Software Requirements Specification

for

ESPE MOBILE APPLICATION

**Version 1.0 approved**

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

The software currently used in most universities in the sense of information and utilities are completely obsolete, have a confusing and a disorderly structure, the information provided is either very little or nothing, not to say outdated.

Forcing students just to gather information on certain academic procedures or simply to consult, they have to go to the university in person and get the information they were looking for. The institution, having a system that is practically useless, has to resort to the use of social networks as official information media and not its website as planned.

We need to know how to develop an application, as that is our starting point. We also need to have adequate knowledge of the university facilities, as well as the knowledge to design a map.

## Document Conventions

Each requirement has its own priority because based on it the project must be realized and by knowing the customer's standards, we can also be able to improve our program, so with this brief description we are able to highlight the importance of each requirement and the weight it makes at the time of executing the program process, we cannot ignore them.

## Intended Audience and Reading Suggestions

The following project is a guide for different users on the creation and implementation of an application for ESPE University, we are totally open to suggestions from developers, project managers, marketing staff, users, testers, and documentation writers as developers, project managers, marketing staff, testers, and documentation writers but above all to customer criticism, we will be better with all comments.

## Product Scope

The project of the creation of a software is to improve the inclusion of students to the university providing more detailed information processes, interactive maps, mailbox sending and delivery of message, greater interactivity between students and even better connection with teachers, also have a calendar linked to the app, so with this we can help the student life is much more comfortable and even more organized with respect to their schedules, we also consider the possibility of implementing forums for free speech or even debates but that side is still in process.

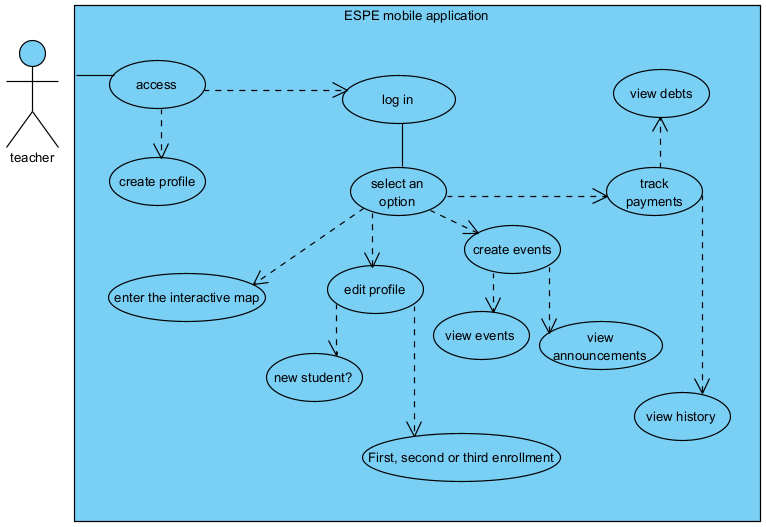
# Overall Description

## Product Perspective

The university handles a lot of information. It has a website in fact, but nothing is clear. It's a bit complicated to find the information we want, sometimes it's not even there, so we can't solve our doubts.

The website feels like a dead zone. You never know if there is activity or not, if the information already published is recent or if it needs to be updated. This is where the idea of this much more interactive application with everyone is born, it will be a replacement for the existing website.

## Product Functions



## User Classes and Characteristics

Students are the main users, especially new entrants who feel quite disoriented about how the university is doing. But it will not be exclusively for them, but also for the rest of the students who want to manage their pending activities in a much more orderly way.

Teachers will also be able to use the app to keep in touch with their students, engineers keep an orderly record of grades and homework due, plus there is always a topic or two that they want to share with their students to broaden their knowledge.

Finally, we have the university authorities, who are looking to share some information about events for the entire university community, conferences and so on.

