

# Divisão de perguntas por temas

Aqui está a divisão das perguntas e respostas, conforme solicitado, seguindo as categorias **Técnicas**, **Staff**, **Patient**, **Operation Types** e **Operation Requests**. Mantive a numeração correta e não alterei o conteúdo das perguntas e respostas.

## Sobre o IAM...

Some of you have been questioning about the IAM (Identity and Authentication Module). To clarify the scope of the project regarding this topic:

1. the team is free to decide if they will use an external or an internal IAM
2. there is just one IAM in the system. that is all users, no matter if they are staff or patients use the same IAM

Imagine the following scenario, a patient is admitted to the hospital and a clerk registers their patient record with email abc@abc.com. that's the patient personal email. afterwards, that same patient wants to self-register in the system. the system use external IAM provider xyz the patient will create an account in the IAM provider, e.g., abc12@xy2z.com and will use that identity to self-register as patient abc@abc.com the system needs to send a verification email to abc@abc.com when the patient follows the link sent to their personal email, the system will be able to "connect" the two emails as identifying the same person, and provide access to the system

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## Perguntas Técnicas

For this first sprint, it's not really important, because you're not going to be doing that up front yet.

In the second sprint, you'll be doing the front end. So session inactivity is typically no interaction of any kind. In this case, with the API.

So you need to make sure that you prepare your API in a way that... And now I'm going to get a little bit more technical, okay? But ideally, your API should not even have a session. It should be completely stateless. So, it should not have a session.

There should be an authentication validation for each visit request. But if you use some kind of session in the API, you need to see when was the last request for that session. And if it was longer than a certain level, usually a web session is around 20 minutes, no more than that.

So you should completely disconnect the user. When you build the application up front in the second sprint, of course, it will be easier to see and understand this. So if I'm not using the application at all, if I'm not doing any kind of action in the application, yes, after 20 minutes, the session should disconnect and I should force it to log in with my credentials.

**26. Q:** If a patient is signed in with a Google account and later uses another external system like Facebook, and both have different credentials, what happens?

**26. A:** Assume the system only supports one IAM (Identity and Access Management).

**60. Q:** Dear client, in a previous answer you said: "If you are using an external IAM (e.g., Google, Azure, LinkedIn, ...) the backoffice user must first create their account in the IAM provider and then pass the credential info to the admin so that the user account in the system is 'linked' with the external identity provider." However, in the acceptance criteria it says "- Backoffice users (e.g., doctors, nurses, technicians) are registered by an Admin via an internal process, not via self-registration." So should the backoffice user first be registered (by himself) in the IAM and then pass the info (email and password?) to the admin so that he creates his account? Or should he only register himself in the IAM after the admin creates his account in the system, providing the staff user his hospital's email? Can you clarify a little bit more what you want to see as the process flow?

In another answer you said: "The username is the 'official' email address of the user. For backoffice users, this is the mechanographic number of the collaborator, e.g., D240003 or N190345, and the DNS domain of the system. For instance, Doctor Manuela Fernandes has the email 'D180023@myhospital.com'."

If we use a DNS domain like the one above, and so, those emails do not actually exist, how can staff receive the confirmation link to activate their account?

**60. A:** In that same clarification

<https://moodle.isep.ipp.pt/mod/forum/discuss.php?d=31510#p39978> you may find that "The system must allow for an easy configuration of the DNS domain (e.g., environment variable)."

**30. Q:** What are the password requirements?

**30. A:** Passwords must be at least 10 characters long, contain at least a digit, a capital letter, and a special character.

**17. Q:** What defines session inactivity?

**17. A:** Inactivity is defined as no interaction with the API. After 20 minutes of inactivity, the session should disconnect.

**75.Q: What happens when a user fails to log in more than five times, and what is the process for unlocking their account?**

**75.A:**After five failed login attempts, the system will temporarily lock the account. The process for unlocking the account is typically handled outside the system by an administrator, who would verify that the failed attempts were not made with malicious intent. However, this unlocking process is not part of the current system

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## Perguntas sobre Staff

**1. Q:** Do nurses have specializations like doctors?

**1. A:** Yes, nurses can have specializations, which are important for specific surgeries.

**6. Q:** Are healthcare staff IDs unique across roles?

**6. A:** Yes, staff IDs are unique and not role-specific (e.g., a doctor and nurse can share the same ID format).

**31. Q:** Can doctors and nurses have only one specialty or can they be specialists in several?

**31. A:** A doctor or nurse can only have one specialization.

**32. Q:** Who is considered part of the staff?

**32. A:** In the staff, we only consider doctors and nurses.

**41. Q:** Can a doctor have more than one specialization?

**41. A:** No, consider only one specialization per doctor.

**53. Q:** How should the specialization be assigned to a staff? Should the admin write it like a first name? Or should the admin select the specialization?

