>293 | NLOC<br>48  |

Code Editor (GCC v6.3.0, Light Theme)  
Custom Input (stdin) T1 T2  
Type Here  
Output Match T1 Match T2  
Empty  
Complexity Analysis

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### CHALLENGE INFORMATION

Course: C Session: Arrays & Loops Question Information: Level 1 Challenge 28

**Problem Description:**  
Joslyn likes problems involving arrays.  
Unfortunately, the last one he tried to solve didn't quite get solved.

Joslyn has an array A of N positive numbers.  
He wants to find the number of subarrays for which the sum and product of elements are equal.  
Please help Joslyn find this number.

**Constraints:**  
**Problem**  
 $1 \leq T \leq 50$   
 $1 \leq n \leq 50$   
 $1 \leq A_i \leq 10^9$   
 $A_1 * A_2 * \dots * A_n \leq 10^{18}$

**Input Format:**  
The first line of input contains an integer T denoting the number of test cases. T test cases follow.  
The first line of each test contains the integer N.  
The next line contains N integers — A1, A2, ..., AN — denoting the array.

**Output Format:**  
Print the output a single line with the answer for the instance.

**Logical Test Cases**

| Test Case 1             | Test Case 2    | Test Case 3      |
|-------------------------|----------------|------------------|
| KEYWORD<br>matprob[100] | KEYWORD<br>for | KEYWORD<br>while |

**Complexity Test Cases**

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>7 | TOKEN COUNT<br>192 | NLOC<br>36  |

**Code Editor**  
GCC v6.3.0 Light Theme  
Code Editor  
1 #include <stdio.h>  
2 int main()  
3 {  
4 return 0;  
5 }

**Custom Input (stdin)**  
T1 T2  
Type Here

**Output**  
Match T1 Match T2  
Empty

**Complexity Analysis**

**Test Case Status**

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**Problem Description:**  
The software tool is a repository of files, often the files for the source code of computer programs, with monitored access. Every change made to the source is tracked, along with who made the change, why they made it, and references to problems fixed, or enhancements introduced, by the change.

**Constraints:**  
 $1 \leq T \leq 100$   
 $1 \leq M, K \leq N \leq 100$   
 $1 \leq A_1 < A_2 < \dots < A_M \leq N$   
 $1 \leq B_1 < B_2 < \dots < B_K \leq N$

**Input:**  
The first line of the input contains an integer  $T$  denoting the number of test cases. The description of  $T$  test cases follows.

The first line of the test case description contains three integers  $N$ ,  $M$  and  $K$  denoting the number of source files in the project, the number of ignored source files and the number of tracked source files.

The second line contains  $M$  distinct integers denoting the sequence  $A$  of ignored source files. The sequence is strictly increasing.

The third line contains  $K$  distinct integers denoting the sequence  $B$  of tracked source files. The sequence is strictly increasing.

**Keywords:**  
int a[m],b[k]  
while  
for

**Complexity Test Cases:**

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>9 | TOKEN COUNT<br>245 | NLOC<br>31  |

**Code Editor:**  
GCC v6.3.0 | Light Theme  
Code Editor  
1. #include <stdio.h>  
2. int main()  
3. {  
4. return 0;  
5. }

**Custom Input (stdin):**  
T1 T2  
Type Here  
Output  
Match T1 Match T2  
Empty  
Complexity Analysis  
Test Case Status

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### CHALLENGE INFORMATION

Course: C Session: Arrays & Loops Question Information: Level 1 Challenge 30

**Problem Description:**  
Once N Men and M Women attended a matrimonial event.  
The event is represented by a matrix named "a" of N rows and M columns where  $a_{ij}$  is 1 if the  $i$ th Men likes the  $j$ th Women.  
Otherwise it will be 0.

Note that it is not necessary that if a Men  $x$  likes Women  $y$ , then Women  $y$  should like Men  $x$ .

If there are two different Men  $x$  and  $y$ , who both like Women  $z$ , then there will be a collision.

Can you calculate the number of different collisions in the matrimonial event?

Note that order of Men in the collision doesn't matter.

**Problem Constraints:**  
 $1 \leq T \leq 100$   
 $1 \leq N, M \leq 10$

**Input Format:**  
The first line contains a single integer  $T$  denoting the number of test cases. Then  $T$  test cases follow.

The first line of each test case contains two space separated integers  $N, M$  denoting the number of Men and Women, respectively.

Each of the following  $N$  lines contain  $M$  characters, each of them is either '0' or '1'.

**Output Format:**  
Print the output a single line containing an integer corresponding to the number of in the matrimonial event.

**Logical Test Cases**

Test Case 1: KEYWORD int t,men,women,collisions=0; Test Case 2: KEYWORD char a[men][women];

**Complexity Test Cases**

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>6 | TOKEN COUNT<br>166 | NLOC<br>24  |

**Code Editor** GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

**Custom Input (stdin)** T1 T2

Type here

**Output** Match T1 Match T2

Empty

**Complexity Analysis**

**Test Case Status**

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Raju the fan of Great Mathematician Ramanujan developed an encoder that encodes the first 16 lowercase English letters using 4 bits each.

