esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies

DEVELOPMENT PROJECT
JAVAEE

Elaborated by:

- Firas Matoussi
- Houssem Ben Achour
- Insaf Nefzi
- Mohamed Amine Khemiri
- Sabri Ben Marzouk
- Walid Nsiri

Class 4 InfoB1 **Year 2018/2019**

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General Introduction

For the academic year 2018 2019 we have been asked to develop an application in the context of the school developing project. The technology used for this project will be JavaEE.

Our project consists in developing an application called “ESI Manager” that will be dedicated to any school wishing to improve their management of end of studies projects.

This application “ESI Manager“ is available on 2 platforms: Desktop and web which must communicate with one another with a common database to ensure our clients’ needs.

In this project, our mission is to create a platform that unites all the students that need to find a training for their end of studies project and help them stay updated and connected.

The first chapter will be dedicated to the presentation of the project. We will first introduce our project. Then we will be studying the existing in order to provide an adequate solution.

The second chapter will be devoted to the functional study by evoking the functional and non-functional needs, global use case diagram and a scenario with models. then we will move to system sequence diagrams, analysis class diagram, global architecture (physical & logical) of the Application.

The last chapter will be devoted to the general conclusion.

Chapter 1

General context of the project

1.1. General context:

Nowadays the new technologies are a real ally to find an adequate training by allowing you to consult online forums, register at an enterprise, keep an eye on your application advancement while staying current and connected.

In this chapter, the first stage of our project, which is the phase 0, will be presented. It is in fact a phase of planning.

The work to be achieved for this period aims to build a good vision of the product, to identify the needs of the users, to clarify the main features, to prepare the environment of development.

1.2. Case study:

1.2.1 Critic of the existing:

"Iset Rades Platform" is a site which is easy to use and homogeneous, there is no visual rupture and offer to students to upload their project's report. However, it doesn't totally respond to the students' needs, for example there is no processing for the end of study project internship and there is no communication between the 5th year students and the administration or teachers.

1.2.2 Issues:

Today, facing these problems, we are looking for a way to offer a two-platform application in a simple and ergonomic way and create a reliable application that meets the needs of the students.

1.3. Conclusion:

We have specified the different needs that our application must meet. This chapter was useful to show our purpose, our needs and to clarify our approach.

UML modeling helped us plan our program before the programming takes place because it is used as a standard, it is widely understood and well known. This makes it easy for a new programmer to step into our project and be productive from day one.

Chapter 2

Technical study

2.1. Proposed solution:

We have chosen to make an application that will resolve the presented problems.

ESI Manager is available on 2 platforms: Desktop and web. For objectives, our applications must communicate with one another with a common database to ensure the following features:

2.1.1. Functional requirements:

The functional requirements express an action, which must be made by the system in answer to a request that is the releases, which are produced for a group given by entries.

Our application must implement the following various features which allows:

- The super admin to:
  - Add/ update/ remove/display an admin to each school.
- The admin to:
  - Configure the platform: insert the logo and all school information such as name, departments, sites and employees and their contact information.
  - Attribute or change the head of department.
  - Insert the 5th year students with their correspondent information.
- The students to:
  - Register on the platform.
  - Fill / Update the fields / Export the convention request form and the end of studies project plug.
  - Ask for internship cancellation.
- The internship director to:
  - Create /update/export the convention request form and the end of studies project plug.
  - List the 5th year students and their category of internship (.NET, JAVA …), country of internship and name of enterprise.

- List all different statistics about students and their internships.
- Authorize a student to be eligible to pass an end of studies project.
- Validate the deposit of the internship report.
- Accept or refuse an end of studies project plug.
- Accept or refuse the cancellation of an internship.
- Affect a reporter to the end of studies project's plug.
- Plan the thesis defense: date and time, class. Affect a president, alert all involved persons.
- Add a head of department.

➢ The head of department to:

- Affect/ update the teachers to end of studies project's plug as: pre-validator, reporter and supervisor.
- See the history of every end of studies project's plug and each modification made.
- List all accepted plugs and all waiting to be accepted plugs.

➢ The teacher to:

- List all plugs to be: pre-validated, reported or supervised and attribute a mark.

2.1.2. Non-Functional Requirements:

The non-functional requirements present the internal requirements for the system, which are essential to reach our goal.

Among these needs we quote:

- **The speed of processing**: it is imperative that the execution time of treatments approaches as much as possible from real time.
- **The performance**: it means that the system must react in a specific time regardless the action of the user.
- **Usability**: as long as the application is easy to use, we need simple and ergonomic interfaces. It is also essential to follow these requirements.
- **Security and confidentiality**: the application is secure, the information's should not be accessible to everyone, and the website must be accessible by an identifier and a password.

- **Portability**: to have a compatible application with any operating system.
- **Extension:** to have the possibility to add or modify new features.

