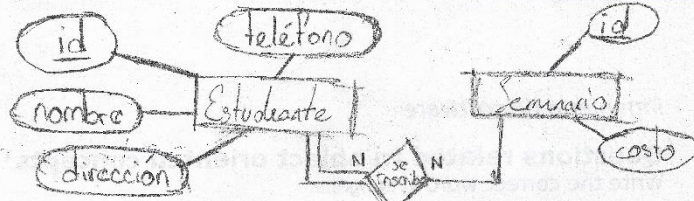


## Ejercicio de casos de uso<sup>2</sup> Ingeniería de software



### Instructions

1. Draw the User Interface and Database Modeling required by the following Use Case.
2. Draw the activity diagram used for business process modeling, for modeling the logic captured by a the use case or usage scenario.

### Use Case

**Name:** Enroll in University.  
**Identifier:** UC 2

#### Description:

Enroll someone in the university.

#### Preconditions:

- The Registrar is logged into the system.
- The Applicant has already undergone initial checks to verify that they are eligible to enroll.

#### Postconditions:

- The Applicant will be enrolled in the university as a student if they are eligible.

#### Basic Course of Action:

1. An applicant wants to enroll in the university.
2. The applicant hands a filled out copy of form U113 University Application Form to the registrar.  
[Alternate Course A: Forms Not Filled Out]
3. The registrar visually inspects the forms.
4. The registrar determines that the forms have been filled out properly. [Alternate Course B: Forms Improperly Filled Out].
5. The registrar clicks on the Create Student icon.
6. The system displays U189 Create Student Screen.
7. The registrar inputs the name, address, and phone number of the applicant. [Extension Point: UC34 Perform Security Check. Applicable to Step 17]
8. The system determines that the applicant does not already exist within the system according to BR37 Potential Match Criteria for New Students. [Alternate Course F: Students Appears to Exist Within The System].
9. The system determines that the applicant is on the eligible applicants list. [Alternate Course G: Person is Not Eligible to Enroll]
10. The system adds the applicant to its records. The applicant is now considered to be a student.
11. The registrar helps the student to enroll in seminars via the use case UC 17 Enroll in Seminar.
12. The system calculates the required initial payment in accordance to BR16 Calculate Enrollment Fees.
13. The system displays U15 Fee Summary Screen.
14. The registrar asks the student to pay the initial payment in accordance to BR19 Fee Payment Options.
15. The student pays the initial fee. [Alternate Course D: The Student Can't Pay At This Time]
16. The system prints a receipt.
17. The registrar hands the student the receipt.
18. The use case ends.

#### Alternate Course A: Forms Not Filled Out

- A.2. The Applicant asks for a set of forms.
- A.3. The Applicant fills out the forms as appropriate.
- A.4. The use case continues at step 2 in the basic course of action.

U113

U189

U15

### Questions related to object oriented concepts<sup>1</sup>

Write the correct word in the gaps.

1. Real-world objects contain behavior and state.
2. A software object's state is stored in fields.
3. A software object's behavior is exposed through methods.
4. Hiding internal data from the outside world, and accessing it only through publicly exposed methods is known as data encapsulation.
5. A blueprint for a software object is called a class.
6. Common behavior can be defined in a superclass and inherited into a subclass, using the extends keyword.
7. A collection of methods with no implementation is called an interface.
8. A namespace that organizes classes and interfaces by functionality is called a package.
9. The term API stands for Application Programming Interface?

<sup>1</sup> Fuente: <http://docs.oracle.com/javase/tutorial/java/concepts/QandE/questions.html>