The first bit (from the left) of the code is 0 if the letter lies among the first 8 letters, else it is 1, signifying that it lies among the last 8 letters.

The second bit of the code is 0 if the letter lies among the first 4 letters of those 8 letters found in the previous step, else it's 1, signifying that it lies among the last 4 letters of those 8 letters.

Similarly, the third and the fourth bit each signify the half in which the letter lies.

Constraints:

$1 \leq T \leq 10$

$4 \leq N \leq 10^5$

The length of the encoded string is a multiple of 4.

$0 \leq S \leq 1$

Functional Description:

Now your task is given a binary encoded string  $S$ , of length at most  $10^5$ , decode the string.

That is, the first 4 bits are the encoding of the first letter of the secret message, the next 4 bits encode the second letter, and so on. It is guaranteed that the string's length is a multiple of 4.

Problem

Input Format:

The first line of the input contains an integer  $T$ , denoting the number of test cases.

The first line of each test case contains an integer  $N$ , the length of the encoded string.

The second line of each test case contains the encoded string  $S$ .

Output Format:

For each test case, print the decoded string, in a separate line.

Explanation:

For example, the letter  $j$  would be encoded as :

Among {a,b,c,d,e,f,g,h | i,j,k,l,m,n,o,p},  $j$  appears in the second half. So the first bit of its encoding is 1.

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Mandatory Test Cases

| Test Case 1   | Test Case 2    | Test Case 3   |
|---------------|----------------|---------------|
| KEYWORD<br>ks | KEYWORD<br>for | KEYWORD<br>if |

Complexity Test Cases

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>5 | TOKEN COUNT<br>210 | LOC<br>38   |

Code Editor

```
#include <stdio.h>
int main()
{
    return 0;
}
```

Custom Input (stdin)

Type Here

Output

Match T1 Match T2

Empty

Complexity Analysis

26°C Mostly cloudy Search ENG IN 08:35 04-05-2023

Screenshot of a challenge information page and a code editor interface.

**Challenge Information:**

- Course:** C
- Session:** Strings
- Question Information:** Level 1 | Challenge 32

**Problem Description:**  
Elavenil likes strings a lot but she likes palindromic strings even more. Today she found an old string 's' in his garage. The string is so old that some of its characters have faded and are unreadable now.  
Faded characters in the string are represented by '-' whereas other characters are lower case Latin alphabets i.e ['a'-'z'].  
Elavenil being the palindrome lover decided to construct the lexicographically smallest palindrome by filling each of the faded character '-' with a lower case Latin alphabet. Can you please help her complete the task?

**Constraints:**  
 $1 \leq T \leq 50$   
 $1 \leq |s| \leq 500$   
String  $s$  consists of ['a'-'z'] and '-' only.

**Input Format:**  
First line of input contains a single integer 'T' denoting the number of test cases. 'T' test cases follow.

First and the only line of each case contains string 's' denoting the old string that Roopa has found in his garage.

**Output Format:**  
Print lexicographically smallest palindrome after filling each faded character if it is possible to construct one.  
Print -1 otherwise.

**Logical Test Cases:**

**Test Case 4:**  
KEYWORD:  
ss

**Complexity Test Cases:**

| Test Case 1                 | Test Case 2        | Test Case 3 |
|-----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>12 | TOKEN COUNT<br>268 | NLOC<br>39  |

**Code Editor:**  
GCC v6.3.0 | Light Theme  
Code Editor (C)  
1 #include <stdio.h>  
2 int main()  
3 {  
4 return 0;  
5 }

**Custom Input (stdin):**  
Type Here  
T1 T2  
Output  
Match T1 Match T2  
Empty

**Complexity Analysis:**

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Course   C   Session   Strings   Question Information   Level 1 • Challenge 33

Problem Description:

Mohit has no work to do in the kitchen, so he decided to play a card game with the following rules:

Initially, N cards are placed in a row on a table. Each card is placed either face up or face down.

The goal of the game is to remove all cards from the table, one by one.

A card may be removed only if it is currently facing up.

When a card is removed, its adjacent cards (the cards directly to its left and right, if they exist) are flipped, i.e. a card that was facing up will be facing down and vice versa.

There is an empty space left behind each removed card, i.e. the remaining cards are not moved to create a contiguous row of cards again.

Therefore, if the game starts with three cards and the middle card is removed, then the cards on the sides are flipped, but removing one of these cards afterwards does not cause the other card to be flipped, since it is only adjacent to the empty space created by removing the middle card.

Problem:

Determine whether Mohit is able to win this game.

Constraints:

$1 \leq T \leq 10^4$

$1 \leq |S| \leq 10^5$

Input Format:

The first line of the input contains a single integer T denoting the number of test cases. The description of T test cases follows.

The first line of each test case contains a single string S describing the row of cards initially placed on the table. Each character of this string is either '1', denoting a face up card, or '0', denoting a face down card.

