Conditional Statements / geeksforgeeks recommended problems

In [1]:
```
if True:
    print('Hello')
```

```
Hello
```

In [23]:
```
if True:
print('hello') #indentation matters
```

```
  Cell In[23], line 2
    print('hello') #indentation matters
    ^
IndentationError: expected an indented block after 'if' statement on line 1
```

In [ ]:
```
if True:
    print('Hello')

print('How r u')
```

In [ ]:
```
if False:
    print('How r u')

print('bye for now')
```

In [ ]:
```
if True:
    print('data science')

print('bye for now')
```

In [ ]:
```
if True:
    print('data science')

else:
    print('bye for now')
```

In [ ]:
```
if False:
    print('data science')

else:
    print('bye for now')
```

In [ ]:
```
#write a python code to check if no is even or odd
num = 8
if num%2==0:
    print(num,'is even')

else:
    print(num,'is odd')
```

In [ ]:
```
#without else statemnt
num = 17
```

```
if num%2==0:
    print(num,'is even') #as we didnt give else statement and the num doesnt sat
```

In [3]:
```
num = 8
if num%2==0:
    print(num,'is even')

if num%2==1:
    print(num,'is odd')

if num%2==2:
    print(num,'is even')

#not recommended to use multiple if in corporate life
```

```
8 is even
```

In [4]:
```
num = 7
if num%2==0:print(num,'is even')
else:print(num,'is odd')
```

```
7 is odd
```

In [5]:
```
num = 17
if num%2==0:
    print(num,'is even')

if num%2!=0:
    print(num,'is odd')
```

```
17 is odd
```

In [6]:
```
#nested if
num = 10
if num%2==0:
    print(num,'is even')
    if num>6:
        print('greater no.')

else:
    print(num,'is odd')
```

```
10 is even
greater no.
```

In [7]:
```
#nested if
num = 6
if num%2==0:
    print(num,'is even')
    if num>6:
        print('greater no.')
    else:
        print('smaller no.')

else:
    print(num,'is odd')
```

```
6 is even
smaller no.
```

In [8]:
```
#it checks all the condition even if it already satisfied which takes more memor
x=4
```

```
if x == 1:
    print('one')

if x == 2:
    print('two')

if x == 3:
    print('three')

if x == 4:
    print('four')

if x == 5:
    print('five')
```

```
four
```

In [9]:
```
#---if elif else---
x= 10
if x == 1:
    print('one')

elif x == 2:
    print('two')

elif x == 3:
    print('three')

elif x == 4:
    print('four')

elif x == 5:
    print('five')

else:
    print('no not found')
```

```
no not found
```

In [14]:
```
num=int(input('enter a no'))
if num<0:
    print('num is negative')

elif num>0:
    print('num is positive')

else:
    print('num is zero')
```

```
num is positive
```

In [15]:
```
age = 20

if age>=18:
    print('Eligible to vote')
```

```
Eligible to vote
```

In [16]:
```
age = 19
```

```
if age>=18:print('Eligible to vote')
```

```
Eligible to vote
```

In [17]:
```
age = 10

if age<=12:
    print('Free to travel')

else:
    print('Pay for ticket')
```

```
Free to travel
```

In [18]:
```
marks=45
res = 'Pass' if marks>=40 else 'Fail'
print(f"Result:",{res})
```

```
Result: {'Pass'}
```

In [19]:
```
age = 10

if age <= 12:
    print('child')

elif age <=18:
    print('teenager')

elif age<=35:
    print('young adult')

else:
    print('Old')
```

```
child
```

In [20]:
```
#nested if
age = 36
is_member = True

if age >= 60:
    if is_member:
        print("30% senior discount!")
    else:
        print("20% senior discount.")
else:
    print("Not eligible for a senior discount.")
```

```
Not eligible for a senior discount.
```

In [21]:
```
# Assign a value based on a condition
age = 69
s = "Adult" if age >= 18 else "Minor" #ternanry conditions

print(s)
```

```
Adult
```

In [22]:
```
#match case stmt
num = 2

match num:
```

```
    case 1:
        print('One')
    case 2 | 3:
        print('Two or Three')
    case _:
        print("other no.")
```

```
Two or Three
```

geeksforgeeks - Recommended Problems (Practise on Own)

