TU856/858-2 Object Oriented Programming with Python
Semester 1, Lab Week 9, 20.11.2020
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Please join the virtual classroom in brightspace first, before going to individual lab links. I will provide explanations and hints and tricks regarding the lab at the beginning of the lab sessions. These are recorded.

Please sign your group's lab sign in sheet!
Lab solutions will be discussed in the Monday lecture. Labs are not marked.
Don't forget about your revision item for the week!

Link to the lab groups (click).
Link to python documentation (click).

Objectives:
- Composition

Preparation:
- Pull the lab's python file from GitHub and create a new branch for today's lab. Remember to git add and git commit with every new feature you implement.
- The file name is `lab_registration_record.py`

Your task:
- **Implement a student registration data record system according to the UML diagram in Figure 1.**
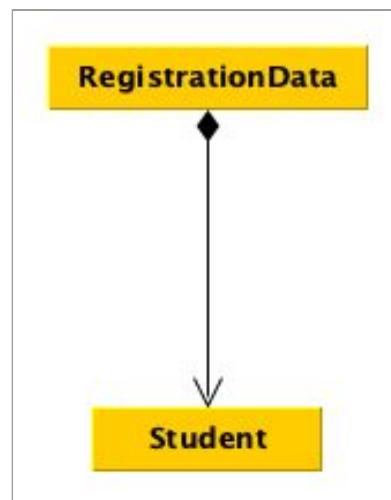

Figure 1: Registration Data Record

2. Student:
- Must contain UNDERGRADATE and POSTGRADUATE as **class variables**
  You may use: UNDERGRADUATE, POSTGRADUATE = range(2) or a tuple if you find it more intuitive.
- Must contain appropriate getter and setter properties where necessary. Think about cases where you don't want to offer a setter option.
- Must contain a method that returns all student information.

3. RegistrationData:
- Must contain appropriate getter and setter properties where necessary. Think about cases where you don't want to offer a setter option.
- Must contain a method called display_student_data(self) that prints all available information about a student from the registration data set to standard output

4. Instances:
- Create an instance of **RegistrationData**
- Demonstrate getting all available student information
- Demonstrate changing a student ID
- Demonstrate adding three courses to a student

  Example Output:
  ```
  Student Info:  (('Bianca', 'Phelan'), 1, []) NA
  Address:  8 Lower Kevin Street, Dublin 8, Ireland
  Registration fee:  1500
  Student Info:  (('Bianca', 'Phelan'), 1, []) C12345
  Address:  8 Lower Kevin Street, Dublin 8, Ireland
  Registration fee:  1500
  Student Info:  (('Bianca', 'Phelan'), 1, ['OOP', 'Advanced
  Databases', 'Environmental Analytics']) C12345
  Address:  8 Lower Kevin Street, Dublin 8, Ireland
  Registration fee:  1500
  ```

General Standards:
- Your solution must follow good OOP principles and **use git for version control**
- Your solution must provide getter and setter properties where appropriate
- Your solution must contain appropriate commenting throughout.
- Use docstrings where appropriate