Output Format:

For each test case, print a single line containing the string "WIN" if Chef can win the game or "LOSE" if he cannot win (without quotes).

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Test Case 4   Test Case 5

KEYWORD   KEYWORD

`if`   `else`

Complexity Test Cases

Test Case 1   Test Case 2   Test Case 3

CYCLOMATIC COMPLEXITY   TOKEN COUNT   NLOC

7   140   33

Code Editor   GCC v6.3.0   Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

Custom Input (stdin)   T1 T2

Type Here

Output   Match T1 Match T2

Empty

Complexity Analysis

Screenshot of a programming challenge interface on a web browser.

**Question Information:** Level 1 | Challenge 34

**Problem Description:**  
Every day, Selvan goes to his office by train and buys the ticket from the counter on the day of travel.  
On the ticket, there is a letter code that is represented as a string of upper-case Latin letters.  
Selvan believes that the day will be successful in case exactly two different letters in the code alternate.  
Otherwise, he believes that the day will be unlucky. Please see note section for formal definition of alternating code.  
If the ticket code is given. Please determine, whether the day will be successful for Selvan or not.  
Print "Successful Day" or "Unsuccessful Day" (without quotes) corresponding to the situation.

**Problem Constraints:**  
 $1 \leq T \leq 100$   
S consists only of upper-case Latin letters

**Input Format:**  
The first line of the input contains an integer "T" denoting the number of test cases. The description of "T" test cases follows.  
The first and only line of each test case contains a single string "S" denoting the letter code on the ticket.

**Output Format:**  
Print the output a single line containing "YES" (without quotes) in case the day will be successful and "NO" otherwise.

**Logical Test Cases:**

| Test Case 1                 | Test Case 2                       |
|-----------------------------|-----------------------------------|
| INPUT [STDIN]<br>3<br>A B C | INPUT [STDIN]<br>6<br>A B C D E F |

**Complexity Test Cases:**

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>6 | TOKEN COUNT<br>147 | NEOC<br>33  |

**Code Editor:**

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

**Custom Input (stdin):**

Type Here

**Output:**

Empty

**Complexity Analysis:**

**Test Case Status:**

Screenshot of a web-based programming challenge interface for challenge 3.5.

**Course:** C

**Session:** Strings

**Question Information:** level 1 • Challenge 3.5

**Problem Description:**

Not everyone probably knows that Nivin has younger brother Nithin. Currently Nithin learns to read.

He knows some subset of the letters of Latin alphabet. In order to help Nithin to study, Nivin gave him a book with the text consisting of  $N$  words. Nithin can read a word if it consists only of the letters he knows.

Now Nivin is curious about which words his brother will be able to read, and which are not. Please help him!

**Constraints:**

- $1 \leq |S| \leq 26$
- $1 \leq N \leq 1000$
- $1 \leq |W_i| \leq 12$

**Problem:**

Each letter will appear in  $S$  no more than once.  
 $S$ ,  $W_i$  consist only of lowercase Latin letters.

**Input Format:**

The first line of the input contains a lowercase Latin letter string  $S$ , consisting of the letters Nithin can read.

Every letter will appear in  $S$  no more than once.

The second line of the input contains an integer  $N$  denoting the number of words in the book.

Each of the following  $N$  lines contains a single lowercase Latin letter string  $W_i$ , denoting the  $i$ th word in the book.

**Output Format:**

For each of the words, output "Yes" (without quotes) in case Nithin can read it, and "No" (without quotes) otherwise.

**Logical Test Cases:**

**Test Case 1:** Input: else

**Test Case 2:** Input: Test Case 2

**Complexity Test Cases:**

| Test Case 1           | Test Case 2 | Test Case 3 |
|-----------------------|-------------|-------------|
| CYCLOMATIC COMPLEXITY | TOKEN COUNT | NLOC        |
| 6                     | 158         | 28          |

**Code Editor:**

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

**Custom Input (stdin):**

Type here

**Output:**

Empty

**Complexity Analysis:**

**Test Case Status:**

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ENG IN 08:39 04-05-2023

Code Editor

GCC v6.3.0 Light Theme

Custom Input (stdin)

T1 T2

Type here

Output

Match T1 Match T2

Empty

Complexity Analysis

Test Case Status

26°C Mostly cloudy

ENG IN 08:40 04-05-2023

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Course   C   Session   Strings   Question Information   level 1 • Challenge 36

Problem Description:  
Nathan won the man of the match award in the recently concluded local tournament final. So the friends of nathan have asked him to take them to cinemas as a treat for winning man of the match. But  
Nathan is short of money to take them to cinemas so to postpone the cinema plan he tried to engage them with the programming challenge.

The task was if the string S was given they have to change the string according to the following condition:

If the first letter in a string is capital letter then change the full string to capital letters.  
Else change the full string to small letters.

Constraints:  
Problem  
 $1 \leq T \leq 50$   
 $1 \leq |S| \leq 104$

Input Format:  
The first line of input contains an integer T denoting the number of test cases.  
Then T test cases follow. Each test case contains a string S.