2.2. Global use case diagram:

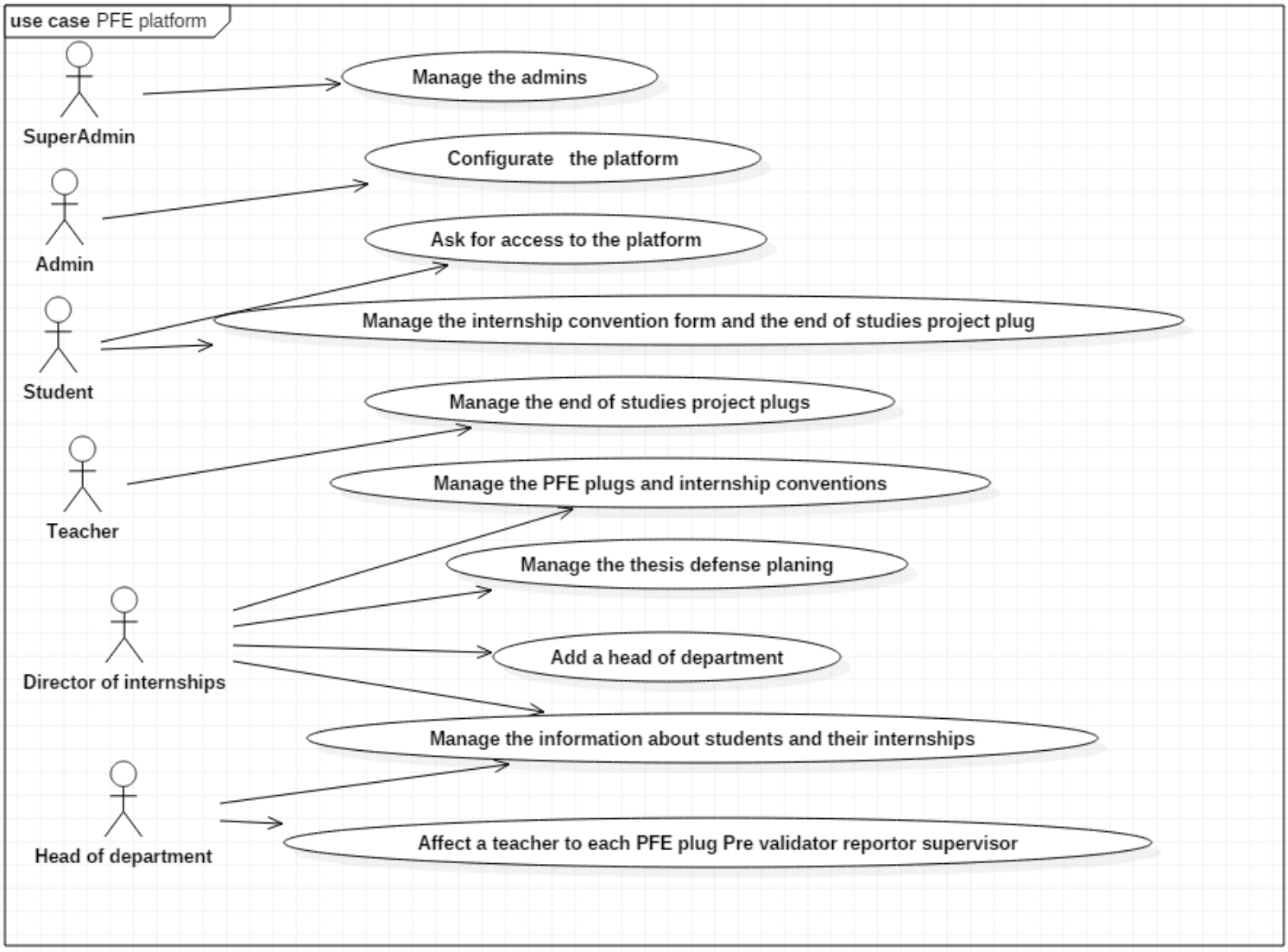
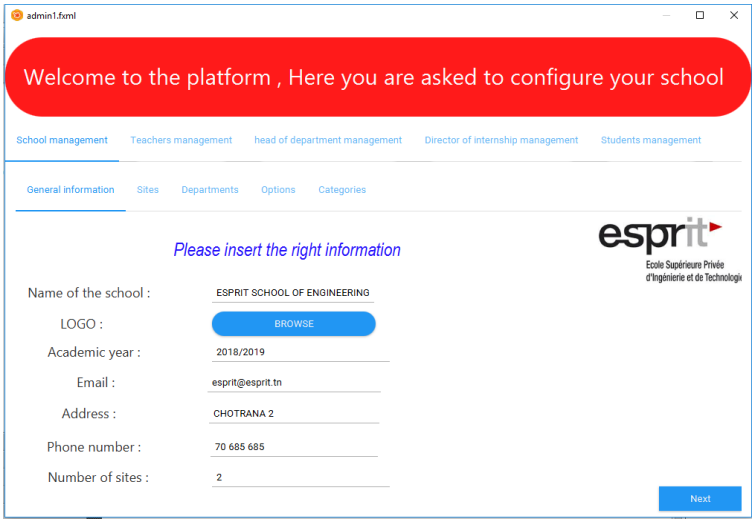


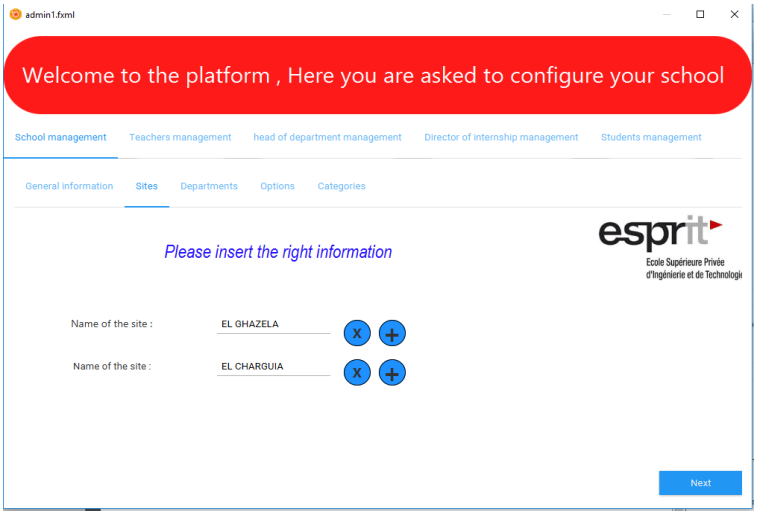
Figure 1

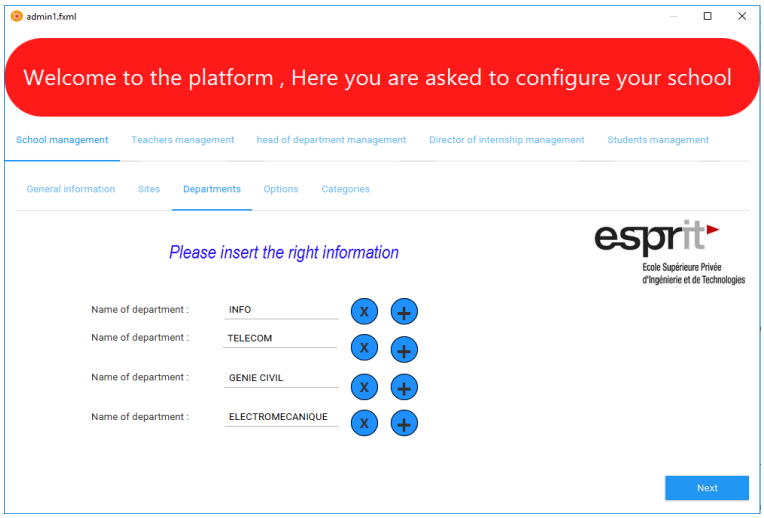
2.3. Scenario with models:

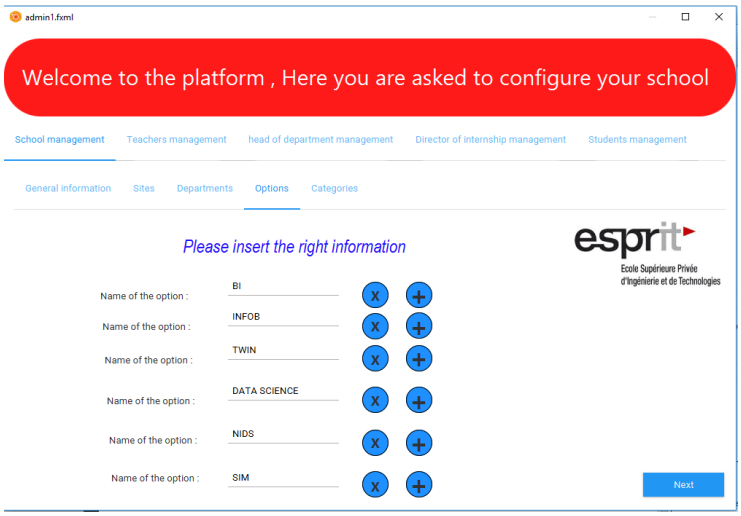
In this scenario, the admin will configure the platform of the school. He will add the general information, the sites of the school, the departments and the options, then he will manage the teachers, head of departments, training director and students (add a new one in this case).

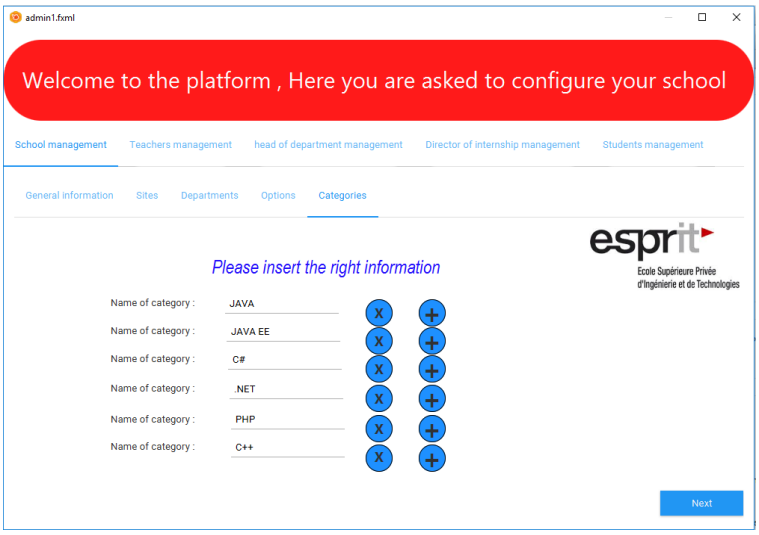
2.3.1. Desktop:

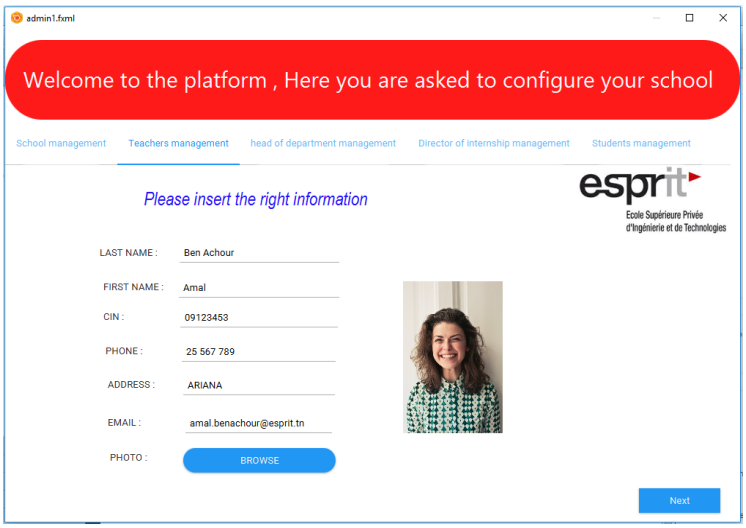

admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Name of the school :
ESPRIT SCHOOL OF ENGINEERING
LOGO :
BROWSE
Academic year :
2018/2019
Email :
esprit@esprit.tn
Address :
CHOTRANA 2
Phone number :
70 685 685
Number of sites :
2
Next

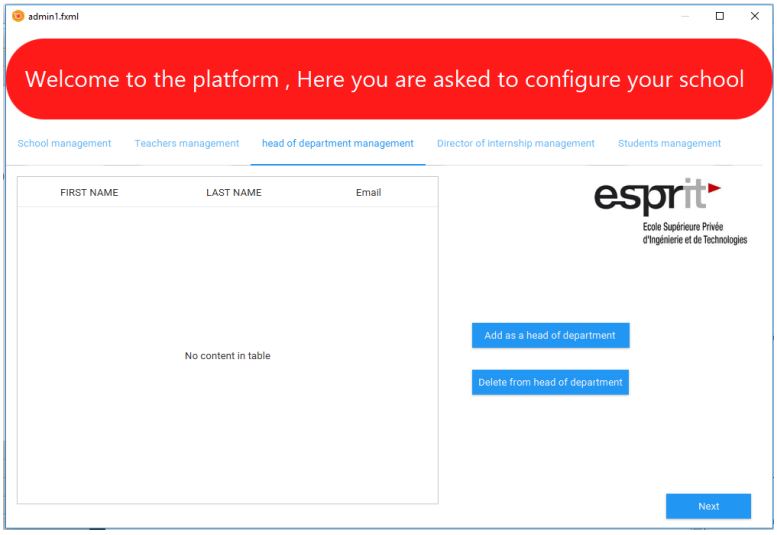

admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Name of the site :
EL GHAZELA
Name of the site :
EL CHARGUIA
Next

