UNIVERSIDAD PONTIFICIA ICAI ICADE COMILLAS MADRID
ESCUELA TÉCNICA SUPERIOR DE INGENIERÍA

Introduction to programming-python

Lab Practice 08: Lists

Program 1: Student names, courses and grades

Write a python program to define a matrix **`grades (list of list)`**, to store the grades of the students of an Institute. Each row of the matrix contains the grades of one student (up to 5 students) and each column contains the grades of one course (up to 3 courses).

In addition, declare 2 list to store the names of the courses and students names.

Follow these steps to write the program:

1. Read from the keyboard the name of the courses to load `courses`, (Example: read **N** names such as "Computer programming", "Physics", "Algebra"…) and names to load `names`.

2. Using the matrix **`courses`** as data, fill the matrix `grades` by asking the user to introduce the grades of every student related to the courses taken. To do so, the program will display the course name and student name before reading the corresponding grade.

3. Use the **`grades`** matrix to calculate the average grade of all the courses of each student, store the average grades in a list called **`average`** (The list stores **M** average grades). Then, display the average grades of each student.

```
print("\nMenu")

print("=====")

print("1.- Course Average")

print("2.- Student Average")

print("3.- Student Grades")

print("4.- Exit")
```

`Ejemplo`

```
Intro nº alumnos: 2
Intro nº asignaturas: 3

Nombre del alumno: Pepe Luis García
Intro nota asignatura: Python 6
Intro nota asignatura: Matlab 7
Intro nota asignatura: Estadística R 8

Nombre del alumno: Maria Gómez
Intro nota asignatura: Python 5
Intro nota asignatura: Matlab 6
Intro nota asignatura: Estadística R 7
1.- Media asignatura
2.- Media Alumno
3.- Mostrar notas
4.- Salir
Introduce opción: 1
Introduzca nombre asignatura: Python
5.5

Introduce opción: 2
Introduzca nombre alumno: José Luis García
Introduzca nombre alumno: Pepe Luis García
7.0

Introduce opción: 3
                        Python         Matlab         Estadística R
Pepe Luis García          6.00           7.00           8.00
Maria Gómez               5.00           6.00           7.00
Introduce opción: 4
```