Output Format:  
For each test case, print the changed string in a new line.

Logical Test Cases

| Test Case 1        | Test Case 2        |
|--------------------|--------------------|
| KEYWORD<br>toupper | KEYWORD<br>tolower |

Complexity Test Cases

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>7 | TOKEN COUNT<br>164 | NLOC<br>35  |

Code Editor    GCC v6.3.0    Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     return 0;
5 }
```

Custom Input (stdin)    T1 | T2

Type here

Output    Match T1 | Match T2

Empty

Complexity Analysis

Test Case Status

Code

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### CHALLENGE INFORMATION

Course: C Session: Strings Question Information: Level 1 • Challenge 37

**Problem Description:**  
Fazil's faculty gave him a string S consisting of only 1s and 0s and he need to find the number of substrings which start and end both in 1.  
In this problem, a substring is defined as a sequence of continuous characters  $S_i, S_{i+1}, \dots, S_j$  where  $1 \leq i \leq j \leq N$ .  
Can you help Fazil in completing the task?  
**Constraints:**  
 $1 \leq T \leq 10^5$   
 $1 \leq N \leq 10^5$

**Problem:** Sum of N over all testcases  $\leq 10^5$   
**Input Format:**  
First line contains T, the number of testcases.  
Each testcase consists of N[the length of string] in one line and string in second line.  
**Output Format:**  
For each testcase, print the required answer in one line.  
**Explanation:**  
Assume the String with 5 digits 10001 then it has 3 substrings such as S[1,1], S[5,5] and S[1,5] that satisfy the condition.

**Logical Test Cases**

| Test Case 1                     | Test Case 2   | Test Case 3    |
|---------------------------------|---------------|----------------|
| KEYWORD<br>scanf("%c",&string); | KEYWORD<br>if | KEYWORD<br>for |

**Complexity Test Cases**

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>5 | TOKEN COUNT<br>120 | NELOC<br>25 |

**Code Editor** GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4     return 0;
5 }
```

**Custom Input (stdin)** T1 T2

Type Here

**Output** Match T1 Match T2

Empty

**Complexity Analysis**

**Test Case Status**

26°C Mostly cloudy

08:41 04-05-2023

Screenshot of a challenge information page and an IDE interface.

**Challenge Information:**

- Course:** C
- Session:** Strings
- Question Information:** Level 1 • Challenge 38

**Problem Description:**

Jani and Ram are close friends who talk a lot about life.  
They go through a lot of inspiring "Quotes of Life".  
One fine day they had a small game. According to the game Ram will Read one of the Quote about life from the book and Jani have to think a word about life in her mind without disclosing it to Ram.  
Finally once Ram completed reading the quoted Jani will say if the word she thought in her mind is there in the Quote read by Ram.  
Can you convert the same scenario to a programming logic?  
If the word thought by Jani was present in the Quote then you have to print "Exists" else print "Doesn't Exist".

**Problem Constraints:**

$1 \leq T \leq 30$   
 $1 \leq |x| \leq 100$

**Input Format:**

The first line of input contains an integer  $T$  denoting the number of test cases.  
Each test case consists of a string in "lowercase" only in a separate line.

**Output Format:**

Print "Exists" or "Doesn't Exist" in a separate line.

**Logical Test Cases:**

| Test Case 4     | Test Case 5    |               |
|-----------------|----------------|---------------|
| KEYWORD<br>else | KEYWORD<br>for | KEYWORD<br>if |

**Complexity Test Cases:**

| Test Case 1                | Test Case 2        | Test Case 3 |
|----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>8 | TOKEN COUNT<br>184 | NLOC<br>43  |

**Code Editor:**

```
1 #include <stdio.h>
2 int main()
3 {
4     return 0;
5 }
```

**Custom Input (stdin):**

Type Here

**Output:**

Match T1 Match T2

Empty

The screenshot shows a programming challenge interface on a web browser. The top navigation bar includes tabs for 'Course', 'Session' (selected), 'Strings', 'Question Information' (Level 1, Challenge 39), and a 'Feedback' button.

**Problem Description:**

Afghanistan has surrounded by attackers. A truck enters the city.  
The driver claims the load is food and medicine from Pakistanis.  
Yasir is one of the soldier in Afghanistan.  
He doubts about the truck, maybe it's from the siege.  
He knows that a tag is valid if the sum of every two consecutive digits of it is even and its letter is not a vowel.  
If the tag is invalid then Yasir need to arrest the driver of the truck with invalid tag. If it is valid the truck is allowed inside the country.

**Problem:**

Can you help Yasir in determine if he need to arrest or allow the truck?

**Input Format:**

The first line contains a string of length 9.

The format is "DXDDDD-DD", where D stands for a digit (non zero) and X is an uppercase English letter.

**Output Format:**

Print "Allowed" if the tag is valid, print "Arrest" otherwise.

