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In [ ]:
```
# PREVIO AL EJERCICIO 1
```

In [1]:
```
# CONCLUSIONES
# -1-
# LAS 2 PRIMERAS INSTRUCCIONES CON PRINT SON EQUIVALENTES
# Y TIENEN UN ESPACIO INCORPORADO

x = 1
y = 2
print(x, y)
print(x, y, sep=' ')
print('\n')
print(x, y, sep='')
print(x, y, sep='       ')
print(x, y, sep='*')
print(x, y, sep='***')
print(x, y, sep='2x')
```

```
1 2
1 2


12
1       2
1*2
1***2
12x2
```

In [ ]:
```
# print?
```

In [2]:
```
print('ejemplos de end')
print(x,y)
print(x,y,end='')
print(x,y,end='*')
print(x,y,end='***')
print('\n')
print('ejemplos con sep')
print(x,x,x)
print(x,x,x, sep=' ')
print(x,x,x, sep='')
print(x,x,x, sep='*')
print('\n')
print('saltó de línea')
```

```
ejemplos de end
1 2
1 21 2*1 2***

ejemplos con sep
1 1 1
1 1 1
111
1*1*1


saltó de línea
```

Question 1 (Data Types)

What is the expected output of the following code?

```
z = y = x = 1
print(x, y, z, sep='*')
```

A. `1*1*1`

B. `1 1 1`

C. `x*y*z`

D. `x y z`

E. `111*`

F. The code is erroneous

Solution 1

In [3]:
```
z = y = x = 1
print(x, y, z, sep='*')
```

```
1*1*1
```

In [ ]:
```
# Solución
# A
```

Question 2 (Data Aggregates)

What is the expected output of the following code?

```
nums = [3, 4, 5, 20, 5, 25, 1, 3]
nums.pop(1)
print(nums)
```

A. `[3, 4, 5, 20, 5, 25, 1, 3]`

B. `[1, 3, 3, 4, 5, 5, 20, 25]`

C. `[3, 1, 25, 5, 20, 5, 4]`

D. `[3, 5, 20, 5, 25, 1, 3]`

E. `[1, 3, 4, 5, 20, 5, 25]`

Solution 2

In [4]:
```
nums = [3, 4, 5, 20, 5, 25, 1, 3]
nums.pop(1)   # borra el elemento en una posición concreta
print(nums)


# [3, 4, 5, 20, 5, 25, 1, 3]
# [3,    5, 20, 5, 25, 1, 3]
```

```
[3, 5, 20, 5, 25, 1, 3]
```

In [ ]:
```
# Solución
# D
```

NOTA IMPORTANTE

In [1]:
```
listado = [10,20,30,10,10]
listado
```

Out[1]: `[10, 20, 30, 10, 10]`

In [2]:
```
# listado.remove(elemento)
# BORRA EL PRIMER ELEMENTO DE LA LISTA QUE ENCUENTRA CON ESE VALOR
listado.remove(10)
listado
```

Out[2]: `[20, 30, 10, 10]`

In [3]:
```
# listado.pop(1)
# BORRA EL ELEMENTO EN INDEX 1
listado.pop(1)
listado
```

Out[3]: `[20, 10, 10]`

In [4]:
```
# del listado[0]   # delete (del)
# BORRA EL ELEMENTO EN INDEX 0
del listado[0]
listado
```

Out[4]: `[10, 10]`

Question 3 (Operators)

What is the expected output of the following code?

```
x = 28
y = 8

print(x / y)
print(x // y)
print(x % y)
```

A.

```
3.5
3
4
```

B.

```
3.5
3.5
2
```

C.

```
3
3.5
4
```

D.

```
3.0
3
2
```

Solution 3

In [5]:
```
x = 28
y = 8

print(x / y)   # 3.5
print(x // y)  # 3
print(x % y)   # 4
```

```
3.5
3
4
```

In [ ]:
```
# Solución
# A
```

Question 4 (Control Flow)

What is the expected output of the following code?

```
x = 1

if x > 0 or x < 1:
    print("1")

if x > 1:
    print("2")
elif x >= 1:
    print("3")
else:
    print("4")
```

A. `1`

B.

```
1
3
4
```

C.

```
1
4
```

D.

```
1
3
```

Solution 4 (Data Aggregates)

In [6]:
```
x = 1

if x > 0 or x < 1:
    print("1")


if x > 1:
    print("2")
elif x >= 1:
    print("3")
```

```
else:
    print("4")
```

```
1
3
```

