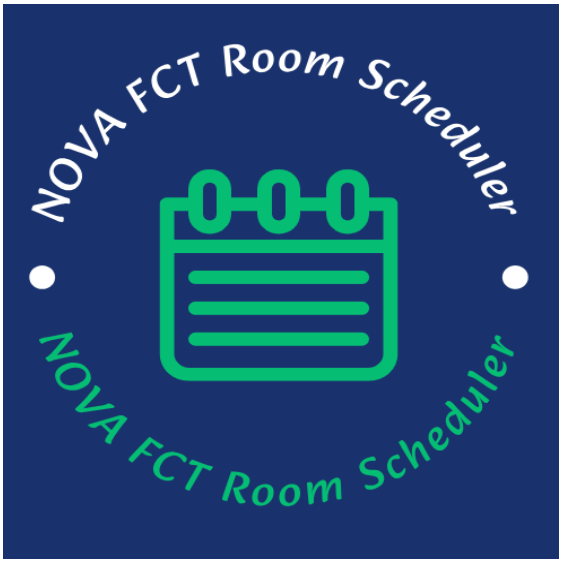
NOVA SCHOOL OF SCIENCE & TECHNOLOGY

**Interação Pessoa-Máquina**

**2024/2025**

# NOVA FCT Room Scheduler

## Stage 2 : User and Task Analysis

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# Problem

The problem our application aims to address is the complexity and inconvenience associated with reserving or locating rooms on a large university campus, such as NOVA FCT.

Managing room reservations at NOVA FCT is currently challenging. While the CLIP platform accepts bookings, it is inefficient and unfriendly, making it difficult to quickly locate the appropriate room with the necessary equipment. Whether a student needs a specific lab for a project or a professor requires a room with, for example, audiovisual equipment for a presentation, the current system fails to accommodate these needs effectively.

Our platform simplifies this process, allowing users to easily book rooms equipped with the resources they need, based on their specific requirements.

# User Analysis

**User class - Generic Student**

A generic student is simply a student that is only interested in the room finding part of our application. This type of user wants to know where and how to get to a specific room as quickly as possible. They also aren't interested in the other functionalities of our application, and having to interact with them in the process of finding the room is actually a nuisance.

Since this type of user is a university student, it's expected that they have a decent general computer knowledge and access to the internet. If the student is foreign, it's expected that they can speak english.

Characteristics like age and gender are irrelevant.

**User class - Advanced Student user**

An advanced student user is a student whose needs in the application exceed the needs of a generic student. Because of various reasons, this student wishes to interact with a wider array of functionalities in our applications like accessing room inventories, and room reservation. Unlike the generic student, this type of user wants as much information as possible about the room to be available, so that they may make the best choice.

Since this type of user is a university student, it's expected that they have decent general computer knowledge and access to the internet. If the student is foreign, it's expected that they can speak english.

Characteristics like age and gender are irrelevant.

**User class - Professor**

A professor using our application is interested in all of its functionalities, but unlike the advanced student user, the professor has extra abilities like the ability to reserve a classroom.

It's expected that the professor has decent general computer knowledge and access to the internet. They are also expected to be fluent in the English language.

# Task Analysis

**Goal 1: Reserve a room**

Pre-conditions:

- User is logged in;
- User is in the initial screen.

Steps:

1) Click in the hamburger button in the top left corner;
2) Choose building (optional);
3) Choose a room size with size required for the purpose of the reservation (optional);
4) Choose the resources needed - A/C, laptops, projector, chemistry instruments (optional);
5) Choose constraints - wheelchair accessibility, for example (optional);
6) Choose time slot desired;
7) Click again in the hamburger button to close the filters;
8) Choose one of the available rooms with these constraints;
9) Click in Make Reservation.

Observations:

- The filter is done when selecting the conditions;

**Goal 2: Find a classroom in the campus knowing the building.**

Pre-conditions:

- User is logged in;
- User is in the initial screen;
- User knows the building where the classroom is.

Steps:

1) Select the building in the map;
2) Choose the room that appears in the list;
3) Click on the button Info Room.

Observations:

- There is a map with the buildings in the initial screen;
- Clicking on the card of the room will open the details of it such as the building name and floor number inside the building;
- If there are no rooms that match the prompt, a message will appear informing the user the search returned no results.

**Goal 3: Check reservations made by the user**

Pre-conditions:

- User is logged in;
- User is in the initial screen.

Steps:

1) Click in the user icon in the top right corner;
2) Click in “Reservations”;

Observations:

- App will show future reservations to the user;
- Past reservations will also be available if needed.

**Goal 4: Check reservations of a classroom**

Pre-conditions:

- User is logged in;
- User is in the initial screen.

Steps:

1) Choose the building where the room is;
2) Choose desired room;
3) Click on “Reservations”.

Observations:

- App will show reservations made by all users without showing who made the reservation;
- Past reservations will also be available if needed.

# Scenario Design

## Scenario 1: A New Student Finding a Classroom

John, an Erasmus first-year student, arrives at the university for his first class but he realizes that the start of his next class is getting near and he is unfamiliar with the campus and the Portuguese language. He then decides to pull out his phone to access the NOVA FCT Room Scheduler, hoping to find the fastest route to his classroom. John accesses the app, originally in Portuguese, but opts to view it in English, since he can speak English. The app quickly displays the location of his classroom and allows him to find the route to get to his next class, helping him avoid being late to his class.

## Scenario 2: BioChem Students Reserving a Laboratory

Emily, a Biochemistry student, is working on an important practical project with her classmates. They need to use a laboratory that is equipped with specific instruments required for their experiment. Knowing that multiple student groups might want the same lab, Emily opens the NOVA FCT Room Scheduler, searches for available laboratories, filters by the type of equipment they need, and reserves the lab for their preferred time. This ensures that their group has exclusive access to the type of resources that they need during their experiment.

## Scenario 3: A Professor Reserving a Room for a Presentation

Dr. Smith, a professor in the Computer Science department, is preparing to host the final project presentations for his class. He needs a larger room with a projector, internet access, and a webcam to stream the event online for external participants. Dr. Smith opens the Meeting Room Scheduler app and uses the filters to search for rooms with the necessary equipment. He finds a suitable room, reserves it, and schedules the setup time, ensuring everything is ready for the big day.

# Interviews

## Daniel Pojega, NOVA FCT Student

Daniel is a new student at NOVA FCT and does not yet know the university well.

Firstly, Daniel was asked questions without knowing the application. These were the questions:

**How would you find a room at the university (Task/Goal 2)?**
Response: “I would like there to be an interactive map of the campus where each building is also interactive, allowing me to view the floors with all the rooms, making it easier to understand the route to get there.
I also think it would be interesting to have information about restrooms and cafés located in the buildings.”

**Why would you want to find a room at the university (Task/Goal 2)?**
Response: “Because I don’t know the university very well yet and also because it’s difficult to know the location of all the rooms in all the buildings, considering how big NOVA FCT is.”

**When would you want to find a room at the university (Task/Goal 2)?**
Response: “Before I have a class in a room that I don’t yet know where it is.”

**Do you find it relevant to be able to reserve a classroom (Task/Goal 1)?**
Response: “Yes, because I look for peace and quiet when I need to be able to study or complete projects/assignments.”

When introduced to the application, Daniel showed interest in using it, as it provides a solution to a problem he has: finding the rooms where he will have his classes. In light of the application, he was asked the following question:

**How would you use the application?**
Response: “I would use it to find the buildings and rooms that I don’t know. I would also use it to find empty rooms to study in.”

## Nuno Peixoto, ex-NOVA FCT Student

Nuno is a former NOVA FCT Student and he got a brief explanation of the application we are creating. We asked him a question about what features he would like to see in an application for booking university rooms for studies or presentations.

Response: “As I have a laptop and don't need chemistry stuff or anything, it would be enough to have some predefined buildings so that I could book rooms straight away and have predefined filters. It would be very simple but intuitive.”

Nuno showed interest in using the app in order to save time finding a study place in the library or other buildings on campus.

## Daniela Marques, ex-ISCTE Student

Daniela is a former ISCTE Student and, like the previous interviewed, she got a brief explanation of the project. Since she studied in a different campus, the plan was to get ideas that could be applicable to another campus in the country. We answered the question about what features she would like to see in an application made to book rooms at the university for studies or presentations.

Response: “Ideally it would aggregate all the campus services in the same app. It would be able to pay for food or coffee in the app, and even book football pitches or padel courts.”

We explained the ideas with more detail and, finally, a second and last question was made to her which was to know if she would use the application. Her response was positive although she would like to have more features besides the reservation of rooms and classrooms.