Exercise 1
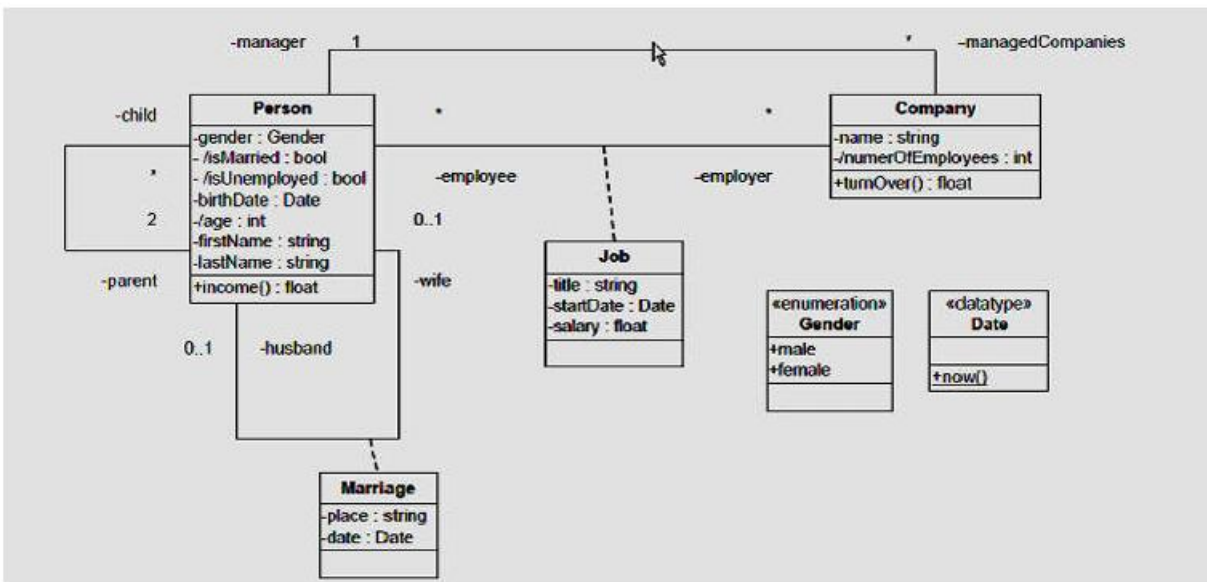
To manage the various projects carried out by UBMA students, we have the following information:

- Each project has a name and takes place in a specific semester of a given academic year.
- A project is divided into several distinct deliverables, each with a number, a description, and a corresponding deadline. There are at least 3 deliverables per project.
- Students form project groups of size 4 or 5. The work done for *each deliverable must be submitted by its deadline!* Within each group, a team leader is designated, who is also a team member.
- The work is graded by group and by deliverable. A valid grade is between 0 and 20.

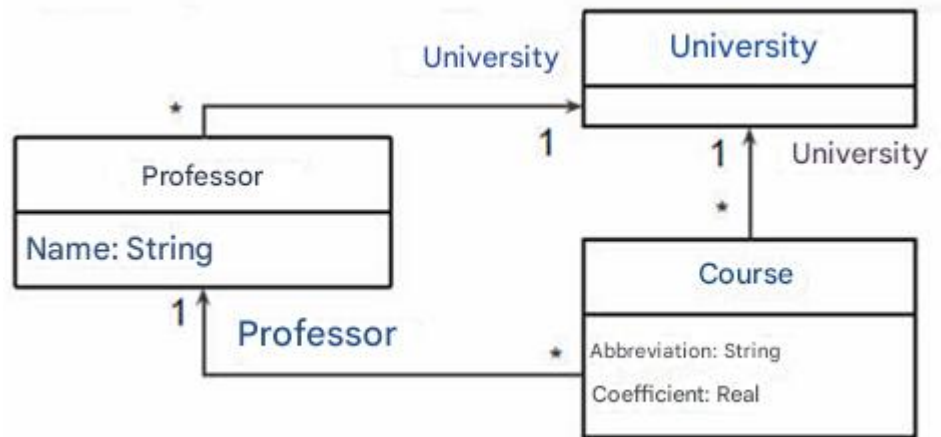Propose the class diagram for this problem. Add all necessary OCL constraints.

Exercise 2

Write the following OCL constraints:

1. Initially, an employee's salary is 30,000 DA.
2. The director of a company must be over 40 years old.
3. An individual's age is a function of the present moment and their date of birth.
4. One cannot start working before their date of birth.
5. A man is married to a woman and a woman to a man.
6. To be married, one must be over 18 years old.
7. One cannot start working on their wedding day.

Exercise 3

Express the following OCL constraints:

- A professor's name cannot be null.
- A course code is always 3 characters long.
- A course's coefficient is between 0.0 and 100.0.
- A professor must work for the university that offers the course in order to teach it.