In [ ]:
```
# Solución
# D
```

Question 5 (Data Aggregates)

What is the output of the following snippet?

```
dct = {}
dct['1'] = (1, 2)
dct['2'] = (2, 1)

for x in dct.keys():
    print(dct[x][1], end='')
```

A. `12`

B. `(1,2)`

C. `(2,1)`

D. `21`

Solution 5

In [6]:
```
dct = {}
dct['1'] = (1, 2)
dct['2'] = (2, 1)

# {'1': (1,2),
#  '2': (2,1)}

for x in dct.keys():
    print(dct[x][1], end='')
       # dct[1] [1] ==> 2
       # dct[2] [1] ==> 1
             # 21
```

```
21
```

In [ ]:
```
# Solución
# D
```

Question 6 (Data Types)

Strings in Python are delimited with:

A. backslashes (i.e.,)

B. dollar symbol (i.e., $)

C. double quotes (i.e. "), or single quotes(') D. asterisks (i.e., *)

Solution 6

In [7]:
```
string1 = 'casa'
string2 = "casa"
string1, string2
```

Out[7]:
```
('casa', 'casa')
```

In [ ]:
```
# Solución
# C
```

Question 7 (Operators)

What is the output of the following code?

```
a = 1
b = 0
x = a or b
y = not(a and b)
print(x + y)
```

A. `2`

B. The program will cause an error

C. `1`

D. The output cannot be predicted

Solution 7

In [8]:
```
a = 1
b = 0
x = a or b          # x = 1 or 0 => x = 1
y = not(a and b)    # y = not(1 and 0) = not(0) => y = 1
print(x + y)        # 1 + 1 = 2
```

```
2
```

In [ ]:
```
# Solución
# A
```

Question 8 (Functions)

The function body is missing.

What snippet would you insert in the line indicated below:

```
def func(number):
    # insert your code here

print(func(7))
```

A. `return number`

B. `return 'number'`

C. `print('number')`

D. `print(number)`

Solution 8

In [7]:
```
# A

def func(number):
    # insert your code here
    return number

print(func(7))
```

```
7
```

In [8]:
```
# B

def func(number):
    # insert your code here
    return 'number'

print(func(7))
```

```
number
```

In [9]:
```
# C

def func(number):
    # insert your code here
    print('number')

print(func(7))
```

```
number
None
```

In [10]:
```
# D

def func(number):
    # insert your code here
    print(number)

print(func(7))
```

```
7
None
```

In [11]:
```
func(7)
```

```
7
```

In [ ]:
```
# Solución
# A
```

Question 9 (Functions)

If a list passed into a function as an argument,

deleting any of its elements inside the function using the del instruction:

A. will affect the argument

B. will cause a runtime error

C. will not affect the argument

Solution 9

In [17]:
```
# defino la función
def funcion(lista):
    del lista[0]
    return lista


# determino que el argumento será una lista
lista = [10,20,30]

# llamada a la función
funcion(lista)
```

Out[17]:
```
[20, 30]
```

In [ ]:
```
# Solución
# A
```

Question 10 (Control Flow)

The ABC organics company needs a simple program

that their call center will use to enter survey data

for a new coffee variety.

The program must accept input

and return the average rating based on a five-star scale.

The output must be rounded to two decimal places.

You need to complete the code to meet the requirements.

```
sum = count = done = 0
average = 0.0

while done != -1:
    rating = XXX
    if rating == -1:
        break
    sum += rating
    count += 1

average = float(sum / count)

YYY + ZZZ
```

What should you insert instead of XXX, YYY and ZZZ?

A.

```
XXX -> float(input('Enter next rating (1-5), -1 for
done'))
YYY -> print('The average star rating for the new coffe is
'
ZZZ -> format(average, '.2d'))
```

B.

```
XXX -> float(input('Enter next rating (1-5), -1 for
done'))
YYY -> print('The average star rating for the new coffee
is'
ZZZ -> format(average, '.2f'))
```

C.

```
XXX -> input('Enter next rating (1-5), -1 for done')
YYY -> print('The average star rating for the new coffee
```

```
is: '
ZZZ -> format(average, '.2d'))
```

D.

```
XXX -> print(input('Enter new rating (1-5), -1 for done')
YYY -> print('The average star rating for the new coffee
is: '
ZZZ -> format(average, '.2f'))
```