**Logical Test Cases:**

| Test Case 1                | Test Case 2                |
|----------------------------|----------------------------|
| INPUT (STDIN)<br>12E345-67 | INPUT (STDIN)<br>11B2A2-73 |

**Complexity Test Cases:**

| Test Case 1                 | Test Case 2        | Test Case 3 |
|-----------------------------|--------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>10 | TOKEN COUNT<br>158 | NLOC<br>16  |

**Code Editor:**

```
#include <stdio.h>
int main()
{
    return 0;
}
```

**Custom Input (stdin):** Type Here

**Output:** Empty

**Complexity Analysis:**

**Test Case Status:**

Screenshot of a challenge interface on a Windows desktop. The browser window shows a challenge titled "Challenge Information" under the "C" tab. The challenge details a problem where Arif likes to play volleyball and needs help determining the winner based on point statistics. It specifies constraints ( $1 \leq T \leq 1000$ ) and a length constraint ( $1 \leq \text{length}(\text{matchscenario}) \leq 100$ ). The input format requires reading an integer  $T$  followed by  $T$  binary strings. The output format requires printing "WIN" if Arif wins or "LOSS" otherwise. Below this, there are sections for "Logical Test Cases" (Test Case 1, Test Case 2, Test Case 4) and "Complexity Test Cases" (Test Case 1, Test Case 2, Test Case 3). The complexity analysis section shows cyclomatic complexity (10), token count (165), and NLOC (35). A code editor window displays a simple C program that includes the `<stdio.h>` header and defines a main function that returns 0. To the right of the code editor is a "Custom Input (stdin)" field and an "Output" field showing "Empty". The system tray at the bottom indicates it's 08:45 on 04-05-2023.

CHALLENGE INFORMATION

Course: C Session: Strings Question Information: Level 1 Challenge 40

Problem Description:  
Arif likes to play volleyball. He found some statistics of matches which described who won the points in order.  
A game shall be won by the player first scoring 11 points except in the case when both players have 10 points each, then the game shall be won by the first player subsequently gaining a lead of 2 points.  
Could you please help the Arif find out who the winner was from the given statistics? (It is guaranteed that statistics represent always a valid, finished match.)

Constraints:  
 $1 \leq T \leq 1000$   
 $1 \leq \text{length}(\text{matchscenario}) \leq 100$

Input Format:  
The first line of the input contains an integer 'T', denoting the number of test cases. The description of 'T' test cases follows.

Each test case consist a binary string 'S', which describes a match.  
'0' means Arif lose a point, whereas '1' means he won the point.

Output Format:  
Print the output on a separate line a string describing who won the match.

If Arif won then print "WIN" (without quotes), otherwise print "LOSS" (without quotes).

Logical Test Cases

Test Case 1: INPUT (stdin)

Test Case 2: INPUT (stdin)

Test Case 4: KEYWORD: for

Complexity Test Cases

Test Case 1: CYCLOMATIC COMPLEXITY: 10

Test Case 2: TOKEN COUNT: 165

Test Case 3: NLOC: 35

Code Editor: GCC v6.3.0 Light Theme

```
1 #include <stdio.h>
2 int main()
3 {
4
5     return 0;
6 }
```

Custom Input (stdin): Type Here

Output: Match T1 Match T2

Empty

Complexity Analysis

26°C Mostly cloudy 08:45 04-05-2023

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### CHALLENGE INFORMATION

| Course                | PYTHON  | Session                    | Input & Output           | Question Information  | Level 1 Challenge 1 |
|-----------------------|---|----------------------------|--------------------------|---|---------------------|
| Problem               |   |                            |                          | Janaki wants to find the distance between the two points $(x_1, y_1)$ and $(x_2, y_2)$ . She know the formula for the distance is $\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$ . Can you help her to create a program for finding the distance? |                     |
| Input Format          |   |                            |                          | Distance between the two points $(x_1, y_1)$ and $(x_2, y_2)$ is $(x_2-x_1)^2+(y_2-y_1)^2$  |                     |
| Function Description  |   |                            |                          | First line represent the $x_1$ value<br>Second line represent the $y_1$ value<br>as like for getting the $x_2$ and $y_2$ values in the separate lines.  |                     |
| Output Format         |   |                            |                          | Refer Testcases   |                     |
| Problem               |   |                            |                          | Logical Test Cases  |                     |
|                       | Test Case 1   | Test Case 2                |                          |   |                     |
| Test Cases            | Test Case 1   | Test Case 2                | Test Case 3              |   |                     |
|                       | KEYWORD   | KEYWORD                    | KEYWORD                  |   |                     |
|                       | int   | input                      | print                    |   |                     |
| Complexity Test Cases | Test Case 1   | Test Case 2                | Test Case 3              |   |                     |
|                       | CYCLOMATIC COMPLEXITY   | TOKEN COUNT                | NLOC                     |   |                     |
|                       | 1   | 88                         | 10                       |   |                     |
| Code Editor           | PYTHON v3.5 Light Theme   | Custom Input [stdin] T1 T2 | Output Match T1 Match T2 | Complexity Analysis   |                     |
|                       | 1 import math<br>2 x1=float(input())<br>3 y1=float(input())<br>4 x2=float(input())<br>5 y2=float(input())<br>6 distance=((x2-x1)**2+(y2-y1)**2)<br>7 print("%f".format(x1, y1, x2, y2, distance)) | Type here                  | Empty                    |   |                     |
|                       |   |                            |                          |   |                     |

