

Specifying Software Requirements

**Project: MDHMS: Military Dining Hall Management
System**

Revision 1

Document file

Date	Revision	Author	Verified dep. quality.
25/5/2024	Rev 1.	The Java Bandits	

Document validated by the parties on date: 25/05/2024

By the customer	By the supplier company
Fdo. D./ Mrs. [Nombre]	Fdo. D./Dña [Nombre]

Content

DOCUMENT FILE	2
CONTENT	3
1 INTRODUCTION	4
1.1 Purpose	4
1.2 Scope	4
1.3 Staff involved	
1.4 Definitions, acronyms and abbreviations	4
1.5 References	4
1.6 Summary	
2 OVERVIEW	5
2.1 Product Outlook	5
2.2 Product Functionality	5
2.3 User Features	5
2.4 Restrictions	5
2.5 Assumptions and dependencies	
2.6 Foreseeable evolution of the system	
3 SPECIFIC REQUIREMENTS	6
3.1 Common Interface Requirements	
3.1.1 User Interfaces	
3.1.2 Hardware Interfaces	
3.1.3 Software Interfaces	
3.1.4 Communication Interfaces	
3.2 Functional Requirements	7
3.2.1 Functional Requirement 1	7
3.2.2 Functional Requirement 2	7
3.2.3 Functional Requirement 3	7
3.2.4 Functional Requirement n	
3.3 Non-functional requirements	8
3.3.1 Performance Requirements	8
3.3.2 Safety	8
3.3.3 Reliability	8
3.3.4 Availability	8
3.3.5 Maintainability	9
3.3.6 Portability	9
4 APPENDICES	9

1 Introduction

1.1 Purpose

Purpose of the document

The objective of this document is to define and specify the requirements for the development of a military dining management system (MDHMS) for the Army. military dining room management system (MDHMS) for the special forces brigade. This system aims to streamline mess hall operations, add diner notification features, manage the menu, and improve efficiency in the management of meals and ensure secure and simple payment processes.

Target audience

The document is aimed at

Software developers in charge of implementing the system.

Administrative staff of the brigade responsible for canteen management and in charge of integrating the system with the banking and identification platforms.

1.2 Scope

Product Identification

The product to be developed, known as the 'Military Dining Hall Management System' (MDHMS), will automate and enhance the management of the dining facilities within the special forces brigade. This system will handle meal registrations, electronic payments, and consumption reporting, ensuring alignment with the operational objectives and security protocols of the brigade.

Consistency with similar definitions of higher-level documents

This document is consistent with the definitions and guidelines set forth in the description of the Special Forces Brigade Dining Management System, ensuring alignment with organizational and operational objectives.

1.3 Definitions, acronyms and abbreviations

MDHMS: Military Dining Hall Management System.

RF: Functional Requirement.

RNF: Non-functional requirement.

ID: Identification.

1.4 References

Reference	Title	Route	Date	Author
[Ref1]	System Description	/path/description	2024-05-01	F.E. Brigade
[Ref2]	Safety Guidelines	/route/safety	2024-05-15	IT Dept.
[Ref3]	Banking Specifications	/route/bank	2024-05-20	XYZ Bank

2 Overview

2.1 Product Outlook

The MDHMS is a standalone product designed to automate the canteen management process in the special forces brigade

2.2 Product Functionality

The QMS should provide the following functionalities:

- Advance electronic payments.
- Digital record of food consumption.
- Automation of the daily registration of diners.
- Generation of consumption reports.
- Push notifications to users.

2.3 User Features

User Type	Commensal (Military and public servants)	Administrator and General administrator	Military chef
Formation	Basic and higher education	Higher education	Gastronomy
Skills	Basic Device Usage	Systems & Data Management	Culinary skills
Activities	Consumption Registration, Electronic Payments	Consumption monitoring, reporting	Create menus for the dishes and prepare the food.

2.4 Restrictions

- Development methodologies: An agile methodology will be used.
- Programming languages: Languages such as Java and JavaScript will be preferred.
- Safety Standards: Compliance with brigade safety regulations.
- Hardware: The system must be compatible with standard mobile devices and workstations.
- Operating system: Compatible with Windows and Android.

2.5 Assumption and dependency

The program will assume that each user has an ID, email, password and rank. When an account is created the new users will always be of type commensal, and when you want to add an administrator, the general administrator will change the account type to one of type commensal from the account of the person who will become an administrator. The general administrator's account and the chef's account will be pre-recorded in the program's database, so no more can be added.

2.6 Future requirements

A new class will be added for the payment of reserved days, in addition to being able to add and subtract balance within each account, for now this data will be resolved externally and not within the program.

As well a new class will be added in the future for the generation of a consumption report.

The features of requirement N.-5 to notify the customer if the electronic payment was successful and the delivery of the bill of the consumption will be added in the future.