In [23]:
```
#check the status
def check_status(a, b, flag):
    if(flag == False and ((a>=0 and b<0) or (a<0 and b>=0))):
        return True
    elif(flag == True and a<0 or b<0):
        return True
    else:
        return False

print(check_status(5, -3, False))#(one non-negative, one negative, flag is False
print(check_status(-4, -6, True))#(both negative, flag is True)
print(check_status(3, 2, False))#(both non-negative)
print(check_status(-1, 0, True))
```

```
True
True
False
True
```

In [24]:
```
print(check_status(1,-1,False))
```

```
True
```

Check occurence of two text in sinlge string

In [25]:
```
def check_cathat(s):
    return s.count('hat') and s.count('cat')
print(check_cathat('cathathatcat'))
print(check_cathat('catinahat'))
```

```
2
1
```

In [26]:
```
print(check_cathat('catcat'))
print(check_cathat('hathat'))
```

```
0
0
```

else condition

In [27]:
```
a = int(input('Enter a no'))
if a > 100:
    print('Big')
else:
    print('Number')
```

```
Big
```

the fizzBuzz Program

In [28]:
```
b=int(input('Enter a no'))

if b%3==0 and b%5==0:
    print('fizzbuzz')

elif b%3==0:
    print('fizz')

elif b%5==0:
    print('buzz')

else:
    print(b)
```

```
fizzbuzz
```

me vs friend -- who wins?

In [29]:
```
def who_wins(n):
    if n % 2 == 1:
        print("You")
    else:
        print("Friend")

who_wins(69)
```

```
You
```

Mark Even or Odd with True or False

In [30]:
```
def checkEvenOdd(n):
    if n%2 == 0:
        return True
    else:
        return False

checkEvenOdd(5)
```

Out[30]:
```
False
```

Greatest of three

In [29]:
```
a=int(input('Enter a no'))
b=int(input('Enter a no'))
c=int(input('Enter a no'))

if a>b and a>c:
    print('a is greatest')

elif b>a and b>c:
    print('b is greatest')

else:
    print('c is greatest')
```

```
b is greatest
```

Leap Year

In [30]:
```
#✅ Leap Year Rules:
#A year is a leap year if:
#It is divisible by 4, and Not divisible by 100, or Divisible by 400
```

In [36]:
```
year = int(input('Enter a no'))

if (year%4==0) and ((year%100!=0) or (year%400==0)):
    print('True')

else:
    print('False')
```

```
True
```

Calculator

In [31]:
```
opr = int(input('1. Addition\n 2.Subtraction\n 3.Multiply\n'))
a=int(input('Enter a no'))
b=int(input('Enter a no'))

if opr==1:
    print(a+b)

elif opr==2:
    print(a-b)

elif opr==3:
    print(a*b)

else:
    print('Operator is not valid')
```

```
70
```

check if tuple has distinct elemts

In [37]:
```
arr=[1,2,3,4,5,1]

if arr ==set(arr):
    print('True')
else:
    print('False')
```

```
False
```

The reason for using or converting tuple into list is because set connot contain duplicate elements so if we convert the tuple to set we get to know if there are any similar elements

In [38]:
```
d = {0:'Sunday',1:'Monday',2:'Tuesday',3:'Wednesday',4:'Thursday',5:'Friday',6:'
d
```

Out[38]:
```
{0: 'Sunday',
 1: 'Monday',
 2: 'Tuesday',
 3: 'Wednesday',
 4: 'Thursday',
 5: 'Friday',
 6: 'Saturday'}
```

Solving Quering problem

In [41]:
```
dict1 = {1:"abc", 2: "cde", 3: "fgh"}
query = [2, 3, 4]
choose=int(input('Enter the key'))

if choose==2:
    print(dict1[1])
elif choose==3:
    print(dict1[2])
else:
    print('No value')
```

```
abc
```

factorial

In [ ]:
```
n=int(input())
if n == 0 or n == 1:
    return 1

return n*n-1
```

factorial

In [16]:
```
fib=int(input())

if fib==0:
    print('0')
elif fib==1:
    print('1')
```

```
else:
    print((fib-1) + (fib-2))
```

```
7
```

Perfect No.

In [22]:
```
c = int(input())
sum=0

for i in range(1,c):
    if c%i == 0:
        sum+=i

if sum==c:
    print('True')
else:
    print('False')
```

```
True
```

In [ ]:
```

```