28°C Mostly cloudy 08:50 04-05-2023

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### CHALLENGE INFORMATION

| Course                | PYTHON  | Session                    | Input & Output           | Question Information  | Level 1 Challenge 1 |
|-----------------------|---|----------------------------|--------------------------|---|---------------------|
| Problem               |   |                            |                          | Janaki wants to find the distance between the two points $(x_1, y_1)$ and $(x_2, y_2)$ . She know the formula for the distance is $\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$ . Can you help her to create a program for finding the distance? |                     |
| Input Format          |   |                            |                          | Distance between the two points $(x_1, y_1)$ and $(x_2, y_2)$ is $(x_2-x_1)^2+(y_2-y_1)^2$  |                     |
| Function Description  |   |                            |                          | First line represent the $x_1$ value<br>Second line represent the $y_1$ value<br>as like for getting the $x_2$ and $y_2$ values in the separate lines.  |                     |
| Output Format         |   |                            |                          | Refer Testcases   |                     |
| Problem               |   |                            |                          | Logical Test Cases  |                     |
|                       | Test Case 1   | Test Case 2                | Test Case 3              |   |                     |
| Test Cases            | Test Case 1   | Test Case 2                | Test Case 3              |   |                     |
|                       | KEYWORD   | KEYWORD                    | KEYWORD                  |   |                     |
|                       | int   | input                      | print                    |   |                     |
| Complexity Test Cases | Test Case 1   | Test Case 2                | Test Case 3              |   |                     |
|                       | CYCLOMATIC COMPLEXITY   | TOKEN COUNT                | NLOC                     |   |                     |
|                       | 1   | 88                         | 10                       |   |                     |
| Code Editor           | PYTHON v3.5 Light Theme   | Custom Input [stdin] T1 T2 | Output Match T1 Match T2 | Complexity Analysis   |                     |
|                       | 1 import math<br>2 x1=float(input())<br>3 y1=float(input())<br>4 x2=float(input())<br>5 y2=float(input())<br>6 distance=((x2-x1)**2+(y2-y1)**2)<br>7 print("%f".format(x1, y1, x2, y2, distance)) | Type here                  | Empty                    |   |                     |
|                       |   |                            |                          |   |                     |

28°C Mostly cloudy 08:52 04-05-2023

The screenshot shows the SRM TRY - ELAB challenge interface. At the top, there are tabs for 'SRM -TRY - ELAB', 'Create | Microsoft 365', and 'Document 9.docx - Microsoft Word'. The main window displays 'Challenge Information' for a challenge titled 'Challenge 2'. The challenge details include:

- Course:** PYTHON
- Session:** Session 1
- Input & Output:** Question Information
- Question Information:** Level 1, Challenge 2

**Problem:**

- Question Description:** Vignesh wants to display your details like name, Degree and Branch in the different lines. Can you help him to program for displaying academic details.
- Function Description:** Use `format()` function
- Output Format:** Refer Testcases.

**Test Cases:**

- Logical Test Cases:**
  - Test Case 1:** INPUT [STDIN]: Arul B.Tech CSE EXPECTED OUTPUT: Manikandan B.Sc Mathematics
  - Test Case 2:** INPUT [STDIN]: Manikandan B.Sc Mathematics EXPECTED OUTPUT: Arul B.Tech CSE
- Complexity Test Cases:**
  - Test Case 1:** CYCLOMATIC COMPLEXITY: 1
  - Test Case 2:** TOKEN COUNT: 35
  - Test Case 3:** NLOC: 5

**Code Editor:** PYTHON V3.5, Light Theme

```
1 print("Hello world")
```

**Custom Input (stdin):** Type Here

**Output:** Match T1 Match T2

**Complexity Analysis:**

**Test Case Status:**

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### CHALLENGE INFORMATION

Course PYTHON Session Input & Output Question Information Level 1 Challenge 3

**Question description**

The Electricity Officer has mentioned the total counts of unit and amount. The officer inform the customer the bill amount in a unique format. The format given by electricity officer as follow: But customers are finding the difficult to find the exact amount that needs to be paid. Can you help the customers?

**Functional Description:**  
Total Bill Amount = unitconsumed ^ costperunit

**Constraints:**  
 $1 \leq \text{unitconsumed} \leq 5002$   $\leq \text{cost per unit} \leq 10$

**Problem**

**Input Format:**  
The first line of input represents the integer value of unit consumed.  
The second line of input represents the integer value of cost per unit.

