EXERCICE 1

WHAT YOUR PROGRAM SHALL DO

We want to manage the number of students per class, so we use a dictionary:

- The key is the name of the class *(ex : "2021C")*
- The value is the number of students

INPUTS:

- 1 dictionary STRING (key) -> INTEGER (value) :
  {"2021A": 20, "2021B": 30, "2021C": 15 }

OUTPUT:

- Print for each class the number of students as follows:
  Class 2021A has 20 students
  Class 2021B has 30 students
  Class 2021C has 15 students

```
studentsDictionary = eval(input())

result = ""
for className in(studentsDictionary) :
    studentNumber = studentsDictionary[className]
    result += "Class " + className + " has " + str(studentNumber) +  "
students"  + "\n"

print(result)
```

EXERCICE 2

WHAT YOUR PROGRAM SHALL DO

We want to manage the number of students per class, so we use a dictionary:

- The key is the name of the class *(ex : "2021C")*
- The value is the number of students

We want to add students in a class

INPUTS:

- 1 dictionary STRING (key) -> INTEGER (value) :
  {"2021A": 20, "2021B": 30, "2021C": 15 }

- Number of students to add:
  4
- Class to add students
  2021A

OUTPUT:

- Print for each class the **new** number of students as follows:
  Class 2021A has 24 students
  Class 2021B has 30 students
  Class 2021C has 15 students

```
studentsDictionary = eval(input())
newStudentsNumber = int(input())
newStudentsClass = input()

if newStudentsClass in studentsDictionary:
    studentsDictionary[newStudentsClass] += newStudentsNumber
else:
    studentsDictionary[newStudentsClass] = newStudentsNumber

result = ""
for className in (studentsDictionary):
    studentNumber = studentsDictionary[className]
    result += "Class " + className + " has " + \
        str(studentNumber) + " students" + "\n"

print(result)
```

EXERCICE 3

WHAT YOUR PROGRAM SHALL DO

We want to manage the number of students per class, so we use a dictionary:

- The key is the name of the class *(ex : "2021C")*
- The value is the number of students

We have 2 dictionaries and we want to merge them into 1

INPUTS:

- 2 dictionary STRING (key) -> INTEGER (value) :

  {"2021A": 20, "2021B": 30, "2021C": 15 }

  {"2021A": 15, "2021C": 10, "2021D": 99 }

OUTPUT:

- Print the dictionary, resulting from the merge of the 2 given dictionaries

  {"2021A": 35, "2021B": 30, "2021C": 25, "2021D": 99 }

Explanation: *Here, for class 2021A the first dictionary gave us 20 students and the second one 15 students. SO the total number of student will be 35 for class 2021A*

```
studentsDic1 = eval(input())
studentsDic2 = eval(input())

# 1  copy the dic 1
mergedDictionary = studentsDic1.copy()

# 1  copy the dic 1
for dic2Class in (studentsDic2):
    dic2Number = studentsDic2[dic2Class]

    if dic2Class in studentsDic1:
        mergedDictionary[dic2Class] += dic2Number
    else:
        mergedDictionary[dic2Class] = dic2Number

print(mergedDictionary)
```

EXERCICE 4

WHAT YOUR PROGRAM SHALL DO

INPUTS:

- 1 string

  good !

OUTPUT:

- A dictionary :
  - The key is the character (one key per character in the string)
  - The value is the occurrence of the character in the string (example : here we have 2 “o”)

{"g": 1, "o": 2, "d": 1, "!": 1}

Warning: we don't count the white characters! (skip them)

```
word = input()

charDictionary = {}
for char in word:
    if char != " ":
        if char in charDictionary:
            charDictionary[char] += 1
        else:
            charDictionary[char] = 1

print(charDictionary)
```