Solution 10

In [19]:
```
sum = count = done = 0
average = 0.0

while done != -1:
    # rating = XXX
    rating = float(input('Enter next rating (1-5), -1 for done: '))
    if rating == -1:
        break
    sum += rating
    count += 1

average = float(sum / count)

# YYY + ZZZ
print('The average star rating for the new coffee is: ' + format(average,
```

```
Enter next rating (1-5), -1 for done: 1
Enter next rating (1-5), -1 for done: 3
Enter next rating (1-5), -1 for done: 5
Enter next rating (1-5), -1 for done: -1
The average star rating for the new coffee is: 3.00
```

In [ ]:
```
# Solución
# B
```

Question 11 (Data Types)

Consider the following code snippet:

```
w = bool(23)
x = bool('')
y = bool(' ')
z = bool([False])
```

Which of the variables will contain False?

A. `w`

B. `z`

C. `y`

D. `x`

Solution 11

In [20]:
```
# w (A)
w = bool(23)
w
```

Out[20]: True

In [21]:
```
# x (D)
x = bool('')
x
```

Out[21]: False

In [22]:
```
# y (C)
y = bool(' ')
y
```

Out[22]: True

In [23]:
```
# z (B)
z = bool([False])
z
```

Out[23]: True

In [ ]:
```
# Solución
# D
```

Question 12 (Operators)

What will be the output of the following code snippet?

```
print(3 / 5)
```

A. `0.6`

B. `0`

C. `6/10`

D. None of the above

Solution 12

In [24]:
```
print(3 / 5)
```

```
0.6
```

In [ ]:
```
# Solución
# A
```

Question 13 (Data Aggregates)

What is the expected output of the following code?

```
print(list('hello'))
```

A. `[h, e, l, l, o]`

B. `hello`

C. `['h' 'e' 'l' 'l' 'o']`

D. None of the above

E. `['h', 'e', 'l', 'l', 'o']`

Solution 13

In [25]:
```
print(list('hello'))
```

```
['h', 'e', 'l', 'l', 'o']
```

In [ ]:
```
# Solución
# E
```

IMPORTANTE

In [26]:
```
listado_hola = list('hello')
listado_hola
```

Out[26]:
```
['h', 'e', 'l', 'l', 'o']
```

In [27]:
```
listado_hola[0]
```

Out[27]:
```
'h'
```

In [28]:
```
listado_HolaMundo = list('hola mundo!')
listado_HolaMundo
```

Out[28]:
```
['h', 'o', 'l', 'a', ' ', 'm', 'u', 'n', 'd', 'o', '!']
```

In [31]:
```
listado_HolaMundo[-1]
```

Out[31]: '!'

In [32]:
```
listado_HolaMundo[4]
```

Out[32]: ' '

Question 14 (Basics)

Which of the following variable names is illegal?

A. In

B. in

C. IN

D. in_

Solution 14

In [ ]:
```
# variable ilegal es la b por palabra reservada
```

In [ ]:
```
# Solución
# B
```

Question 15 (Basics)

What will be the output of the following code snippet?

```
x = 1
y = 2
z = x
x = y
y = z
print(x, y)
```

A. `1 1`

B. `1 2`

C. `2 2`

D. `2 1`

Solution 15

In [33]:
```
x = 1
y = 2
z = x         # z = 1
x = y         # x = 2
y = z         # y = 1
print(x, y)   # 2 1
```

```
2 1
```

In [ ]:
```
# Solución
# D
```

Question 16 (Control Flow)

Which of the following for loops would output the below number pattern?

```
11111
22222
33333
44444
55555
```

A.

```
for i in range(1, 5):
    print(str(i) * 5)
```

B.

```
for i in range(1, 6):
    print(str(i) * 5)
```

C.

```
for i in range(1, 6):
    print(i, i, i, i, i)
```

D.

```
for i in range(0, 5):
    print(str(i) * 5)
```

Solution 16

In [38]:
```
# C

for i in range(1, 6):
    print(i, i, i, i, i)
```

```
1 1 1 1 1
2 2 2 2 2
3 3 3 3 3
4 4 4 4 4
5 5 5 5 5
```

In [37]:
```
# B

for i in range(1, 6):
    print(str(i) * 5)
```

```
11111
22222
33333
44444
55555
```

In [ ]:
```
# En la B van todos juntos
```

In [ ]:
```
# Solución
# B
```

NOTA IMPORTANTE:

string por un número

In [34]:
```
'a'*3
```

Out[34]: 'aaa'