**Output Format:**  
Print the total Bill amount in single line.

**Logical Test Cases**

| Test Case 1              | Test Case 2              |
|--------------------------|--------------------------|
| INPUT [STDIN]<br>23<br>3 | INPUT [STDIN]<br>19<br>5 |

28°C Mostly cloudy    Search    04-05-2023 08:53

SRM -TRY - ELAB Create | Microsoft 365 Document 9.docx - Microsoft Word

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### CHALLENGE INFORMATION

Course PYTHON Session Input & Output Question Information Level 1 Challenge 4

**Question Description**

Compute the area of a triangle when the lengths of all three sides are known. Let  $s_1$ ,  $s_2$  and  $s_3$  be the lengths of the sides. Let  $s = (s_1 + s_2 + s_3)/2$ . Then the area of the triangle can be calculated using the following formula:  $\text{area} = \sqrt{s(s - s_1)(s - s_2)(s - s_3)}$  Develop a program that reads the lengths of the sides of a triangle from the user and displays its area.

**Function Description**

```
area =sqrt[s * (s - s1) * (s - s2) * (s - s3)]
```

**Constraints**

$s_1, s_2, s_3 > 0$

**Input Format**

Refer the Testcases

**Output Format**

Print the following:

The area of triangle is required answer. Refer the Testcases.

**Logical Test Cases**

Test Case 1 Test Case 2

| Test Cases | Test Case 1 | Test Case 2 | Test Case 3 | Test Case 4 |
|------------|-------------|-------------|-------------|-------------|
| KEYWORD    | float       | input       | print       |             |
|            |             |             |             | 51+52+53    |

**Complexity Test Cases**

Test Case 1 Test Case 2 Test Case 3

| CYLOMATIC COMPLEXITY | TOKEN COUNT | NEOC |
|----------------------|-------------|------|
| 1                    | 75          | 10   |

**Code Editor** PYTHON v3.5 Light Theme

```
1 print("hello world")
```

**Custom Input (stdin)** T1 T2

Type Here

**Output** Match T1 Match T2

28°C Mostly cloudy 08:57 04-05-2023

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### CHALLENGE INFORMATION

Course: PYTHON    Session:    Input & Output:    Question Information:    Level 1 • Challenge 5

**Question description:**  
Vetri wants to convert the units of time into seconds. He gets the days, hours, minutes, seconds from the user. Can you help him to convert the units in to seconds.

**Input Format:**  
Number of days, hours, minutes and seconds will be given which separated by enter key.

**Output Format:**  
Refer the Testcases

**Logical Test Cases:**

| Test Case 1                       | Test Case 2                       |
|-----------------------------------|-----------------------------------|
| INPUT [STDIN]<br>2<br>1<br>2<br>3 | INPUT [STDIN]<br>3<br>2<br>1<br>1 |
| EXPECTED OUTPUT                   | EXPECTED OUTPUT                   |

**Complexity Test Cases:**

| Test Case 1               | Test Case 2       | Test Case 3 |
|---------------------------|-------------------|-------------|
| CYLOMATIC COMPLEXITY<br>1 | TOKEN COUNT<br>75 | NLOC<br>10  |

**Code Editor:**

```
1 print("Hello world")
```

PYTHON v3.5    Light Theme

**Custom Input (stdin):**

Type name: \_\_\_\_\_

**Output:**

Match T1 Match T2  
Empty

**Complexity Analysis:**

**Test Case Status:**

28°C Mostly cloudy    Search    Document 9.docx - Microsoft Word    08:58 04-05-2023

ENG IN



#### Course

PYTHON

#### Session

Input & Output

#### Question Information

level 1 Challenge 6

##### Question description

Selvan was playing with the object of random size for stress relief.  
Selvan knows that the Length, Width, and Height of the object.  
But he would like to know the surface area of the object he is playing with.

Can you help him in finding it?

##### Functional Description

Surface area of the Object =  $2 \times [\text{width} \times \text{length} + \text{length} \times \text{height} + \text{height} \times \text{width}]$

#### Problem

##### Constraints:

$1 \leq \text{length} \leq 10$

$1 \leq \text{width} \leq 10$

$1 \leq \text{height} \leq 10$

##### Input Format

First Line : Length of the object in Integer type.

Second Line : Width of the object in Integer type.

Third Line : Height of the object in Integer type.

##### Output Format:

Print a single integer value representing the surface area of the object selvan is playing with.



#### Test Cases

##### Test Case 1

###### KEYWORD

int

##### Test Case 2

###### KEYWORD

input

##### Test Case 3

###### KEYWORD

print

##### Complexity Test Cases

##### Test Case 1

###### CYCLOMATIC COMPLEXITY

1

##### Test Case 2

###### TOKEN COUNT

58

##### Test Case 3

###### NLOC

5



#### Code Editor

```
1 print("hello world")
```

PYTHON v3.5 Light Theme

#### Custom Input [stdin]

T1 T2

Type Here

#### Output

Match T1 Match T2



Empty

#### Complexity Analysis

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CHALLENGE INFORMATION

Course: PYTHON    Session:    Question Information: Level 1 Challenge 7

Question Description: Tharvi's Maths teacher taught that a sphere is a three-dimensional solid with no face, no edge, no base and no vertex. It is a round body with all points on its surface equidistant from the center. The volume of a sphere is measured in cubic units. Can you help her to find the volume of the sphere for the given radius?

