1. Your Favorite Programming Language?

Problem Description

Write a program that asks the user to input their favorite programming language and output a specific string based on their answer. Based on the user inputs these are the outputs to be shown to the user.

Programming Language	Output
Python or Java	Nice choice!
Golang	You're a cool person I see...
JavaScript	Okay so you are our web developer!
C++	Too old school...
Anything else	I don't know that language.

Note: The input will be case sensitive and exact as mentioned in the above list

Input Format

There is only 1 single line in the input, which is the string containing favorite programming language of the user.

Output Format

Output the relevant string from the table shown above.

Example Input

Input 1:-

```
C++
```

Input 2:-

```
Java
```

Example Output

Output 1:-

```
Too old school...
```

Output 2:-

```
Nice choice!
```

2. Leap year? – III

Problem Description

Given an integer **A** representing a year, Return **1** if it is a leap year else, return **0**.

A year is a leap year if the following conditions are satisfied:

- The year is multiple of 400.
- or the year is multiple of 4 and not multiple of 100.

Problem Constraints

$1 <= A <= 10^9$

Input Format

First and only argument is an integer A

Output Format

Return **1** if it is a leap year else return **0**

Example Input

Input 1

```
 A = 2020
```

Input 2:

```
 A = 1999
```

Example Output

Output 1

```
1
```

Output 2:

```
0
```

3. Nested If-Else

Given the nested if-else structure below, what will be the value of "a" after code execution completes

```
a = 6
b = -5
if a > 0:
    if b < 0:
        a = a - 2
    elif a > 5:
        a = a - 4
    else:
        a = a + 3
else:
    b = b + 2
```

A. 2
B. 0
C. 7
D. 4

4. Categorise the number - Nested if-else

Problem Description

Given the number **N,** Categorise the number according to following condition :
1. Odd-Positive
2. Odd-Negative
3. Even-Positive
4. Even-Negative

Note : Intention of problem is to teach you **Nested If-Else**, so try to solve this problem using nested if-else

Problem Constraints

-10000 <= **N** <= 10000 **except 0**

Input Format

Take Number in single line.

Output Format

Print the statement, according to number N in single line.

Example Input

Input 1 :
15

Input 2 :
-38

Example Output

Output 1 :
Odd-Positive

Output 2 :
Even-Negative

Example Explanation

Example Explanation 1 :
N is 15, which is Odd and Positive.

Example Explanation 2 :
N is -38, which is Even and Negative.

5. Fizz Buzz

Problem Description

Write a program that takes in a number **N** as input and does the following:

- if **N** is a multiple of 3, print **Fizz**
- if **N** is a multiple of 5, print **Buzz**
- if **N** is a multiple of both 3 and 5, print **FizzBuzz**

Problem Constraints:

```
1 <= N <= 1000
```

Input Format

There is only 1 single line in the input, which is the integer **N.**

Output Format

Print **Fizz / Buzz / FizzBuzz** depending on the value **N.**

Example Input

Input 1:-

```
9
```

Input 2:-

```
15
```

Example Output

Output 1:-

```
Fizz
```

Output 2:-

```
FizzBuzz
```

6. Which condition?

Which of the **if-elif-else** statements will get executed if the following code snippet is run?

```
if False:                                          #1
    print("Artificial Intelligence")
elif True:                                         #2
    print("Machine Learning")
elif True:                                         #3
    print("Data Science")
else:                                              #4
    print("Deep Learning")
```

Mark the correct option.

A. 1
B. 2
C. 2 & 3 both
D. 2, 3 & 4

7. Royal. ML. Python. DS.

What would be the output of the following code:

```
a = 1
b = 0
c = 1
if (a and b):
    print("Royal is awesome")
elif (a and c):
    print("ML is fun")
if (a and b and c):
    print("Python is amazing")
if (a or b or c):
    print("I love DS")
```

a.

```
Royal is awesome
ML is fun
Python is amazing
I love DS
```

b.

```
ML is fun
I love DS
```

c.

```
ML is fun
Python is amazing
I love DS
```

d.

```
No output
```

8. **Type of triangles**

Complete the code snippet in order to classify the triangle into equilateral, isosceles, and scalene on the basis of its sides a, b and c.

```
if (a==b __1__ a==c) and b==c:
  print("equilateral")
elif a==b __2__ b==c or c==a:
  print("isosceles")
else:
  print('scalene')
```

Which of the options can be placed at the first blank __1__ and the second blank __2__ to get the correct output?

A. 1 = and, 2 = or
B. 1 = or, 2 = and
C. 1 = and, 2 = and
D. 1 = or, 2 = or