Final project

BrainerX

In this final project you will create a university management system it will contain this structure :
Each university has different faculties , and each faculty has different departments and each department has different years , and each year contains a list of students .

University :

The university has these attributes :

- Name .
- Address .
- Email .
- Phone number .
- List of faculties .
- Director of the university .

It has these methods (functions) :

- Create university .
- Add Faculty to the list of faculties .
- Remove Faculty .
- Set a director of the university .

Faculty :

The Faculty has :

- Name .
- List of departments .
- Director of the faculty .

It has these methods (functions) :

- Create faculty .
- Add department to the list of departments .
- Remove department from the list of departments .

Department :

The department has :

- Name .
- List of years (promotions example L1 , L2 , L3 , M1 , M2) .
- Chief of the department .

It has these methods (functions) :

- Create department .
- Add a year to the list of years .

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Year (promo) :

The year has :

- Name .
- List of students .
- List of modules .
- List of marks *(les moyennes générales) // calculated by the chief department only* .

It has these methods (functions) :

- Create year .
- Add a student to the list of students .
- Remove student .
- Send a student to the next year .

Student :

The student has :

- Name .
- Address .
- Phone number .
- Email .
- List of notes (each note is related to a module).

University director :

He has these attributes :

- Name .
- Email .
- Phone number .

It has these methods (functions) :

- Set a director to a faculty .
- Set a chief to a department .

Faculty director :

He has these attributes :

- Name .
- Email .
- Phone number .

It has these methods (functions) :

- Set a chief to a department .

Department chief :

He has these attributes :

- Name .
- Email .

- Phone number .

It has these methods (functions) :

- Calculate the marks of the students of a specific year (calculer les moyennes) .

Module :

It has these attributes :

- Name .
- Coef (coefficient) .

Note :

It has these attributes :

- Value (la note).
- Module .

Questions :

1. Create the modulation of the system with respecting the OOP rules and SOLIDE first principle , mentioning the class , and each class has its own attributes and methods .
2. Create all the classes of the system using python .
3. Create a test program to test all the features of the system with a simple user interface using python .

Good luck :)