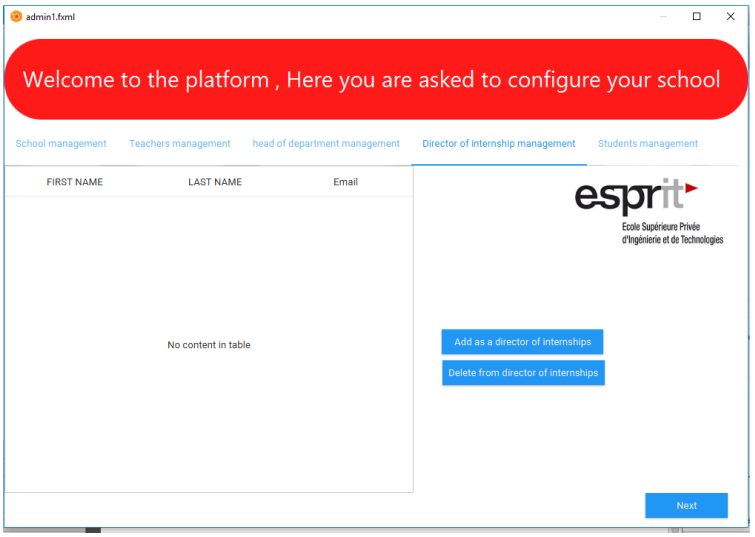

admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Name of department :
INFO
Name of department :
TELECOM
Name of department :
GENIE CIVIL
Name of department :
ELECTROMECANIQUE
Next

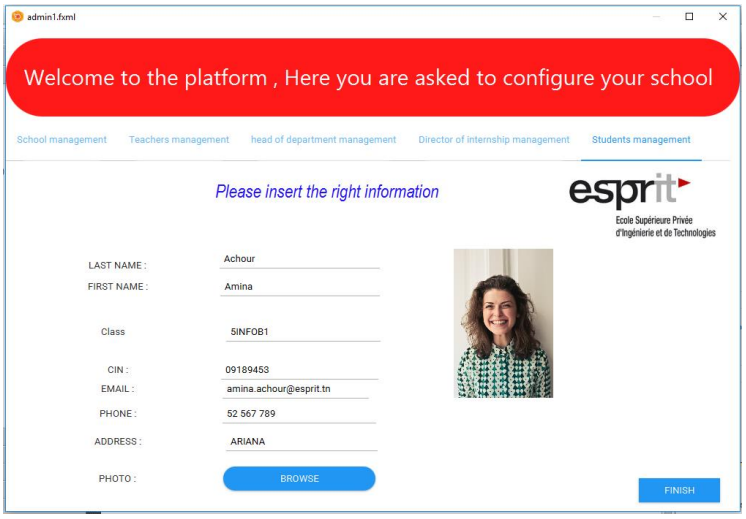

admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Name of the option :
BI
Name of the option :
INFOB
Name of the option :
TWIN
Name of the option :
DATA SCIENCE
Name of the option :
NIDS
Name of the option :
SIM
Next


admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
General information
Sites
Departments
Options
Categories
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Please insert the right information
Name of category :
JAVA
JAVA EE
C#
.NET
PHP
C++
Next


admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Please insert the right information
LAST NAME :
Ben Achour
FIRST NAME :
Amal
CIN :
09123453
PHONE :
25 567 789
ADDRESS :
ARIANA
EMAIL :
amal.benachour@esprit.tn
PHOTO :
BROWSE
Next


admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
FIRST NAME
LAST NAME
Email
No content in table
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Add as a head of department
Delete from head of department
Next


admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
FIRST NAME
LAST NAME
Email
No content in table
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
Add as a director of internships
Delete from director of internships
Next


admin1.fxml
Welcome to the platform , Here you are asked to configure your school
School management
Teachers management
head of department management
Director of internship management
Students management
Please insert the right information
esprit
Ecole Supérieure Privée d'Ingénierie et de Technologies
LAST NAME :
Achour
FIRST NAME :
Amina
Class
5INFOB1
CIN :
09189453
EMAIL :
amina.achour@esprit.tn
PHONE :
52 567 789
ADDRESS :
ARIANA
PHOTO :
BROWSE
FINISH

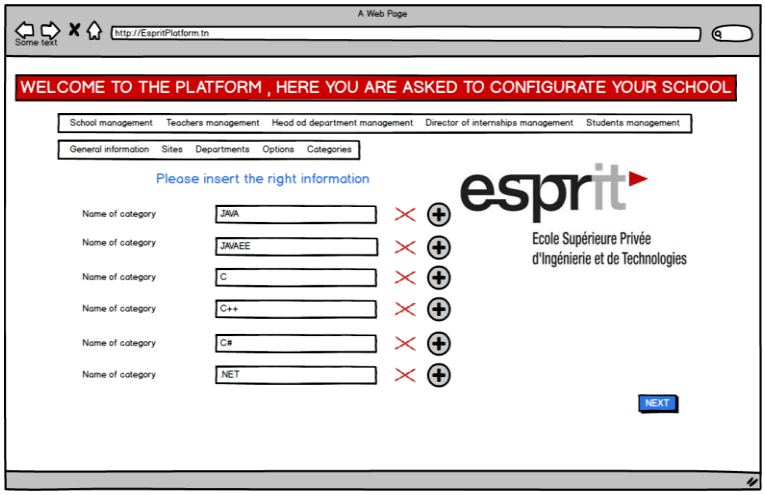
2.3.2. Web :

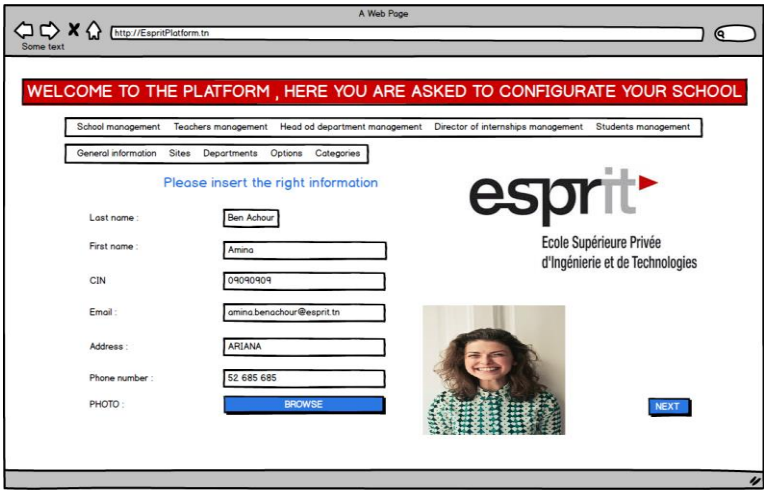

A Web Page
http://EspritPlatform.tn
Some text
WELCOME TO THE PLATFORM , HERE YOU ARE ASKED TO CONFIGURATE YOUR SCHOOL
School management
Teachers management
Head od department management
Director of internships management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
Name of the School :
ESPRIT SCHOOL OF ENGINEERING
LOGO :
BROWSE
Academic year :
2018/2019
Email :
esprit@esprit.tn
Address :
CHOTRANA 2
Phone number :
70 685 685
Number of sites :
2
NEXT
esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies

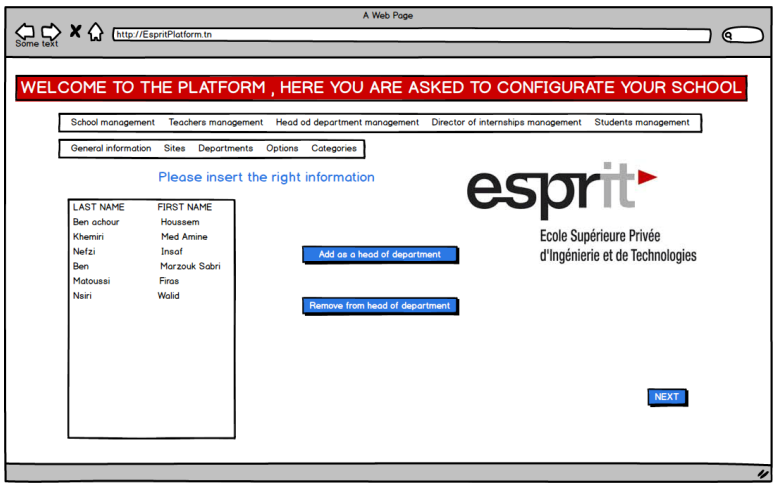

A Web Page
http://EspritPlatform.tn
Some text
WELCOME TO THE PLATFORM , HERE YOU ARE ASKED TO CONFIGURATE YOUR SCHOOL
School management
Teachers management
Head od department management
Director of internships management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
Name of Department
EL GHAZELA
Name of Department
EL CHARGUIA
NEXT
esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies

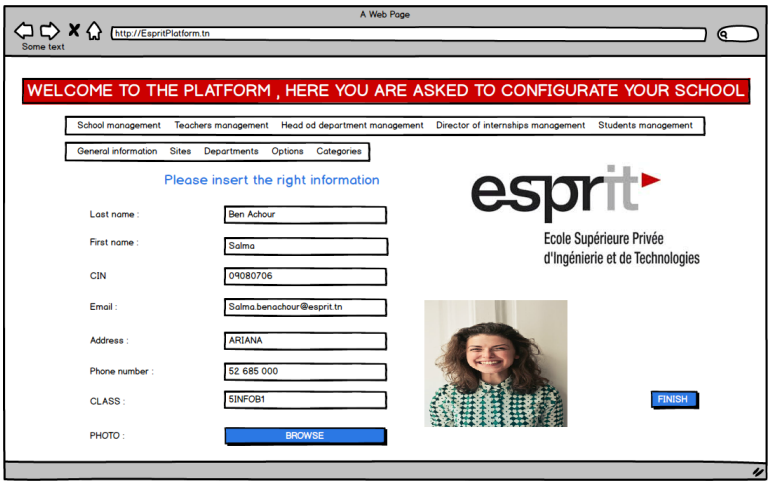

A Web Page
http://EspritPlatform.tn
Some text
WELCOME TO THE PLATFORM , HERE YOU ARE ASKED TO CONFIGURATE YOUR SCHOOL
School management
Teachers management
Head od department management
Director of internships management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
Name of Department
INFO
Name of Department
TELECOM
Name of Department
GENIE CIVIL
Name of Department
ELECTROMECNIQUE
NEXT
esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies


A Web Page
http://EspritPlatform.tn
Some text
WELCOME TO THE PLATFORM , HERE YOU ARE ASKED TO CONFIGURATE YOUR SCHOOL
School management
Teachers management
Head od department management
Director of internships management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
Name of option
BI
Name of option
INFOB
Name of option
DATA SCIENCE
Name of option
TWIN
Name of option
SIM
Name of option
NIDS
NEXT
esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies


A Web Page
http://EspritPlatform.tn
Some text
WELCOME TO THE PLATFORM , HERE YOU ARE ASKED TO CONFIGURATE YOUR SCHOOL
School management
Teachers management
Head od department management
Director of internships management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
Name of category
JAVA
Name of category
JAVAEE
Name of category
C
Name of category
C++
Name of category
C#
Name of category
NET
NEXT
esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies


A Web Page
http://EspritPlatform.tn
Some text
WELCOME TO THE PLATFORM , HERE YOU ARE ASKED TO CONFIGURATE YOUR SCHOOL
School management
Teachers management
Head od department management
Director of internships management
Students management
General information
Sites
Departments
Options
Categories
Please insert the right information
Last name :
Ben Achour
First name :
Amina
CIN
09090909
Email :
amina.benachour@esprit.tn
Address :
ARIANA
Phone number :
52 685 685
PHOTO :
BROWSE
NEXT
esprit
Ecole Supérieure Privée
d'Ingénierie et de Technologies





