*EXERCICE 1*

|  |
| --- |
| **WHAT YOUR PROGRAM SHALL DO** |
| First you need to implement the following function:   |  |  | | --- | --- | | **Function name** | numberOfUpperCases | | **Parameters** | word (an **string**) | | **Return value** | The number of uppercase characters in the word (**an integer**) | | **Examples** | numberOfUpperCases (“Phnom Penh”) 🡪 2  *Phnom Penh has 2 uppercase characters Phnom Pen* |   Then code the main program:   1. The program asks user to enter a word :   Word : RonaN   1. The program number of uppercase characters in the word:   Number of uppercase letters : 2  **Warning** : you need to call the function you have defined previously |

*EXERCICE 2*

This code does not work when running program

* Find the reason and fix it

# Return ‘Good’ is the grade is greater than 10

# Return ‘Bad’ is the grade is less or equal than 10

def **getComment**(grade):

    if grade > 10:

        return “Good”

print(**getComment**(12) + **getComment** (8))

True

def getComment(grade):

    if grade > 10:

        return "Good"

    else:

        return "Bad"

print(getComment(18) + getComment (8))

*EXERCICE 3*

We have a program to display the price of banana, apple and orange. This code does not work when running program

* Find the reason and fix it

# banana -> 2 $

# apple  -> 5 $

# orange -> 1 $

def getPrice(fruitName):

    if fruitName == "banana":

        return 2

    if fruitName == "apple":

        return 5

print("banana price is: " + str(getPrice("banana")) + " dollars")

print("orange price is: " + str(getPrice("orange")) + " dollars")

True

def getPrice(fruitName):

    if fruitName == "banana":

        return 2

    if fruitName == "apple":

        return 5

    if fruitName == "orange":

        return 1

print("banana price is: " + str(getPrice("banana")) + " dollars")

print("orange price is: " + str(getPrice("orange")) + " dollars")

print("apple price is: " + str(getPrice("apple")) + " dollars")

*EXERCICE 4*

We have a program to display the absolute value of a number (ex: getAbsolute(-5) = 5)

This code does not work when running program

* Find the reason and fix it

def getAbsolute(number):

    if number < 0:

        return -1 \* number

    else:

        return str(number)

print(getAbsolute(5) + 10)

True

def getAbsolute(number):

    if number < 0:

        return -1 \* number

    else:

        return number

print(getAbsolute(5) + 10)

*EXERCICE 5*

We want to improve the following program to avoid duplication of code (in red):

# Test 1

number1 = 20

number2 = 100

result = 0

if number1 > number2:

    result = number1

else:

    result = number2

print("Maximum is " + str(result))

# Test 2

num1 = 200

num2 = 300

result = 0

if num1 > num2:

    result = num1

else:

    result = num2

print("Maximum is " + str(result))

def sum(number1,number2):

    if number1 > number2:

        return number1

    else:

        return number2

number1 =int(input())

number2 =int(input())

print("Maximum is " + str(sum(number2,number1)))

1 – Implement the following function:

|  |  |
| --- | --- |
| **Function name** | max |
| **Parameters** | number1 (an **integer**) , number2 (an **integer**) |
| **Return value** | The max of number1 and number2 (a **integer**) |
| **Examples** | max (2, 5) 🡪 5 |

2 – Change the above code to use your function and void duplication of code (in red)

*EXERCICE 6*

We want to improve the following program to avoid duplication of code (in red):

# Test 1

text1 = "Hello PNC"

result = ""

lastIndex = len(text1) - 1

for i in range(len(text1)):

    result += text1[lastIndex - i]

print(result)

# Test 2

text2 = "Welcome 2021"

result = ""

lastIndex = len(text2) - 1

for i in range(len(text2)):

    result += text2[lastIndex - i]

print(result)

1 – Implement the following function:

|  |  |
| --- | --- |
| **Function name** | reverseString |
| **Parameters** | word (an **string**) |
| **Return value** | The same string but characters are in the reversed order |
| **Examples** | reverseString (“ronan”) 🡪 “nanor” |

2 – Change the above code to use your function and void duplication of code (in red)

def improve(text1):

    result = ""

    lastIndex = len(text1) - 1

    for i in range(len(text1)):

        result += text1[lastIndex - i]

    return result

text1=input()

print(improve(text1))