2.7 External Interfaces

It will use a calendar and systems to control the time of registration of reservations.
In addition to being able to put a range to the days to be able to reserve, as well as to be able to put the menu depending on the months and to be able to update them.

3 Specific Requirements

Requirement Number	RF 1
Requirement Name	E-Pay
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RF 2
Requirement Name	Digital food consumption track
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RF 3
Requirement Name	Automation of daily logging
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RF 4
Requirement Name	Consumption log
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RF 5
Requirement Name	Notify
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RNF 1
Requirement Name	Load Capacity
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input type="checkbox"/> High/Essential <input checked="" type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RNF 2
Requirement Name	Secure data
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RNF 3
Requirement Name	Measure failure
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff

Priority of the requirement	<input type="checkbox"/> High/Essential	<input checked="" type="checkbox"/> Medium/Desired	<input type="checkbox"/> Low/Optional
-----------------------------	---	--	---------------------------------------

Requirement Number	RNF 4
Requirement Name	Ensure system availability
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input checked="" type="checkbox"/> High/Essential <input type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RNF 5
Requirement Name	Facilitate maintenance
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input type="checkbox"/> High/Essential <input checked="" type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

Requirement Number	RNF 6
Requirement Name	Port software
Guy	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction
Source of Requirement	Administrative staff
Priority of the requirement	<input type="checkbox"/> High/Essential <input checked="" type="checkbox"/> Medium/Desired <input type="checkbox"/> Low/Optional

3.1 Functional Requirements

3.1.1 Functional Requirement 1

- Requirement Number: RF 1
- Requirement Name: E-Pay
- Type: Requirement
- Requirement Source: Administrative Staff
- Requirement Priority: High
- Description: The system should allow users to make advance electronic payments through a mobile app or banking platform.

3.1.2 Functional Requirement 2

- Requirement Number: RF 2
- Requirement Name: Digital food consumption track
- Type: Requirement
- Requirement Source: Administrative Staff
- Requirement Priority: High
- Description: The system should allow users to record the days they will consume food one or two days in advance.

3.1.3 Functional Requirement 3

- Requirement Number: RF 3
- Requirement Name: Automation of daily logging
- Type: Requirement
- Requirement Source: Administrative Staff
- Requirement Priority: High
- Description: The system should automate the daily comparison, generating automatic reports on food consumption.

3.1.4 Functional Requirement 4

- Requirement Number: RF 4
- Requirement Name: Consumption log
- Type: Requirement
- Requirement Source: Administrative Staff
- Requirement Priority: High
- Description: The system should automatically make a bill about the electronic payment made by the user.

3.1.5 Functional Requirement 5

- Requirement Number: RF 5
- Requirement Name: Notify
- Type: Requirement
- Requirement Source: Administrative Staff
- Requirement Priority: High
- Description: The system should automatically notify the user what food will be served on what days and it also must notify if the electronic payment was successful, delivering the bill of the consumption log in the process.

3.2 Non-functional requirements

3.2.1 Performance Requirements

- Performance Requirements
- Requirement Number: RNF 1
- Requirement Name: Load Capacity
- Type: Requirement
- Requirement Source: Technical Staff
- Requirement Priority: Medium
- Description: The system must support at least 200 users simultaneously, with response times of less than 2 seconds for 95% of transactions.

3.2.2 Safety

- Requirement Number: RNF 2
- Requirement Name: Secure data
- Type: Requirement
- Requirement Source: IT Dept.
- Requirement Priority: High
- Description: The system must use cryptographic techniques to protect payment and consumption data, and perform regular audits to ensure the integrity of the system.

3.2.3 Reliability

- Requirement Number: RNF 3
- Requirement Name: Measure failure
- Type: Requirement
- Requirement Source: Technical Staff
- Requirement Priority: Medium
- Description: The system must have a failure rate of less than 0.1% per month.

3.2.4 Availability

- Requirement Number: RNF 4

- Requirement Name: Ensure system availability
- Type: Requirement
- Requirement Source: Technical Staff
- Requirement Priority: High
- Description: The system must be available 99.5% of the time, with a maximum downtime of no more than 3 hours per month.

3.2.5 Maintainability

- Requirement Number: RNF 5
- Requirement Name Facilitate maintenance
- Type: Requirement
- Requirement Source: Technical Staff
- Requirement Priority: Medium
- Description: The system must allow maintenance by trained technical personnel, with scheduled maintenance tasks to avoid interruptions during operating hours.

3.2.6 Portability

- Requirement Number: RNF 6
- Requirement Name: Port software
- Type: Requirement
- Requirement Source: Technical Staff
- Requirement Priority: Medium
- Description: The system must be portable to other platforms, with 80% of the code independent of the server and developed in portable languages such as Java.

