ADVANCE PYTHON

CONDITIONAL STATEMENTS

.IF

.ELSE

.NESTED IF

.IF ELIF ELSE

In [13]:
```
if True:
    print('Hey you are welcome')
```

```
Hey you are welcome
```

In [27]:
```
if False:   # no output
    print('Meet you soon')
```

In [26]:
```
if True:
    print('Hey you are welcome')
    print('Meet you soon')
```

```
Hey you are welcome
Meet you soon
```

In [30]:
```
if False:
    print('hello')
    print('Meet you soon')
```

In [32]:
```
if True:
    print('hey you welcome')
else:
    print('meet you soon')
```

```
hey you welcome
```

In [33]:
```
if False:
    print('data science job')
else:
    print('no job')
```

```
no job
```

In [35]:
```
x=4
r=x%2

if r==0:
   print('Even number')
```

```
Even number
```

In [38]:
```
x=5
r=x%2

if r!=0:
   print('Odd number')
```

```
Odd number
```

In [39]:
```
x=7
r=x%2

if r==1:
   print('Odd number')
```

```
Odd number
```

In [40]:
```
x = 5
r = x % 2                                    # if the condition is false then only

if r == 0:
    print('Even number')

print('odd number')
```

```
odd number
```

In [41]:
```
x = 4
r = x % 2                                      # if the condition is true then bo

if r == 0:
    print('Even number')

print('odd number')
```

```
Even number
odd number
```

In [43]:
```
x = 19
r = x % 2

if r == 0:
    print('Even number')                        #multiple if

if r == 1:
    print('odd number')
```

```
odd number
```

In [44]:
```
x=21
r=x%2

if r==0:
    print('Even number')
else:
    print('Odd number')
```

```
Odd number
```

In [45]:
```
x=20
r=x%2

if r==0:
    print('Even number')
else:
    print('Odd number')
```

```
Even number
```

In [46]:
```
x=21
r=x%2

if r!=0:
    print('odd number')
else:
    print('even number')
```

```
odd number
```

NESTED IF ELSE

In [47]:
```
x=5
r=x%2

if r==0:
    print('even number')
    if x>6:
        print('greater number')

else:
    print('odd number')
```

```
odd number
```

In [48]:
```
x=10
r=x%2

if r==0:
    print('even number')
    if x>6:
        print('greater number')
```

```
else:
    print('odd number')
```

```
even number
greater number
```

In [49]:
```
x=19
r=x%2

if r==1:
    print('odd number')
    if x<20:
        print('lesser  number')

else:
    print('even number')
```

```
odd number
lesser  number
```

In [51]:
```
x=5
r=x%2

if r!=0:
    print('odd number')
    if x>6:
        print('greater number')

else:
    print('even number')
```

```
odd number
```

In [54]:
```
x=5
r=x%2

if r==0:
    print('even number')
    if x>4:                                  # in nested if, if  the second if is t
    print('greater number')                 # in nested if ,all the stmts must be tr

else:
    print('odd number')
```

```
odd number
```

MULTIPLE IF

In [55]:
```
 x=2
 if x==1:
   print('one')
if x==2:
    print('two')
if x==3:
```

```
    print('three')
```

```
two
```

USING ELIF

In [57]:
```
x=2
if x==1:
   print('one')
elif x==2:
    print('two')
elif x==3:
    print('three')
```

```
two
```

IF ELIF ELSE

In [59]:
```
x=5
if x==1:
   print('one')
elif x==2:
    print('two')
elif x==3:
    print('three')
else:
    print('number not found')
```

```
number not found
```

In [61]:
```
age=19
if age>=18:
    print('Right to vote')
```

```
Right to vote
```

In [63]:
```
age=17
if age>=18:
    print('Right to vote')
else:
    print('wait for the right age')
```

```
wait for the right age
```

TO CHECK IF A NUMBER IS POSITIVE ,NEGATIVE OR ZERO

In [65]:
```
num=int(input('enter a num:'))
if num>0:
    print('positive')
```

```
 elif num==0:
     print('zero')
else:
    print('negative')
```

zero

In [66]:
```
num=int(input('enter a num:'))
if num>0:
    print('positive')
elif num==0:
    print('zero')
else:
    print('negative')
```

negative

In [67]:
```
num=int(input('enter a num:'))
if num>0:
    print('positive')
elif num==0:
    print('zero')
else:
    print('negative')
```

positive

In [73]:
```
num=int(input('enter a num:'))
if num % 2==0:
    print('even number')
else:
    print('odd number')
```

even number

In [74]:
```
num=int(input('enter a num:'))
if num % 2==0:
    print('even number')
else:
    print('odd number')
```

odd number

In [76]:
```
text=input('enter a string:')
if text==text[::-1]:
    print('it is a palindrome')
else:
    print('not a palindrome')
```

it is a palindrome

In [77]:
```
text=input('enter a string:')
if text==text[::-1]:
    print('it is a palindrome')
```

```
else:
    print('not a palindrome')
```

```
not a palindrome
```