## Design and Implementation Constraints

*Constraints are time and resources, quality may also be a constraint as this can only be roughly estimated. The software is going to be quite flexible but not unlimited because of the resource issue. The requirements can be quite demanding so the development time can stretch too far and setting a deadline will be one of the complications.*

*Testing too, depending on the type of tests to be run.*

*And finally, we have the requests for new features depending on the needs.*

## User Documentation

*The application will obviously have a short tutorial. It will be an introduction to the more general functions.*

*It will also have a FAQ section where there will be much more detailed information about each function and how to use it properly.*

## Assumptions and Dependencies

*The availability and good performance of members is assumed for the project. It also takes into account budget constraints and the accuracy of the dates set.*

*Accuracy of deadlines.*

*Since it is an application that must be continuously active, users must have access to the internet.*

# External Interface Requirements

## User Interfaces

Our user interface will be clear to prevent the user from making mistakes while interacting with it with simple options for it, it will not show unnecessary information so as not to confuse it, it will also be very flexible having options to undo actions if it gets to make a mistake in something and finally it will be very attractive to the eye, having characteristic colors of the university such as the range of greens

## Hardware Interfaces

Here are simple options such as user input and password or the creation of a profile, it will ask you for your identification number and the application will provide you with a temporary password, within the application you will be able to interact with the different menus and their options, for example the menu of chat with all the chats you have there with teachers and other students

## Software Interfaces

Here we will show the user which version of our application is using and the processes that our application is doing will also be shown, loading screens when looking for information from the database.

## Communications Interfaces

Being an application for the ESPE we will use its own servers to store student data, with institutional emails we can access forms through google forms and being an application that shows you data stored on a server you must have access to the internet, but the documents you download will remain stored on your device.

# System Features

The problem to which we will propose a solution with this project is the following, begins when a new student enters The University of The Armed Forces ESPE,enters its facilities for the first time and realizes that the campus is extensive and it would be so easy to get lost in it. That makes it difficult to attend classes on time or just to get to know the place where they will spend most of their day. That is why we have thought of an interactive application that shows the classrooms and places of coexistence in the university. This will facilitate mobility within these facilities and the agility of students to go to their classes and in the corridors of the university.

## System Feature 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case Name: | Track payment for students. | | | |
| Identifier | REQ-01 | | | |
| Description | The user will be able to access an up-to-date payment tracking history by entering their personal data and complete outstanding payments if any. | | | |
| Goal | The students have to enter his or her information in order to complete any outstanding payments or to check the status of payments. | | | |
| Status: | - | | Version: | 1.0 |
| Autor: | Santórum Sandoval Thais Yetsalem | | | |
| Creation date | *11/12/2021* | | Modified date | *11/12/2021* |
| Pre conditions | It is assumed that the student is registered in the system. It is assumed that the student is logged into the system.It is assumed that there is a student database. | | | |
| **Basic flow**  The password and the user are entered, the application validates the entered data and if they are correct it allows access to the system. | | | | |
| Actor | | System | | |
| *User: Students.* | | 1. Enter your username and password.  2. Data verification.  3. Log in to the system.  4. Access the payment section.  5. Review the payment history.  6. Payment selection.  7. Selection of payment method.  8. Complete payment.  9. Generate a payment receipt. | | |
| **Alternative Flow** | | | | |
| If the student is not in the database, a customer service option will be presented immediately. If the student has problems with their username and password, the recovery option via institutional mail will be displayed. | | | | |
| Post conditions:  By logging into the application the student will be able to access general features, nothing involving a customer database until he logs in. | | | | |