2.4. System sequence diagrams:

Use case: The admin configures the platform

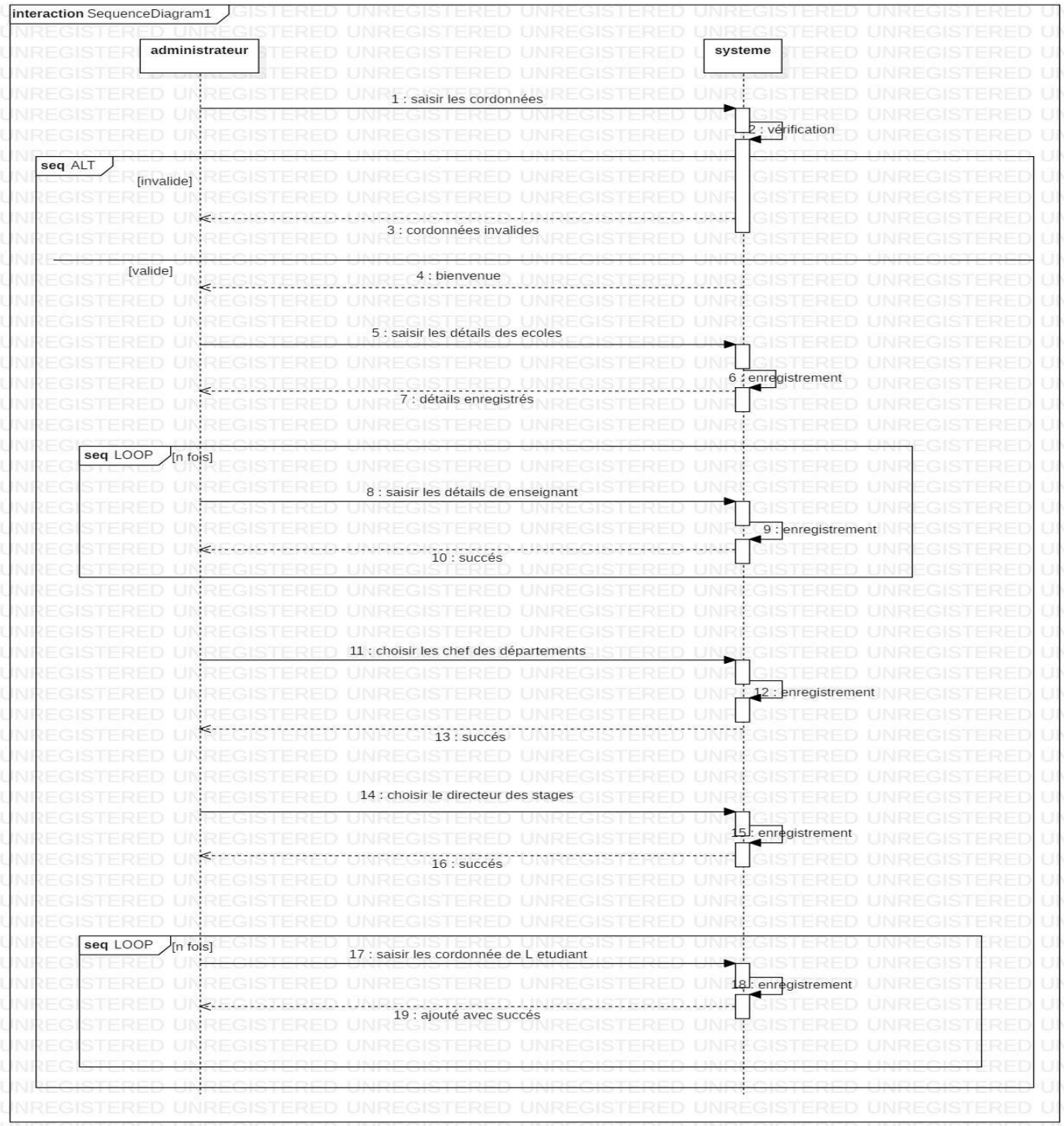

interaction SequenceDiagram1
administrateur
systeme
1 : saisir les cordonnées
2 : vérification
seq ALT
[invalide]
3 : cordonnées invalides
[valide]
4 : bienvenue
5 : saisir les détails des ecoles
6 : enregistrement
7 : détails enregistrés
seq LOOP
[n fois]
8 : saisir les détails de enseignant
9 : enregistrement
10 : succés
11 : choisir les chef des départements
12 : enregistrement
13 : succés
14 : choisir le directeur des stages
15 : enregistrement
16 : succés
seq LOOP
[n fois]
17 : saisir les cordonnée de L etudiant
18 : enregistrement
19 : ajouté avec succés

Figure 2

Use case: The training director adds a president to the thesis defense.