4 Appendices

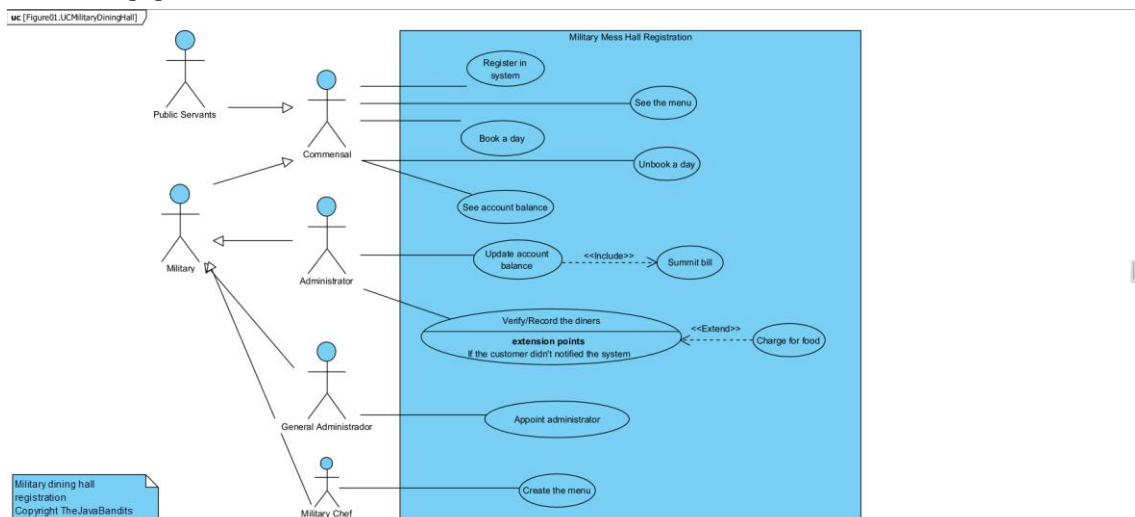


Illustration 1: Use case diagram

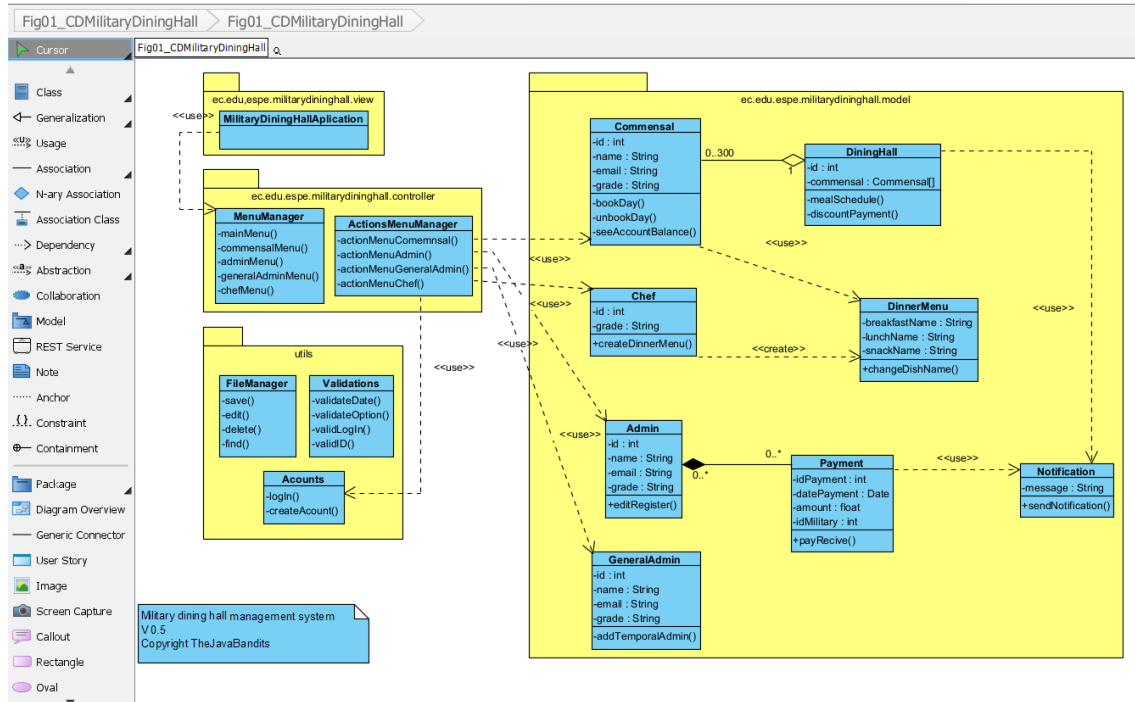


Illustration 2:Class diagram