## 

**System Feature 2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Use Case Name: | Enter the interactive map | | | | |
| Description | The interactive maps is a tool that will help us in the location of green places, classrooms and common areas within the institution which will present us with a detailed image of the university | | | | |
| Goal | The main objective of the interactive map is to facilitate and speed up the movement of students and teachers within the institution, either between hours or for new entrants | | | | |
| Status: | - | | Version: |  | 1.0 |
| Autor: | Daniela Camila Ramos | | | | |
| Creation date | *11/12/2021* | | Modified date |  | *11/12/2021* |
| Pre conditions | The user will need to have an account on the platform and then see the section started on it; Another of the conditions to use the interactive map will be to have the GPS of your device turned on in order to allow the operation of the map through google | | | | |
| Basic flowThe password and the user are entered, the application validates the data entered and if they are correct allows access to the system and the location can be reviewed in real time within the university | | | | | |
| Actor | | System | | | |
| *User: Students.* | | 1. Enter the password and username.2. Confirmation of the data.3. Access to the system4. Review interactive map.5. Check location where you want to go6. Select place7. Confirm | | | |
| Alternative Flow | | | | | |
| The user does not have an active or valid account will not be able to enter the map; Nor will you be able to enter if your GPS is not active or your Google services will not be able to access both the interactive map and the platform itself. | | | | | |
| Post conditions: The conditions for the map to be used satisfactorily for the user would be to have an active  account, it must be registered in the university's data and at the time of using the interactive map it must be within the institution | | | | | |

### 

## System Feature 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case Nam | view for students with second tuition | | | |
| Description | The system will have a filter for students with second tuition and will help separate from new students | | | |
| Goal | The system will help the teachers know which students are first tuition and second tuition | | | |
| Status: | - | | Version: | 1.0 |
| Autor: | Juan Diego Quimbiulco | | | |
| Creation date | *11/12/2021* | | Modified date | *11/12/2021* |
| Pre conditions | The mobile application must have the students data and payment information registered about the institution fee. | | | |
| **Basic flow**  The password and the user are entered, the application validates the entered data and if they are correct it allows access to the system. | | | | |
| Actor | | System | | |
| *User Student and Teacher* | | 1. Enter Password and Username.  2. Confirmation Of the data.  3. Access to the system  4.Review student seccion.  5.Review student fee  6.Review second tuition  7.Confirm | | |
| **Alternative Flow** | | | | |
| If the student puts the user or the password wrong, one message will pop up,telling the student that some data was written incorrectly,and there will be the option to send an email to remember the user or the password. | | | | |
| Post conditions:  The student must be in the institution's database or the system will send a message telling the student to create an account.  If the students don't pay the fee,the system will send a message telling them that it is late with the payment. | | | | |

## 

# Other Nonfunctional Requirements

## Performance Requirements

*The system needs to have a smooth and fast interface, especially in the section of uploading assignments and sending homeworks, since the platform cannot be slow in performing this task for time reasons.*

*It must also have compatibility with most modern mobile devices so that it does not cause performance problems.*

## Safety Requirements

*There could be cases of leakage of private personal information if the administrative rights are held by a person who does not know the extent of their administrative holdings.*

*There could also be alteration of tuition payments and embezzlement of funds using the power of the platform, these are mostly ethical issues that will depend on the morals of the person.*

## Security Requirements

*-Personal information must be stored on a private server of the University , which only the institution and the owners of the information will have access to it.*

*-CAPCHA service will be used to avoid the use of bot on the platform and to prevent information theft.*

*-We will use a two-factor authentication process to maximize security on the platform.*

*-We will also have a log of IP addresses so that if someone accesses from another network or device they will have to log in again or the account will be blocked if suspicious activity is registered.*

## Software Quality Attributes

*The software must be compatible on all browsers and mobile devices.*

*The software must be able to contain a large number of people in real time using the platform.*

*The software must be easy to use and as intuitive as possible.*

*The software must be available around the clock and every day of the year except maintenance days.*

## Business Rules

*Administrator: Will have full control of the platform and can edit, create, modify, and delete sections that are within the capacity of the platform.*

*Teachers: Can make event announcements, meetings, create class groups, upload assignments, tests, documents, add or remove students from their list, request personal information from students, among others.*

*Students: They can review their pending activities, contact their teacher and classmates, upload assignments, documents, request reinforcements, suggestions, among others.*

# Other Requirements

*Permission will be required from students and teachers for the use of their personal information to the institution.*

*Permission will be required from device information to collect platform usage data.*

*Location permissions will be required for the use of GPS to make use of the interactive map.*

**Appendix A: Glossary**

*IP:Internet Protocol*

*CAPTCHA:Completely Automated Public Turing test to tell Computers and Humans Apart*

*GPS:Global Positioning System*