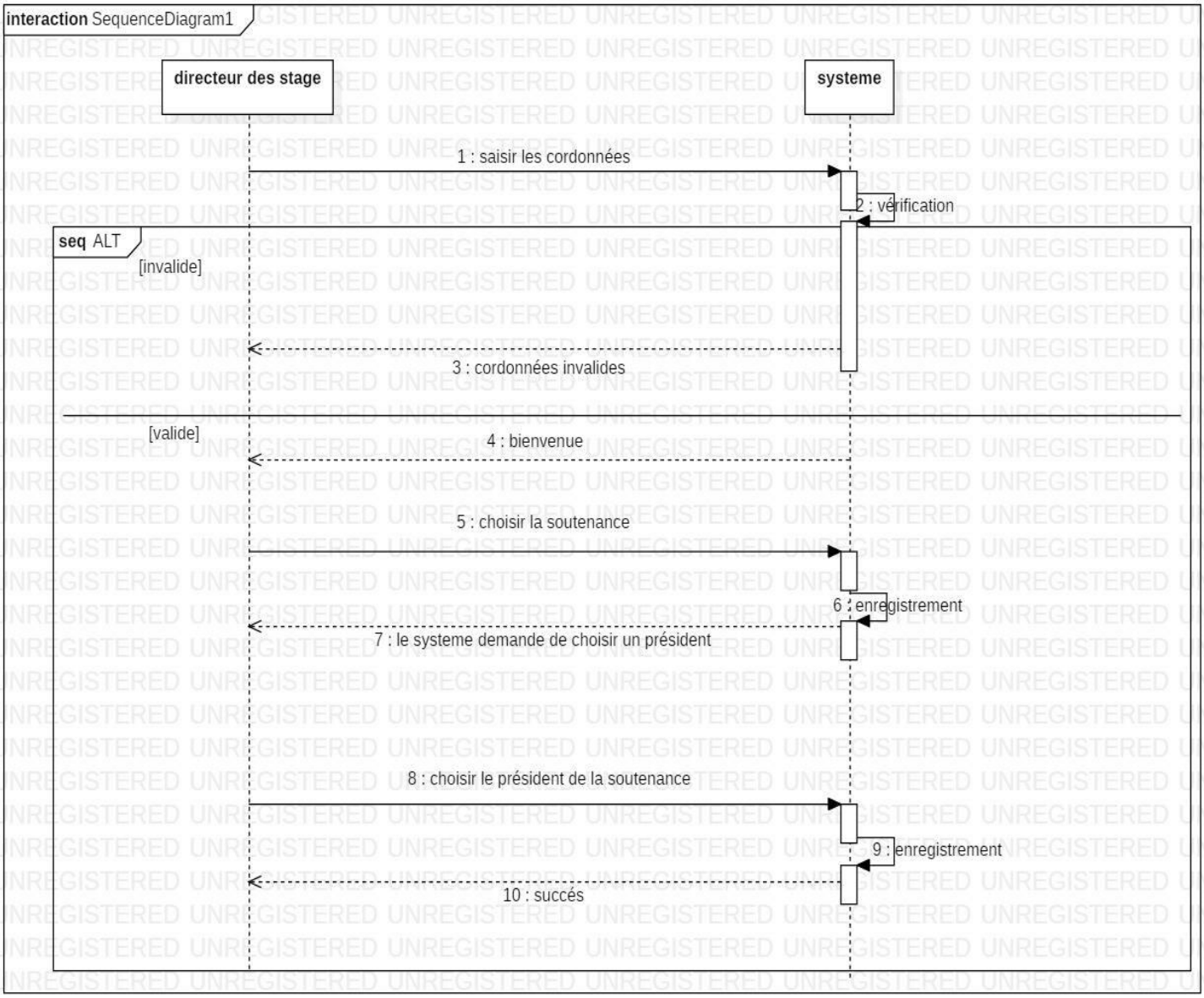


Figure 3

2.5. Diagram of analysis classes:

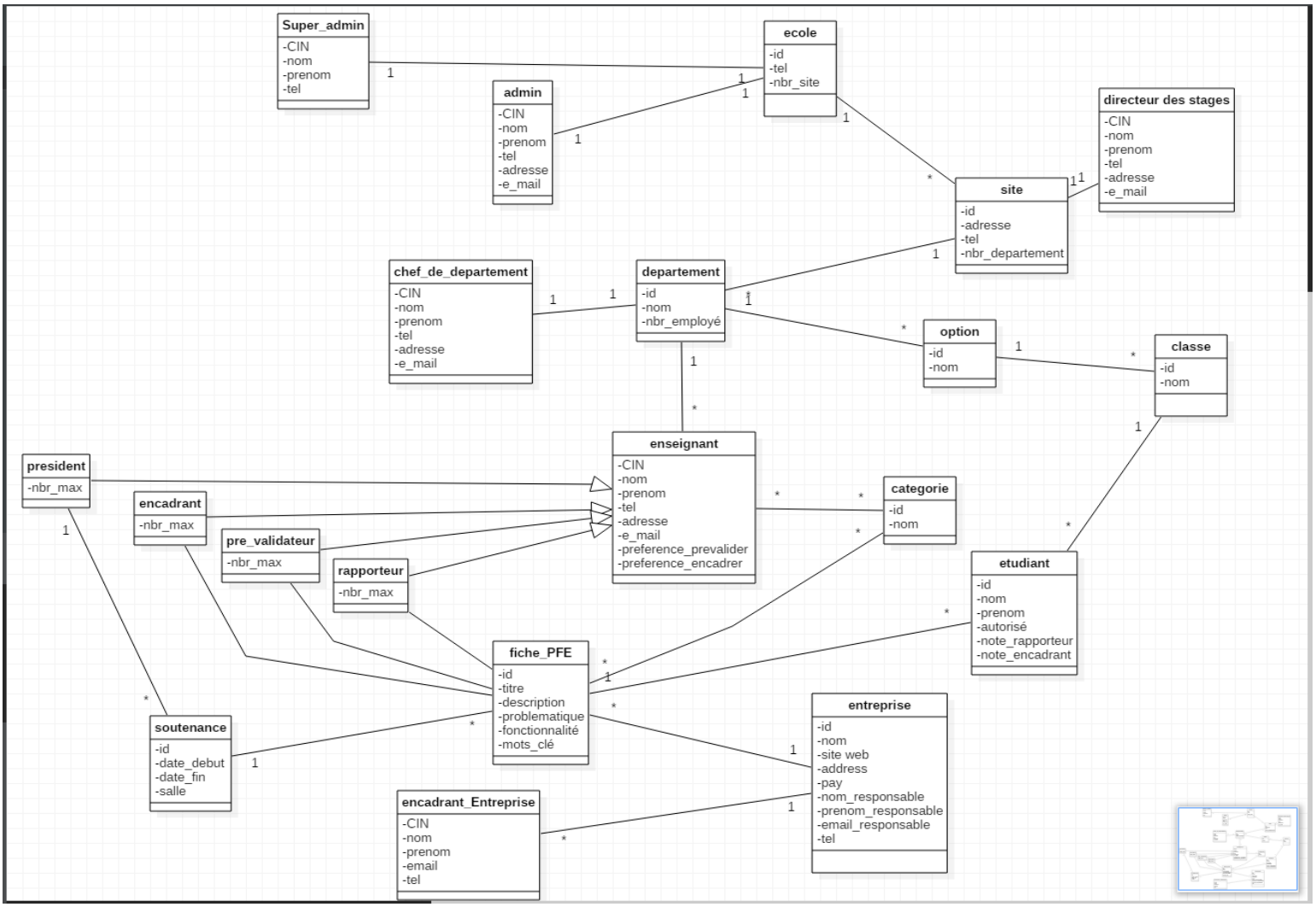


Figure 4

2.6. Global architecture of the application:

2.6.1. Global physical architecture of the application:

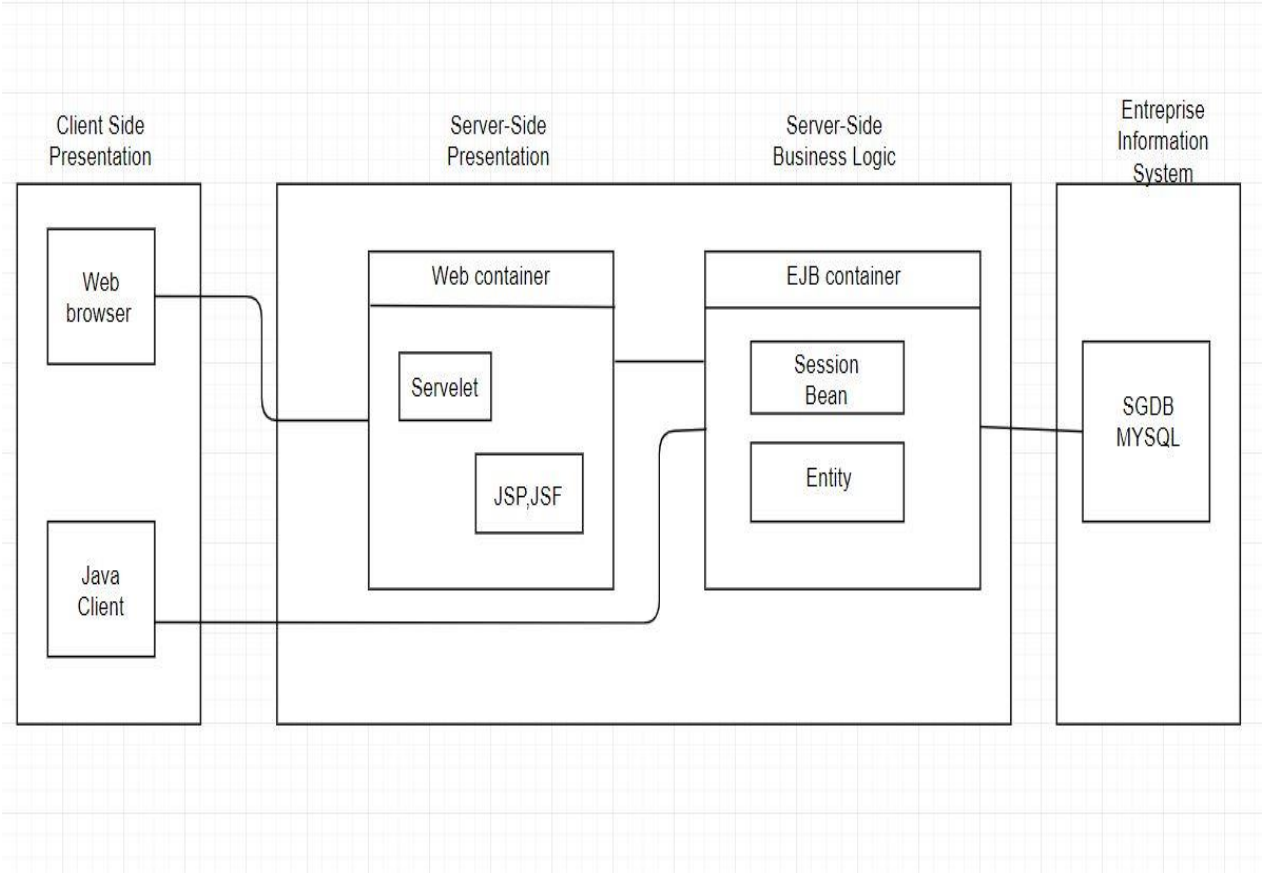


Figure 5

2.6.1. Global logical architecture of the application:

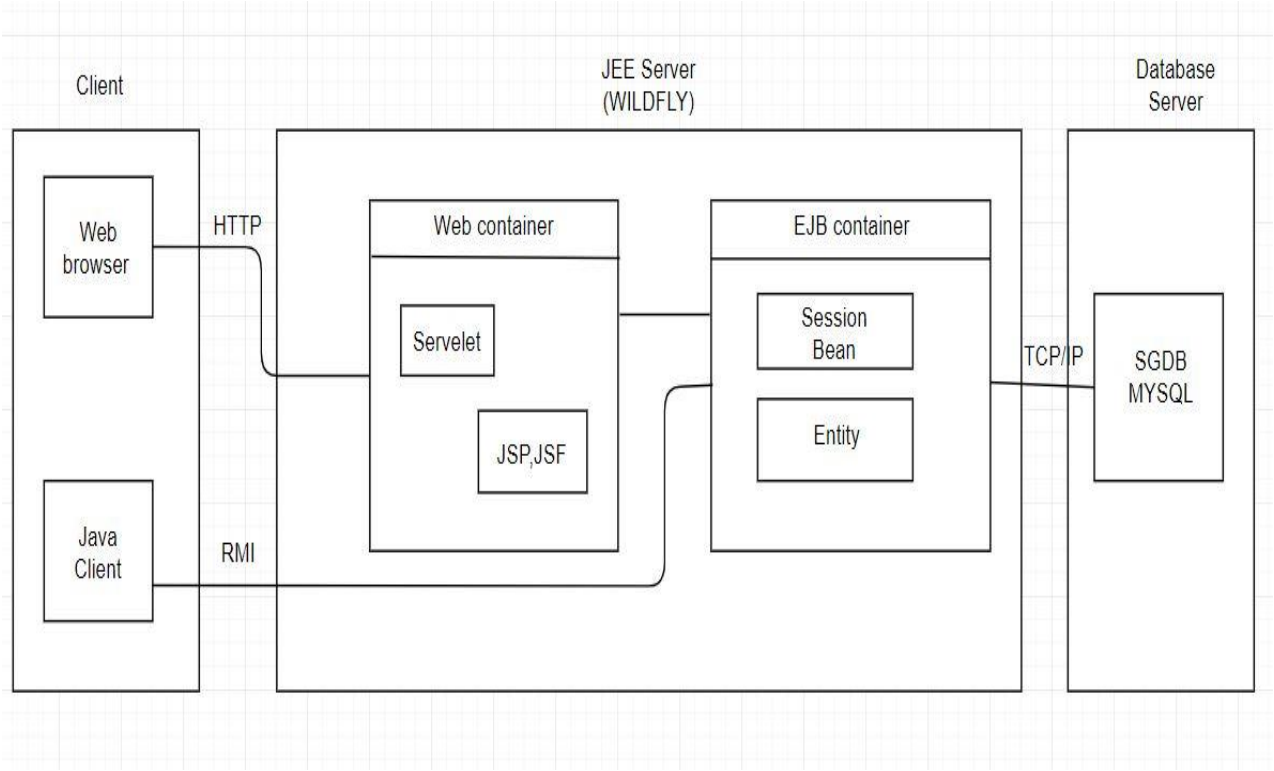


Figure 6

General Conclusion

In this project, our mission was to create a platform that unites all end of studies projects implicants and help them stay updated and connected.

We are perfectly satisfied with the level of planning that we made, and we are going to follow it completely.

On the personal level this project will help us to learn more about JAVAEE and will allow us to gain experience in this field.