In [35]:
```
'2x'*4
```

Out[35]: '2x2x2x2x'

en los print, hay espacios

In [36]:
```
print(1,1,1,1,1)
```

```
1 1 1 1 1
```

Question 17 (Functions)

What is the expected output of the following code?

```
def func(p1, p2):
    p1 = 1
    p2[0] = 42
```

```
x = 3
y = [1, 2, 3]

func(x, y)

print(x, y[0])
```

A. `3 42`

B. The code is erroneous

C. `1 42`

D. `1 1`

E. `3 1`

Solution 17

In [39]:
```
def func(p1, p2):
    p1 = 1
    p2[0] = 42

x = 3
y = [1, 2, 3]

func(x, y)

print(x, y[0])
```

```
3 42
```

In [ ]:
```
# Solución
# A
```

ejercicios similares

In [ ]:
```
# ejemplo con algunos prints
```

In [40]:
```
def func(p1, p2):
    p1 = 1
    p2[0] = 42
    print('p1 es: ', p1)
    print('p2 es: ', p2)

x = 3
y = [1, 2, 3]

func(x, y)

print("\n")
print('x es: ', x)
```

```
print('y es: ', y)
print(x, y[0])
```

```
p1 es:  1
p2 es:  [42, 2, 3]


x es:  3
y es:  [42, 2, 3]
3 42
```

In [ ]:
```
# ejemplo imprimiendo todo 'y'
```

In [41]:
```
def func(p1, p2):
    p1 = 10
    p2[0] = 42

x = 3
y = [1, 2, 3]

func(x, y)

print(x, y)
```

```
3 [42, 2, 3]
```

In [ ]:
```
# un ejemplo diferente, una sola variable
```

In [42]:
```
def func(p1):
    p1 = 10

W = 3
func(W)

print(W)
```

```
3
```

In [ ]:
```
# el ejemplo anterior pero con variable GLOBAL.
```

In [44]:
```
def func(p1):
    global W
    W = 10

W = 3
func(W)

print(W)
```

```
10
```

In [ ]:
```
# el ejemplo anterior pero con variable LOCAL.
```

In [48]:
```
def func(p1):
    W = 10

W = 3
func(W)

print(W)
```

```
10
3
```

In [ ]:
```
# ejemplo anterior pero imprimiendo el valor de W dentro de la función

# ACTÚA DE MANERA LOCAL
```

In [49]:
```
def func(p1):
    W = 10
    print('W dentro de la función LOCAL: ', W)

W = 3
func(W)

print('W al final del todo: ', W)
```

```
W dentro de la función LOCAL:  10
W al final del todo:  3
```

Question 18 (Basics)

What is the expected output of the following code?

```
x = '\''
print(len(x))
```

A. `1`

B. `0`

C. The code is erroneous

D. `2`

Solution 18

In [1]:
```
x = '\''
print(len(x))
```

```
1
```

In [ ]:
```
# Solución
# A
```

EJEMPLOS SIMILARES

In [53]:
```
x = '\'\''
print(len(x))

# ESCRITO 2 VECES: \' LA LONGITUD ES 2 (2*1)
```

```
2
```

In [54]:
```
x = '\'\'\''
print(len(x))

# ESCRITO 3 VECES LA LONGITUD ES 3
```

```
3
```

Question 19 (Functions)

Which of the following lines correctly invoke the function defined below:

```
def fun(a, b, c=0):
    Body of the function.
```

(Select two answers)

A. `fun(b=0, a=0)`

B. `fun()`

C. `fun(0, 1, 2)`

D. `fun(b=1)`

Solution 19

In [55]:
```
# A

def fun(a, b, c=0):
    # Body of the function.
    return a, b, c

fun(b=0, a=0)
```

Out[55]:
```
(0, 0, 0)
```

In [ ]:
```
# B


"""def fun(a, b, c=0):
    # Body of the function.
    return a, b, c

fun()"""


# TypeError:
# fun() missing 2 required positional arguments: 'a' and 'b'
```

In [56]:
```
# C
def fun(a, b, c=0):
```

```
    # Body of the function.
    return a, b, c

fun(0, 1, 2)
```

Out[56]: (0, 1, 2)

In [ ]:
```
# D

"""def fun(a, b, c=0):
    # Body of the function.
    return a, b, c


fun(b=1)"""


# TypeError: fun() missing 1 required positional argument: 'a'
```

In [ ]:
```
# Solución
# A y C
```

Question 20 (Operators)

