

MONDAY

MONDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO?
<ul style="list-style-type: none">- Enter one string (the word) in the console:20- Print in the console the number of "A" of this word

EXAMPLES	
INPUT	OUTPUT
>Jonathan	The number of A is : 2
>Sochetra	The number of A is : 1

CORRECTION
<pre>name = input() numberOfAs = 0 for index in range(len(name)) : if name[index] == "A" : numberOfAs = numberOfAs + 1 print("The number of A is: " + str(numberOfAs))</pre>

Notes correction:

- Print("eee", 5) is forbidden , instead students shall use : print ("eee" + str(5))
- Here were are counting only A upper case, not lower case... how to count both?

MONDAY EXERCICE 2

WHAT YOUR PROGRAMM SHALL DO?
<ul style="list-style-type: none">- Enter one string (the word) in the console:- Display "GOOD!" if the word have at least one A – Otherwise display "BAD!" <p><u>Note</u> : at least means : one or more</p>

CONSTRAINT
You must use only 1 print

EXAMPLES	
INPUT	OUTPUT
>Jonathan	GOOD!

>Benoit	BAD!
---------	------

CORRECTION

```
name = input()

numberOfAs = 0
for index in range( len(name)) :
    if name[index] == "A" :
        numberOfAs = numberOfAs + 1

if (numberOfAs > 0) :
    result = "GOOD!"
else:
    result = "BAD!"

print(result)
```

TUESDAY

TUESDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO
<ul style="list-style-type: none">- Enter one string (the word) in the console:- Print "WELL DONE" if the word contains 2 "A" and 2 "B" – otherwise print "LOST"

EXAMPLES	
INPUT	OUTPUT
>BBAU	LOST
>AABUB	WELL DONE
>AAAXB	LOST

CORRECTION
<pre>name = input() numberOfAs = 0 numberOfBs = 0 for index in range(len(name)) : if name[index] == "A" : numberOfAs = numberOfAs + 1 if name[index] == "B" : numberOfBs = numberOfBs + 1 if (numberOfAs == 2 and numberOfBs == 2) : result = "WELL DONE" else: result = "LOST" print(result)</pre>

TUESDAY EXERCICE 2

WHAT YOUR PROGRAMM SHALL DO
<ul style="list-style-type: none">- Enter one string (the word) in the console:- Print "WELL DONE" if the word contains ONLY A characters– otherwise print "LOST"

EXAMPLES		
INPUT	OUTPUT	REASON
>AAAX	LOST	There is an "X", so this word does not contain only A

>AA	WELL DONE	Only A here
-----	-----------	-------------

CORRECTION
<pre> name = input() onlyAChars = True for index in range(len(name)) : if name[index] != "A" : onlyAChars = False if (onlyAChars) : result = "WELL DONE" else: result = "LOST" print(result) </pre>

Notes correction:

- Here we can break the loop if we find something different than A: it is useless to continue till the end, since we know we already lost...
- How to break the loop like this ?

TUESDAY EXERCICE 3

WHAT YOUR PROGRAMM SHALL DO
<ul style="list-style-type: none"> - Enter one string (the word) in the console: - Print "WELL DONE" if the word contains more A characters than B characters – otherwise print "LOST"

EXAMPLES		
INPUT	OUTPUT	REASON
>AABBBB	LOST	2 A and 3 B So more B than A
>AAAAAB	WELL DONE	4 A and 1 B So more A than B
>AABB	LOST	2 A and 2 B So as much A than B – We lost

CORRECTION
<pre> name = input() numberOfAs = 0 numberOfBs = 0 for index in range(len(name)) : if name[index] == "A" : numberOfAs = numberOfAs + 1 if name[index] == "B" : </pre>

```
    numberOfBs = numberOfBs + 1

if (numberOfAs > numberOfBs) :
    result = "WELL DONE"
else:
    result = "LOST"

print(result)
```

WEDNESDAY

WEDNESDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO
<ul style="list-style-type: none">- Enter three string (word1, word2, word3) in the console- Print the word with the greatest number of characters <p>If 2 or 3 words have the greatest size, print : "Two or 3 names have the greatest number of characters"</p>

