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| Conservatoire national des arts et métiers  ISSAE Cnam Liban - département informatique  Functional Specifications Document  CNAM Attendance |

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# Introduction

The CNAM Attendance is an application that will help educational institutions and students handle the events attendance activity with ease, using a web application along with a mobile application that are built using recent technologies in the software development field.

## Purpose of the document

The Functional Specification Document is a document that provides detailed information on *how* the system solution will function and the expected behavior. Included in this document will be the detailed functional requirements including use cases, system inputs and outputs, process flows, diagrams, and mock ups.

## Project Scope

In this section, we are going to define the project boundaries that put the project team in sync and prevent unauthorized tasks from popping up within the project. This project is for the creation of an attendance web application to be used by students and the educational institution they belong to along with a mobile app that will be used by the students for location tracking/check-in purposes. The mobile app will be for Android based systems only. The user interface will be designed as part of the project but will contain, as a minimum, the ability to create a Person (Teacher, Student), create a Course, assign students to a Course, and check the attendance. It will be a web application whereby the Student or Teacher can log in to view their corresponding Dashboards. The app must include a tutorial to make it easy to get started. Also, a deployment tutorial will be included as a guide to deploy the application and run it in the Cloud. Only deployment to Google Cloud will be covered in the provided tutorial.

## Scope of the document

This FSD is created for both the web and mobile parts of the project. No multiple FSDs are created for the project.

## Related documents

|  |  |  |
| --- | --- | --- |
| **Component** | **Name (with link to the document)** | **Description** |
| N/A | N/A | N/A |

## Terms/Acronyms and Definitions

|  |  |  |
| --- | --- | --- |
| **Term/Acronym** | **Definition** | **Description** |
| User |  |  |
| Person |  |  |
| Student |  |  |
| Teacher |  |  |
| WS | Web Services |  |
| FSD | Functional Specifications Document | Acronym used to refer to the current document. |

## 1.6 Risks and Assumptions

The application will be using third-party commercial components like Google Maps API, the malfunctioning of this component could affect the functional design of the system.

The Operating environment must be able to run applications in the Java ecosystem.

The use of old and outdated browsers could affect the functional design of the system. The preferable browser to run the web app is Chromium, or the recent Brave browser.

# System/ Solution Overview

## Context Diagram/ Interface Diagram/ Data Flow Diagram, Application Screen Flow, Sitemap, Process Flow

## 2.2 System Actors

### 2.2.1 User Roles and Responsibilities / Authority Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User/Role** | **Example** | **Frequency of Use** | **Security/Access, Features Used** | **Additional Notes** |
|  |  |  |  |  |

## 2.3 Dependencies and Change Impacts

### 2.3.1 System Dependencies

### 2.3.2 Change Impacts

# Functional Specifications

## 3.1 <Title>

### 3.1.1 Purpose/ Description

### 

### 3.1.2 Use case

|  |  |
| --- | --- |
| **UC-1** |  |
| **Primary Actor(s)** |  |
| **Stakeholders and Interest** |  |
| **Trigger** |  |
| **Pre-conditions** |  |
| **Post-conditions** |  |
| **Main Success Scenario** |  |
| **Extensions** |  |
| **Priority** |  |
| **Special Requirements** |  |
| **Open Questions** |  |

### 3.1.3 Mock-up

### 

### 3.1.4 Functional Requirements

|  |  |  |
| --- | --- | --- |
| **Spec ID** | **Specification Description** | **Business Rules/ Data Dependency** |
|  |  |  |

### 

### 3.1.5 Field level specifications

*<Specify all the field data elements related to the functional requirement in both tables below.>*

**Form Elements:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Call-out** | **Field Label** | **UI Control** | **Mand?** | **Editable** | **Data Type** | **Value Set** | **Default Value** | **Data Example** | **Data Source** |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

**Form Business Rules and Dependencies:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Label** | **Validation / Business Rules** | **Error Messages** | **Data Dependencies** | **Additional Info/ Notes** |
|  |  |  |  |  |
|  |  |  |  |  |

**Buttons, Links and Icons:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Button, Link, Icon Label** | **OnClick Event** | **Other Event** | **Visible** | **Enabled Vs Disabled** | **Navigate To** | **Validation** | **Dependencies** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

# System Configurations

# Other System Requirements/ Non-Functional Requirements

# Reporting Requirements

# Integration Requirements

## Exception Handling/ Error Reporting

|  |  |  |  |
| --- | --- | --- | --- |
| **Exception/ Error ID** | **Error** | **Cause** | **Solution Strategy** |
|  |  |  |  |

# Data Migration/ Conversion Requirements

## Data Conversion Strategy

## Data Conversion Preparation

## Data Conversion Specifications

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **Source Data Element** | **Target** | **Target Data Element** | **Conversion Rules** | **Notes** |
|  |  |  |  |  |  |

# References

# Open Issues

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Issue ID** | **Issue** | **Raised By** | **Raised On** | **Solution/ Decision** | **Resolved By** | **Resolved On** | **Status** |
|  |  |  |  |  |  |  |  |

# Appendix