Function Description: The volume of the sphere is:  $V=43\pi r^3$

Problem: Constraints: Take  $\pi=3.142$

Output Format: Required volume. Refer testcases.

Logical Test Cases:

| Test Case 1        | Test Case 2        |
|--------------------|--------------------|
| INPUT (STDIN)<br>2 | INPUT (STDIN)<br>3 |

Complexity Test Cases:

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>1 | TOKEN COUNT<br>38 | NELOC<br>5  |

Code Editor: PYTHON v3.5    Light Theme

```
print("hello world")
```

Custom Input (stdin): T1 T2  
Type here

Output: Match T1 Match T2  
Empty

Complexity Analysis

Test Case Status

28°C Mostly cloudy    ENG IN 09:00 04-05-2023

The screenshot shows a web-based programming environment for a challenge titled "Challenge Information".

**Challenge Information:**

- Course:** PYTHON
- Session:** Session 1
- Input & Output:** Question Information
- Question Information:** Level 1, Challenge 8

**Problem:**

Afthika and Ritu got a nice job at a MNC company . She was confused with the salary credited in her account.  
To verify if the correct amount of HRA and DA was provided to them.  
Ritu and Afthika planned to develop a software that calculates the salary pay if the basic pay was provided.  
The Salary policy of Afthika and Ritu's Company is as follows: HRA is 80% of the basic pay and DA is 40% of basic pay.  
Can you help Ritu and Afthika in the software development?

**Constraints:**  
20000<basic<=75000

**Input Format:**  
Single Integer representing the basic pay of the employee.

**Output Format:**  
Print the Gross salary of employee by adding the certain amount of HRA and DA to the basic pay and correcting to 2 decimal places.

**Logical Test Cases:**

**Complexity Test Cases:**

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>1 | TOKEN COUNT<br>55 | NLOC<br>10  |

**Code Editor:**

```
1 print("Hello World")
```

**Custom Input (stdin):**

Type Here

**Output:**

Match T1 Match T2

Empty

**Complexity Analysis:**

**Test Case Status:**

SRM -TRY - ELAB Create | Microsoft 365 Document 9.docx - Microsoft Word

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CHALLENGE INFORMATION

Course: PYTHON Session: Input & Output Question Information: Level 1 Challenge 9

Question description:  
Laasya bought a new volleyball in the sports shop. It looks like a medium size.  
She somehow found the radius of the sphere.  
But she would like to know the volume of that ball.  
Can you help him in finding the Volume of the ball?

Function Description:  
 $\text{Volume} = [4.0/3.0] \times \pi \times r^3$   
where  $\pi = 3.14$

Problem Constraints:  
 $1.00 \leq r \leq 5.00$

Input Format:  
The only line of input has a single value of type float representing the radius of the ball.

Output Format:  
Print the volume of the ball in a single line.

Refer the Testcases

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Mandatory Test Cases

Test Cases

| Test Case 1      | Test Case 2      | Test Case 3      |
|------------------|------------------|------------------|
| KEYWORD<br>float | KEYWORD<br>input | KEYWORD<br>print |

Complexity Test Cases

| Test Case 1                | Test Case 2       | Test Case 3 |
|----------------------------|-------------------|-------------|
| CYCLOMATIC COMPLEXITY<br>1 | TOKEN COUNT<br>45 | NLOC<br>3   |

Code Editor: PYTHON v3.5 Light Theme

```
1 print("Hello World")
```

Custom Input (stdin): T1 T2  
Type Here

Output: Match T1 - Match T2  
Empty

The image shows a screenshot of a web-based programming environment. At the top, there's a header bar with tabs for 'SRM -TRY - ELAB', 'Create | Microsoft 365', and 'Document 9.docx - Microsoft Word'. Below the header, the URL is https://care.srmtrichy.edu.in/srmtrichyelab/#/srmtrichyelab/student/home. The user information includes role: student, name: abinaya.t, ID: 963043074845, dept: school of electronics and communication engineering, and the date: May 4th 2023, 8:52:08 am. There are 'Logout' and 'Update' buttons.

The main content area is titled 'CHALLENGE INFORMATION'. It has tabs for 'Course' (set to PYTHON), 'Session', 'Input & Output', and 'Question Information'. The 'Question Information' tab is active, showing 'Level 1' and 'Challenge 10'. The challenge description is about Binita's train journey from Chennai to Delhi. Constraints are given as  $100 \leq \text{tot\_mins} \leq 550$ . Input and output formats are specified, and the problem statement asks for the total number of hours and minutes. Test cases are provided under 'Logical Test Cases' and 'Complexity Test Cases'. The 'Code Editor' section shows a Python code snippet: 

```
1 print("hello world")
```

. The interface includes a 'Custom Input (stdin)' field where users can type input, and an 'Output' field showing the result of the code execution.