EXAMPLES	
INPUT	OUTPUT
>Rith >Channak >Rithy	The greatest word is: Channak
>Ronan >Sochetra >Benoit	The greatest word is: Sochetra
>Hugo >Rady >Hi	Two or 3 names have the greatest number of characters

CORRECTION
<pre>word1 = input() word2 = input() word3 = input() sizeWord1 = len(word1) sizeWord2 = len(word2) sizeWord3 = len(word3) if sizeWord1>sizeWord2 and sizeWord1>sizeWord3: result = "The greatest word is: " + sizeWord1 elif sizeWord2>sizeWord1 and sizeWord2>sizeWord3: result = "The greatest word is: " + sizeWord2 elif sizeWord3>sizeWord1 and sizeWord3>sizeWord2: result = "The greatest word is: " + sizeWord3 else: #In this case, 2 or 3 word have the same size result = "Two or 3 names have the greatest number of characters" print(result)</pre>

WEDNESDAY EXERCICE 2

WHAT YOUR PROGRAMM SHALL DO

- Enter one string (word) in the console
- Print the number of characters of this word, but do **NOT** include the spaces in this count

EXAMPLES

INPUT	OUTPUT	REASON
>Sam Oun	The number of letters is: 6	Here the len of this text is 7 But the text contain 1 space characters
>A A A	The number of letters is: 3	Here the len of this text is 9 But the text contain 6 space characters

CORRECTION

```
word = input()

sizeWithNoSpace = 0
for index in range( len(word)) :
    if word[index] != " " :
        sizeWithNoSpace = sizeWithNoSpace + 1

print("The number of letters is: " + str(sizeWithNoSpace))
```

THURSDAY

What is an even number?

An **even** number is a number that can be exactly divided by 2.

Ex: 2, 4, 6, 8...

A number which is not even is an **odd** number

Ex: 1, 3, 5, 13...

What is modulo (%)?

A%B is the remanding of the division of A by B

Example	Explanation
$10\%3 = 1$	$10 = 3*3 + 1$
$11\%3 = 2$	$11 = 3*3 + 2$
$12\%3 = 0$	$12 = 3*4$

So... how to check if a number is even in Python?

We check if the modulo of the number by 2 is equal to 0

Example	Explanation
$10\%2 = 0$	10 is an even number
$9\%2 = 1$	9 is an odd number

TUESDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO
<ul style="list-style-type: none">- Enter a number in the console- Print "this number is even" if the number is even – otherwise print "this number is odd"

EXAMPLES	
INPUT	OUTPUT
>2	This number is even
>3	This number is odd

CORRECTION
<pre>number = int(input()) isEven = number%2 == 0</pre>


```
if (isEven) :  
    print ("This number is even")  
else :  
    print ("This number is odd")
```

TUESDAY EXERCICE 2

WHAT YOUR PROGRAMM SHALL DO

- Enter a **positive** number (max) in the console
- Print the sum of all the **even** numbers lower or equal to max

EXAMPLES

INPUT	OUTPUT	EXPLANATION
>5	6	Between 0 and 5 there are 3 even numbers: 0, 2, 4 $0 + 2 + 4 = 6$
>9	20	Between 0 and 9 there are 5 even numbers: 0, 2, 4, 6, 8 $0 + 2 + 4 + 6 + 8 = 20$

CORRECTION

```
max = int(input())

sumEvens = 0
for n in range(max + 1) :
    if (n%2 == 0) :
        sumEvens = sumEvens + n

print ("Sum of even numbers is: " + str(sumEvens))
```

FRIDAY

FRIDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO

- Enter a number (numberOfValues) in the console
- Enter < numberOfValues> numbers in the console
- Print the number of odd number entered in the console

EXAMPLES

INPUT	OUTPUT	EXPLANATION
>Number of values: 4 >5 >3 >4 >12	2	5 and 3 are odd number 4 and 12 are not odd number So the number of odd numbers is 2
>Number of values: 3 >2 >4 >6	0	2 and 4 and 6 are even number So the number of odd numbers is 0

CORRECTION

```
numberOfValue = int(input("Number of values: "))

numberOdds = 0
for n in range(numberOfValue) :
    number = int(input("Enter a value: "))
    if (number%2 == 1) :
        numberOdds = numberOdds + 1

print ("Sum of odd numbers is: " + str(numberOdds))
```