What is the expected output of the following code?

```
x = 1 // 5 + 1 / 5

print(x)
```

A. `0.4`

B. `0.0`

C. `0`

D. `0.2`

Solution 20

In [57]:
```
x = 1 // 5 + 1 / 5

#    0     +   0.2   =   0.2
print(x)
```

```
0.2
```

In [ ]:
```
# Solución
# D
```

Question 21 (Operators)

The result of the following addition:

```
123 + 0.0
```

A. is equal to `123.0`

B. is equal to `123`

C. cannot be evaluated

Solution 21

In [58]:
```
123 + 0.0
```

Out[58]:
```
123.0
```

In [ ]:
```
# Solución
# A
```

Question 22 (Data Types)

What is the expected output of the following code if the user enters 2 and 4?

```
x = input()
y = input()
print(x + y)
```

A. `6`

B. `24`

C. `4`

D. `2`

Solution 22

In [59]:
```
x = input()    # 2
y = input()    # 4
print(x + y)
```

```
2
4
24
```

In [ ]:
```
# Solución
# B
```

EJEMPLO PARECIDO

In [60]:
```
# la otra opción sería:
# ESTABLECER ENTERO (INT)

x = int(input())  # 2
y = int(input())  # 4
print(x + y)
```

```
2
4
6
```

Question 23 (Control Flow)

How many stars will the following snippet print to the monitor?

```
i = 4
while i > 0:
    i -= 2
    print('*')
    if i == 2:
        break
else:

    print('*')
```

A. `1`

B. `2`

C. `0`

D. The snippet will enter an infinite loop

Solution 23

In [61]:
```
i = 4
while i > 0:
    i -= 2      # i = i - 2
    print('*')  # *
    if i == 2:  # cumple la condición
        break   # se sale
else:
    print('*')
```

*

In [ ]:
```
# Solución
# A
```

Question 24 (Data Types)

What is the expected output of the following code?

```
print(float('1.3'))
```

A. `1,3`

B. `1.3`

C. `13`

D. The code is erroneous

Solution 24

In [2]:
```
print(float('1.3'))
```

```
1.3
```

In [ ]:
```
# Solución
# B
```

Question 25 (Error Handling)

What is the output of the following program if the user enters kangaroo at the first prompt and 0 at the second prompt?

```
try:
    first_prompt = input("Enter the first value: ")
    a = len(first_prompt)
    second_prompt = input("Enter the second value: ")
    b = len(second_prompt) * 2
    print(a/b)
except ZeroDivisionError:
    print("Do not divide by zero!")
except ValueError:
    print("Wrong value.")
except:
    print("Error.Error.Error.")
```

A. `Error. Error. Error`

B. `Do not divide by zero!`

C. `Wrong value`

D. `4.0`

Solution 25

In [63]:
```
try:
    first_prompt = input("Enter the first value: ")     # kangaroo
    a = len(first_prompt)  # ====================================> len(
    print('longitud de kangaroo:', a)
    second_prompt = input("Enter the second value: ")   # 0
    print('el 0 string:', second_prompt)
    b = len(second_prompt) * 2   # ================================> 0 es
    print('longitud de string 0:', b)
    print(a / b)   # ================================================
except ZeroDivisionError:
    print("Do not divide by zero!")
except ValueError:
    print("Wrong value.")
except:
    print("Error.Error.Error.")
```

```
Enter the first value: kangaroo
longitud de kangaroo: 8
Enter the second value: 0
el 0 string: 0
longitud de string 0: 2
4.0
```

In [ ]:
```
# 8/2 = 4
# (el cociente es de longitudes)
# y el de abajo es *2
```

In [ ]:
```
# Solución
# D
```

ahora 0 es entero, NO STRING

un ejemplo parecido, pero no el mismo

In [67]:
```
try:
    first_prompt = input("Enter the first value: ")     # kangaroo
    a = len(first_prompt)  # ====================================> len(
    print('longitud de kangaroo:', a)
    second_prompt = int(input("Enter the second value: "))   # 0
    print('el 0 string:', second_prompt)
    b = second_prompt    # ================================> 0 es entero,
    print('longitud de string 0:', b)
    print(a / b)   # ================================================
except ZeroDivisionError:
    print("Do not divide by zero!")
```

```
except ValueError:
    print("Wrong value.")
```

```
Enter the first value: kangaroo
longitud de kangaroo: 8
Enter the second value: 0
el 0 string: 0
longitud de string 0: 0
Do not divide by zero!
```

