

MONDAY

MONDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO?

- 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

```
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))
```

Notes correction:

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

MONDAY EXERCICE 2

WHAT YOUR PROGRAMM SHALL DO?

- Enter one string (the word) in the console:
- Display "GOOD!" if the word have **at least** one A – Otherwise display "BAD!"

Note : at least means : one or more

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

- 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
>AAAXBB	LOST

CORRECTION

```
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)
```

TUESDAY EXERCICE 2

WHAT YOUR PROGRAMM SHALL DO

- 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
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CORRECTION

```
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)
```

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
- 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
>AABB	LOST	2 A and 3 B So more B than A
>AAAAB	WELL DONE	4 A and 1 B So more A than B
>AAB	LOST	2 A and 2 B So as much A than B – We lost

CORRECTION

```
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 > numberOfBs) :
    result = "WELL DONE"
else:
    result = "LOST"

print(result)
```

WEDNESDAY

WEDNESDAY EXERCICE 1

WHAT YOUR PROGRAMM SHALL DO
- Enter three string (word1, word2, word3) in the console - Print the word with the greatest number of characters
If 2 or 3 words have the greatest size, print : "Two or 3 names have the greatest number of characters"

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, 9, 13...

What is modulo (%)?

$A \% B$ is the remainder 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	
- 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
<code>number = int(input())</code>
<code>isEven = number%2 == 0</code>

```
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))