In [78]:
```
num=int(input('enter a number:'))
if num%3==0:
    print('num is divisible by 3')
else:
    print('num is not divisible by 3')
```

```
num is divisible by 3
```

In [79]:
```
num=int(input('enter a number:'))
if num%3==0:
    print('num is divisible by 3')
else:
    print('num is not divisible by 3')
```

```
num is not divisible by 3
```

In [80]:
```
num=int(input('enter a number:'))
if num%3==0 and num%7==0:
    print('num is divisible by 3 and 7')
else:
    print('num is not divisible by 3 and 7')
```

```
num is divisible by 3 and 7
```

In [81]:
```
num=int(input('enter a number:'))
if num%3==0 and num%7==0:
    print('num is divisible by 3 and 7')
else:
    print('num is not divisible by 3 and 7')
```

```
num is not divisible by 3 and 7
```

In [84]:
```
import math
num = int(input("Enter a number: "))
if math.isqrt(num) ** 2 == num:
       print("Perfect square")
else:
       print("Not a perfect square")
```

```
Perfect square
```

In [85]:
```
import math
num = int(input("Enter a number: "))
if math.sqrt(num) ** 2 == num:
       print("Perfect square")
else:
       print("Not a perfect square")
```

```
Not a perfect square
```

In [86]:
```
import math
num = int(input("Enter a number: "))
if math.isqrt(num) ** 2 == num:
       print("Perfect square")
```

```
else:
       print("Not a perfect square")
```

```
Perfect square
```

In [87]:
```
year=int(input('enter an year:'))
if (year%4==0 and year%100!=0) or (year%400==0):
    print('leap year')
else:
    print('not a leap year')
```

```
not a leap year
```

In [88]:
```
year=int(input('enter an year:'))
if (year%4==0 and year%100!=0) or (year%400==0):
    print('leap year')
else:
    print('not a leap year')
```

```
not a leap year
```

In [89]:
```
year=int(input('enter an year:'))
if (year%4==0 and year%100!=0) or (year%400==0):
    print('leap year')
else:
    print('not a leap year')
```

```
leap year
```

In [90]:
```
year=int(input('enter an year:'))
if (year%4==0 and year%100!=0) or (year%400==0):
    print('leap year')
else:
    print('not a leap year')
```

```
leap year
```

In [91]:
```
num=int(input('enter a number:'))
if num%10==0:
    print('it is a multiple of 10')
else:
    print('it is not a multiple of 10')
```

```
it is a multiple of 10
```

In [92]:
```
num=int(input('enter a number:'))
if num%10==0:
    print('it is a multiple of 10')
else:
    print('it is not a multiple of 10')
```

```
it is not a multiple of 10
```

In [93]:
```
data=input('enter data:')
if data.isalpha():
    print('it is an alphabet')
else:
    print('it is not an alphabet')
```

```
it is not an alphabet
```

In [94]:
```
data=input('enter data:')
if data.isalpha():
    print('it is an alphabet')
else:
    print('it is not an alphabet')
```

```
it is an alphabet
```

In [95]:
```
num=int(input('enter any number:'))
if num%3==0 and num%5==0:
    print('number is divisible by 3 and 5')
else:
    print('number is not divisible by 3 and 5')
```

```
number is divisible by 3 and 5
```

In [96]:
```
num=int(input('enter any number:'))
if num%3==0 and num%5==0:
    print('number is divisible by 3 and 5')
else:
    print('number is not divisible by 3 and 5')
```

```
number is not divisible by 3 and 5
```

In [97]:
```
data=input('enter the data:')
if data.isspace():
    print('only whitespace')
else:
    print('no whitespace')
```

```
only whitespace
```

In [99]:
```
data=input('enter the data:')
if data.isspace():
    print('only whitespace')
else:
    print('no whitespace')
```

```
no whitespace
```

In [100…
```
data=input('enter a string:')
if any(char.isupper() for char in data):
    print('upper case')
else:
    print('not a upper case')
```

```
upper case
```

In [101…
```
data=input('enter a string:')
if any(char.isupper() for char in data):
    print('upper case')
else:
    print('not a upper case')
```

```
not a upper case
```

In [102…
```
data=input('enter a string:')
if any(char.islower() for char in data):
    print('lower case')
else:
    print(' upper case')
```

```
lower case
```

In [103…
```
data=input('enter a string:')
if any(char.islower() for char in data):
    print('lower case')
else:
    print(' upper case')
```

```
upper case
```

In [104…
```
data=input('enter a string:')
if any(char.islower() for char in data):
    print('lower case')
else:
    print(' upper case')
```

```
lower case
```

In [ ]: