

Sanatorium Use Case

Based on the following text:

1. Create the Use Case Diagram.
2. Specify the "Request Appointment" Use Case.

The new "Buena Salud" sanatorium system must allow patients to manage appointments through the health center's website, offering them greater convenience by not having to call to request appointments and wait for an operator to assist them. Appointments for in-office consultations, as well as appointments for medical studies, should be able to be processed.

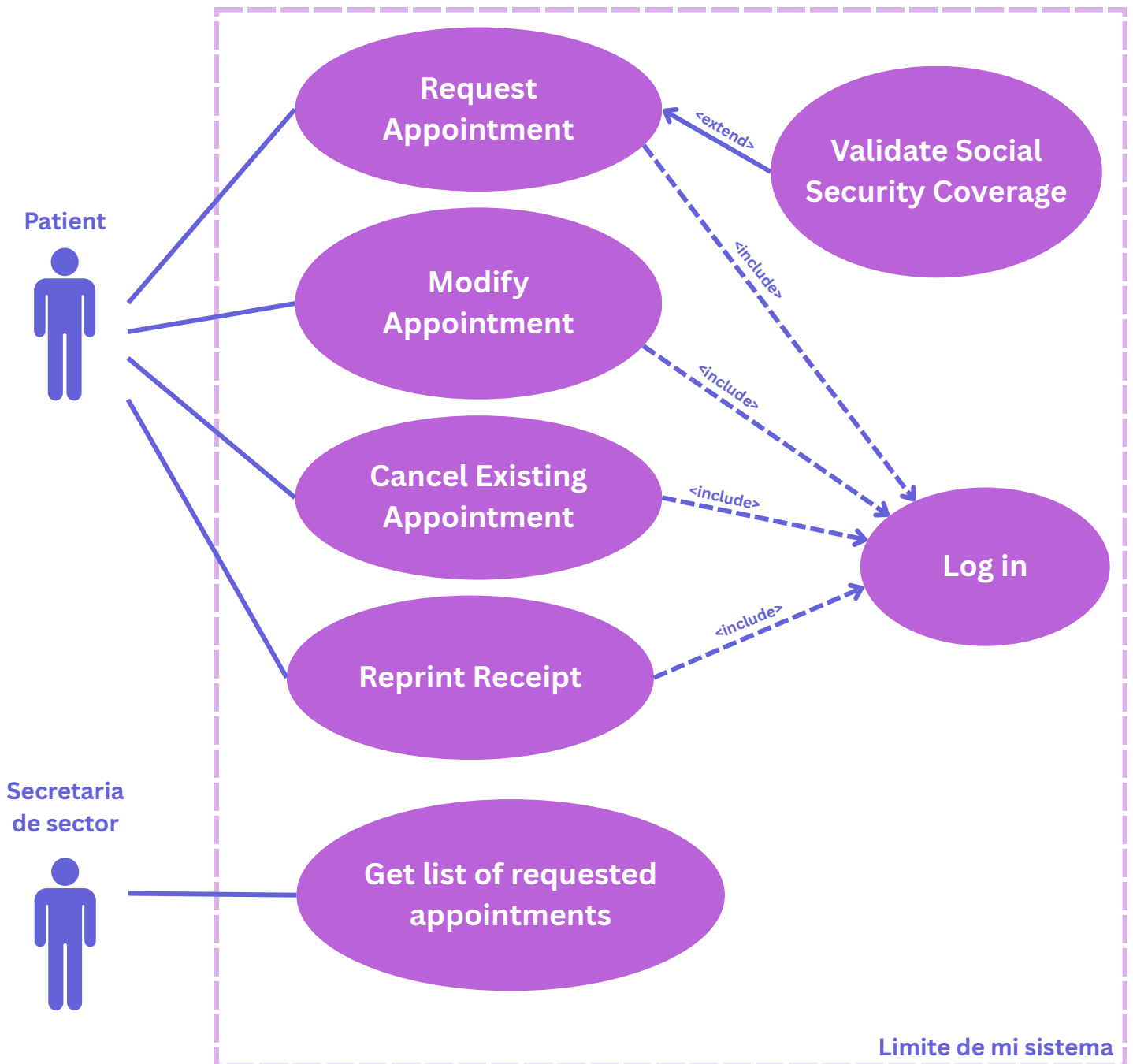
To manage an appointment, the patient, for the first and only time, must go to the sanatorium to have their personal data registered and thus obtain a user and access key, as they will need them to log into the system. Once the patient logs in, by entering their user and key provided at the sanatorium, the system will show them a menu with all the available actions they can perform. The patient can request an appointment, modify or cancel an existing appointment. They can also reprint the receipt for an already assigned appointment.

If they select the appointment request, the system will show them a list of the specialties offered at the sanatorium. When the patient chooses a specialty, the system will show them a grid with the available days and times, along with the doctors who attend at those times. The patient will select the day and time according to their convenience. The system will verify that the time has not been occupied by another person at that same moment ; if it has been occupied, the system will issue an error message indicating that this time is not free and will ask them to select a new appointment from the grid.

If the appointment is available, the system validates that the type of coverage the patient has covers the cost of the consultation. If so, it will ask the patient for confirmation of the appointment. If the patient confirms, the system will save the appointment data in the "Pending Appointments" table and will issue a receipt that includes the patient's name, day, time, the doctor who will see them, and the sector they must go to on that day upon arrival at the sanatorium. If they do not confirm, the system will cancel the appointment request and return to the main menu that contains all the available actions the patient can perform.

If the type of coverage does not cover the cost, the system connects online to the social security network's POS terminal to request authorization, where all the necessary functionality for that validation is executed. At the start of the day, the secretary of each sector will log into the system and obtain a list of the requested appointments, which they will print for each doctor. The database where the data will be stored will be SQL Server.

Use Case Diagram



Use Case		Request Appointment
Actor		Patient
Description		The patient requests an appointment through the sanatorium's website.
Precondition		---
Functional Requirements:		<ul style="list-style-type: none"> • The system must allow the request of an appointment. • The system must be able to verify the availability of times. • The system must allow coverage validation.
Non-Functional Requirements: (Mentioned in text and suggested)		<ul style="list-style-type: none"> • The system must guarantee the confidentiality and protection of patients' personal and medical data. • The system must have a fast response time when processing appointment requests. Specifically, when a patient selects a day and time, the availability check and medical coverage validation must be performed almost instantly. • The user interface for requesting, modifying, or canceling appointments must be clear and not require advanced technical knowledge.
Normal/Main Flow		Alternative Flow / Exceptions
1	The "Log in" Use Case is executed successfully.	
2	The system shows a list of the specialties offered at the sanatorium.	
3	The patient selects the specialty they want.	
4	The system shows a grid with the available days and times, along with the doctors who attend at those times.	
5	The patient selects the day and time according to their convenience.	
6	The system determines that the time has not been occupied by another person.	6.1 The system determines that the time is already occupied by another person. 6.2 The system issues an error message indicating that the time is not free. 6.3 Go to step 4.
7	The system validates that the cost of the consultation is covered by social security.	7.1 The system validates that the cost of the consultation is not covered by social security. 7.2 The "Validate Social Security Coverage" Use Case is executed.
8	The system requests confirmation.	
9	The patient confirms the appointment.	9.1 The patient does not confirm the appointment. 9.2 The system cancels the appointment request. 9.3 End of Use Case.

10	The system saves the appointment data in the "Pending Appointments" table.	
11	The system issues an attendance receipt which includes the patient's name, day, time, the doctor who will see them, and the sector they must go to on that day upon arrival at the sanatorium.	
Postcondition		---