Question 26 (Data Aggregates)

What is the expected output of the following code?

```
data = [[0, 1, 2, 3] for i in range(2)]
print(data[2][0])
```

A. `2`

B. `1`

C. `0`

D. The code is erroneous

Solution 26

In [3]:
```
data = [[0, 1, 2, 3] for i in range(2)]
data
```

Out[3]:
```
[[0, 1, 2, 3], [0, 1, 2, 3]]
```

In [4]:
```
# print(data[2][0])

# IndexError: list index out of range
```

In [ ]:
```
# Solución
# D
```

OBTENEMOS OTROS VALORES

In [72]:
```
data[1][0]   # fila 1 columna 0
```

Out[72]:
```
0
```

In [73]:
```
data[1][2]   # fila 1 columna 2
```

Out[73]:
```
2
```

In [74]:
```
data[0][0]   # fila 0 columna 0
```

Out[74]:
```
0
```

Question 27 (Operators)

What is the expected output of the following code?

```
x = 9
y = 12
result = x // 2 * 2 / 2 + y % 2 ** 3
print(result)
```

A. `8`

B. `7.0`

C. `8.0`

D. `9.0`

Solution 27

In [75]:
```
x = 9
y = 12
result = x // 2 * 2 / 2 + y % 2 ** 3
# VA DE IZQUIERDA A DERECHA
# RES  = (9  //  2 * 2 / 2) + (12 % 2 ** 3)
#        (9  //  (2 * 1.0)) + (12 %   8   )
#        (9  //      2.0    ) + (    4      )
#             4.0              +      4
#                            8.0

print(result)
```

```
8.0
```

justificación del resultado decimal, y no entero

In [76]:
```
result_parentesis = (x // (2 * (2 / 2))) + (y % (2 ** 3))
result_parentesis
```

Out[76]:
```
8.0
```

In [77]:
```
2/2    # 2/2 sale decimal, entonces, el resto decimal ya
```

Out[77]:
```
1.0
```

In [78]:
```
9 // 2   # esto saldría entero, si fuera entero
```

Out[78]: 4

In [79]:
```
9 // 2.0
```

Out[79]: 4.0

In [ ]:
```
# Solución
# C
```

Question 28 (Functions)

What is the expected output of the following code?

```
def func(message, num=1):
    print(message * num)

func('Hello')
func('Welcome', 3)
```

A.

```
Hello
Viewers
```

B.

```
Hello
Welcome Welcome Welcome
```

C.

```
Hello
```

D.

```
Hello
Welcome, Welcome, Welcome
```

E.

```
Hello
WelcomeWelcomeWelcome
```

Solution 28

In [80]:
```
def func(message, num=1):
    print(message * num)
```

```
func('Hello')        # Hello
func('Welcome', 3)   # WelcomeWelcomeWelcome

# HACE 2 LLAMADAS A LA FUNCIÓN
```

```
Hello
WelcomeWelcomeWelcome
```

In [ ]:
```
# Solución
# E
```

Nota

los conocimientos para resolver este ejercicios ya se encontraban en otros ejercicios)

In [81]:
```
'a'*3
```

Out[81]: 'aaa'

In [82]:
```
'2x'*4
```

Out[82]: '2x2x2x2x'

Question 29 (Operators)

What value will be assigned to the x variable?

```
z = 3
y = 7
x = y == z and y > z or z > y and z != y
```

A. `0`

B. `1`

C. `False`

D. `True`

Solution 29

In [83]:
```
z = 3
y = 7
x = y == z and y > z or z > y and z != y

# x  =  (7 == 3  and  7 > 3)  or  (3 > 7  and 7 != 3)
#        False   and  True    or  False  and  True
```

```
#               False         or         False
#                            False
print(x)
```

```
False
```

In [84]:
```
# Solución
# C
```

Question 30 (Data Types)

What is the expected output of the following code if the user enters 11 and 4 ?

```
x = int(input())
y = int(input())
x = x % y
x = x % y
y = y % x
print(y)
```

A. `1`

B. `2`

C. `3`

D. `4`

Solution 30

In [85]:
```
# 11 and 4
x = int(input())  # x = 11
y = int(input())  # y = 4
x = x % y         # x = 11 % 4 => x = 3
x = x % y         # x =  3 % 4 => x = 3
y = y % x         # y =  4 % 3 => y = 1
print(y)          # 1
```

```
11
4
1
```

In [ ]:
```
# Solución
# A
```

Gracias por la atención

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