

# CountMeIn

Introdução à Engenharia de software

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Bernardo Figueiredo	108073



# Team and Roles

## Team Manager

Alexandre  
Cotorobai

Responsible for task distribution, meeting deadlines and orienting the team in the right direction

## Product Owner

Hugo  
Correia

Represents the main interests of the stakeholders and clarifies the project features/requirements

## Architect

Joaquim  
Rosa

Deep understanding of the proposed architecture and supporting technologies.

## DevOps

Bernardo  
Figueiredo

Responsible for the infrastructure and its configuration



# Product Concept

CountMeIn is a space management service designed for businesses looking to optimize customer flow and floor space usage. It combines real-time data from cameras with an autonomous door system and graphical displays for instant feedback. The service includes an online platform for custom settings and a private API for seamless integration with client platforms.



# Project Objectives

## Space Optimization

Maximise utilisation of limited spaces by managing real-time occupancy

## Integration and Compatibility


Ensure seamless integration with existing security and monitoring infrastructures and external systems via private API

## User Interactivity

Provide a local graphical interface that displays updated information on room occupancy and capacity

## System Performance

Maintain efficient real-time data processing for timely updates on occupancy status, ensuring high availability and fault tolerance



# Personas



Dona Celeste

## Demographics:

- **Age:** 52
- **Role:** Library Administrator

**Motivations:** Committed to creating an organised and inviting library atmosphere, values the CountMeIn system for managing occupancy and maintaining an optimal study environment.



Sofia

## Demographics:

- **Age:** 22
- **Role:** Software Engineering

**Motivations:** Sofia is driven by her ambition to excel in software engineering. She values a study space that minimises distractions and maximises her productivity. Tools and services that can streamline her study sessions and enhance her focus are essential to her daily academic routine.

# User Storys



## Local Occupancy Display Check

As a library patron,  
I want to be able to check  
the library's space  
occupancy through a local  
display at the entrance,  
So that I can immediately  
know if there is available  
space for me to use.



## Space Optimization for Enhanced Student Experience

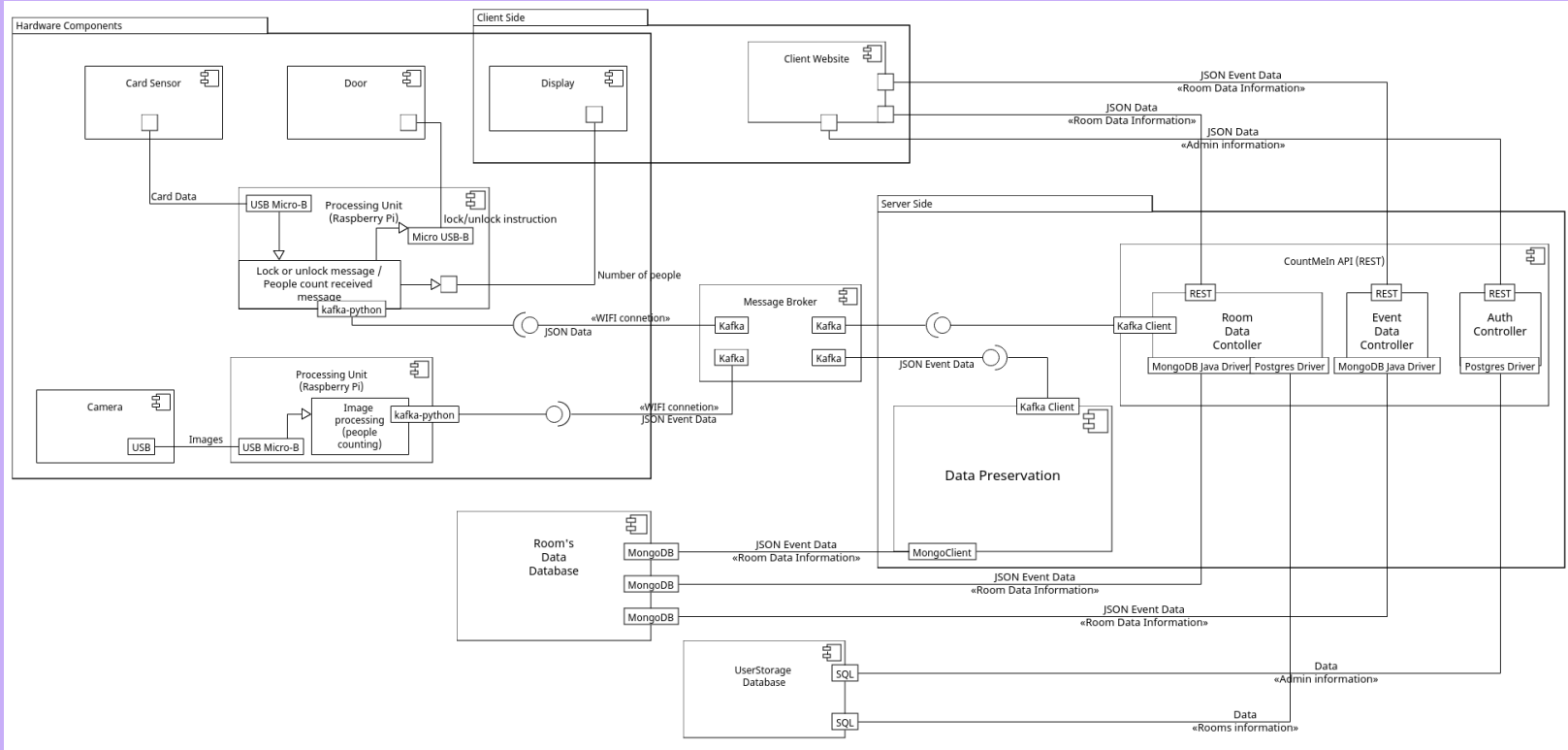
As the library administrator,  
I want to utilize the  
CountMeIn system to adjust  
room capacities,  
So that I can manage space  
more effectively and enhance  
the study **experience for  
students.**



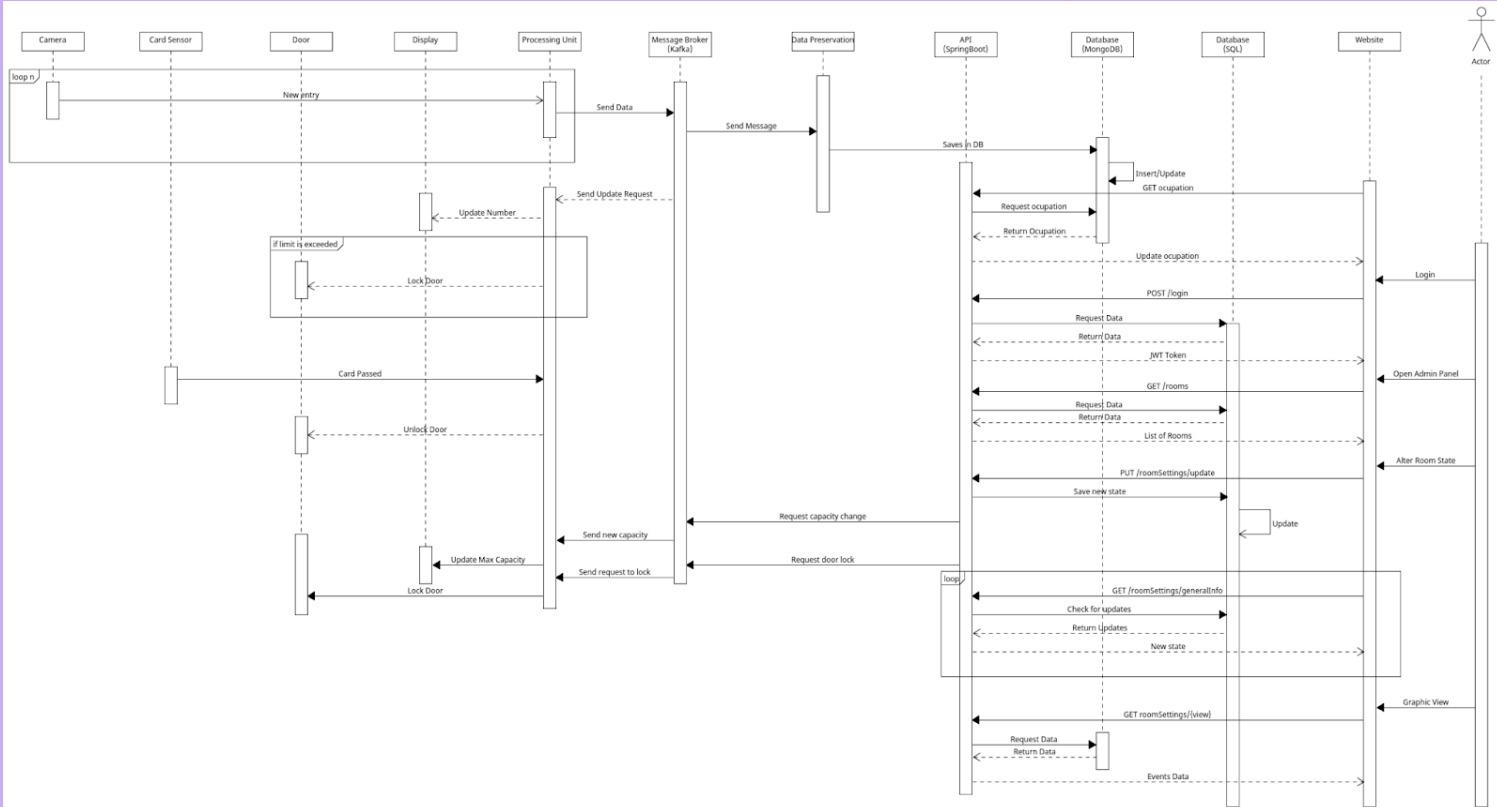
## Real-Time Data Monitoring and Visualization for Admins

As an administrator of the  
CountMeIn system,  
I want to monitor and visualize real-  
time data for each room I manage,  
So that I can have an informed  
overview of occupancy trends and  
make data-driven decisions to  
optimize **space utilization.**

# Architecture



# Module Interact





# Project Managment

Branches

Overview

Yours

Active

State

All

Q Search branches...

Default

Branch

main

Your branches

Branch

18-Implement-the-admin-page

23-Implementation-of-login-logic-in-

8-Implement-the-landing-page

9-Implement-the-login-page

Active branches

Branch

18-create-production-docker-compose...

31-consumer-logic-for-second-hardw...

18-Implement-the-admin-page

16-creation-of-a-reverse-proxy

14-fixing-docker-compose

Title	Assignees	Status	Labels	Linked pull requests
1 UML UC #1	AlexandreCotoroba...	Done	documentation	
2 UX preview #2	LeikRad	Done	documentation	
3 Project Architecture #3	JakeRosa	Done	documentation	
4 Report Fix #4	AlexandreCotoroba...	Done	documentation	
5 Implement the Admin page #10	MrLoydHD	Done	development	#38
6 Implement the Login page #9	LeikRad and MrLoy...	Open		
7 Implement the Landing Page #8	MrLoydHD	Open		
8 Create Login REST API endpoint #16	JakeRosa	Open		
9 Setup MongoDB #14	JakeRosa	Open		
10 Setup kafka service #11	AlexandreCotoroba...	Open		
11 Setup PostgreSQL #13	AlexandreCotoroba...	Open		
12 Create a service that will store counting information #15	AlexandreCotoroba...	Open		
13 User Authentication Logic Implementation and Route Refactoring #23	MrLoydHD	Open		
14 Display logic for the second Hardware controller #32	LeikRad	Open		
15 Fake data generation #12	LeikRad	Open		
16 Containerizing frontend and backend applications #26	LeikRad	Open		
17 Implement Endpoint to retrieve data from MongoDB #29	AlexandreCotoroba...	Open		
18 Fixing docker compose #34	LeikRad	Open		
19 Consumer Logic for second hardware controller #31	LeikRad	Open		
20 Integrate data visualisation #17	MrLoydHD	Open		
21 Create production docker compose file and associates #40	LeikRad	Open		
22 Implementation of user story 4 #7	AlexandreCotorob...	Open		
23 Creation of a reverse proxy #36	LeikRad	Open		

11 Open 14 Closed

Author Label Projects Milestones Reviews Assignee Sort

Prod Docker compose #1 by LeikRad was merged 2 hours ago

added manager, with display and kafka #29 by LeikRad was merged 6 hours ago

10 implement the admin page #18 by MrLoydHD was merged 16 hours ago + Approved

proxy #27 by LeikRad was merged 11 hours ago

fixed compose and other skill issues #25 by LeikRad was merged yesterday + Approved

29 implement endpoint to retrieve data from mongoDB #13 by AlexandreCotoroba was merged 3 days ago + Approved

15 create a service that will store counting information #10 by AlexandreCotoroba was merged last week + Approved

POST endpoint for login and GET endpoint for user info #18 by JakeRosa was merged last week + Approved

26 containerizing frontend and backend applications #27 by LeikRad was merged 2 weeks ago + Approved

12 fake data generation #12 by LeikRad was merged 2 weeks ago + Approved

23 implementation of login logic in frontend #14 by MrLoydHD was merged 2 weeks ago + Approved

landing page done #22 by MrLoydHD was merged 3 weeks ago

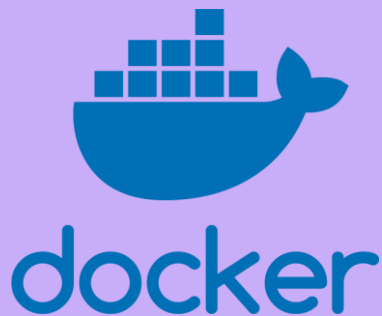
9 implement the login page #21 by MrLoydHD was merged 3 weeks ago + Approved

kafka Service implemented #20 by AlexandreCotoroba was merged 3 weeks ago + Approved

mongodb setup #19 by JakeRosa was merged 3 weeks ago + Approved

postgres setup #16 by AlexandreCotoroba was merged 3 weeks ago

# DevOps



GitHub Actions





# DEMO