**53. A:** The system has a list of specializations. Staff is assigned a specialization from that list.

**58. Q:** Good afternoon, regarding the specializations, do doctors, nurses, and technicians share the same group of specializations, or does each type of professional have distinct, role-specific specializations? Could you clarify how these specializations are categorized?

**58. A:** They share the same set of specializations.

**61. Q:** Dear client, I hope you are doing amazingly well. I have one question related to the staff license number. Since it will be generated, would you like it to be generated in any particular format or algorithm of your choice?

**61. A:** There is misinformation in the RFP. Staff IDs are unique and generated by the system. License numbers are unique but are not generated by the system. Staff IDs follow the format "(N | D | O)yyyynnnnn". For instance, N202401234. N is for nurse, D is for doctor, O is for other. yyyy is the year of recruitment, and nnnnn is a sequential number. License numbers are assigned by the professional guild. The admin will enter the license number, and the system records it.

**38. Q:** Is it the system's objective to differentiate specializations for each type of staff?

**38. A:** The specializations are independent of whether the professional is a doctor or a nurse.

**36. Q:** For staff availability slots, will they be with a "temporal gap" of hour by hour, customizable, or another time frame?

**36. A:** Staff availability is normally in 15-minute blocks.

68.Q: Can you clarify the difference between mechanographic number, staff id and license number?

68.A: The staff id and mechanographic number is the same concept.

The license number is the number assigned by the professional guild (ex., "ordem dos enfermeiros", "ordem dos médicos") to the doctor or nurse attesting they legally can perform the medical acts of their profession

71.Q: Greetings,

Regarding the creation of staff users and profiles, I know there's been a lot of questions about this matter, but my team just got very confused about this whole process, so I felt the need to ask for some clarification.

There are 2 separate use cases regarding backoffice users: One for the creation of the user account and another one for the creation of the staff's profile.

- Is there a fixed order for these operations to take place? Does the admin always create the profile first or can he create the user first as well?
- If the profile is created first, for example, should the user be created automatically or should the admin create the user afterwards, having to do 2 distinct operations?

71.A: **Recommended Flow:**

1. **Order of operations:** The system should support **profile first**. The admin should then create the user account. the account and user profile are linked by the professional email address or username (depending on the IAM provider).
2. **Distinct Operations:** The operations should remain distinct, even if they are performed in quick succession. This ensures that each step (creating user credentials and creating a staff profile) is carefully tracked and managed.
3. **Validation:** The system should ensure that a **staff profile** and **user account** are both created and linked before the staff member can access the system.

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## Perguntas sobre Pacientes (Patient)

**3. Q:** How are duplicate patient profiles handled when registered by both the patient and admin?

**3. A:** The system checks the email for uniqueness. The admin must first create the patient record, and then the patient can register using the same email.

**5. Q:** Is it mandatory for patients to have a user account to schedule a surgery?

**5. A:** No, patients are not required to have a user account. The system administrator creates patient profiles.

**11. Q:** What happens to patient data after the profile is deleted?

**11. A:** Patient data must be retained for a legally mandated period before being anonymized or deleted.

**14. Q:** Do we always need to create an associated user when recording a patient profile in a medical facility?

**14. A:** No. A patient profile can be created without an associated user unless it's easier technically to create an inactive user.

**16. Q:** Can patients update both their user and patient profile information?

**16. A:** Patients can update contact information but not medical details. Changes must be verified and validated.

**25. Q:** What do preferences mean in the patient profile?

**25. A:** Preferences are currently related to marketing consent or other GDPR-related preferences given by the patient.

**34. Q:** The user has contact information, email and phone. Are both mandatory?

**34. A:** Yes, both email and phone are mandatory.

**39. Q:** Can you give an example of an allergy/medical condition record for a Patient?

**39. A:** *[Exemplo de registro médico do paciente fornecido]*

**40. Q:** Is medical record unique?

**40. A:** Yes.

**45. Q:** It is specified that the admin can input some of the patient's information (name, date of birth, contact information, and medical history). Do they also input the omitted information (gender, emergency contact and allergies/medical

condition)? Additionally, does the medical history that the admin inputs refer to the patient's medical record, or is it referring to the appointment history?

**45. A:** The admin cannot input medical history nor allergies. They can, however, input gender and emergency contact.

**48. Q:** As discussed in a class, there are plenty of filters for the doctors' profiles; however, I'm struggling to see what filters can be applied to the patients' profiles listing. They can be searched by name, email, date of birth, or medical record number, but everyone has the same role, no specialization, and so on. Can you be a bit more detailed on the filters you're looking to be applied in the patients' listings?

**48. A:** Users should be able to search patients by: name, AND/OR email, AND/OR phone number, AND/OR medical record number, AND/OR date of birth, AND/OR gender. Listing of users should have the same filters available.

**49. Q:** All patient data is permanently removed from the system within a predefined time frame. Is this time frame defined by the system itself, or by the admin who deletes the data?

**49. A:** It is part of your responsibilities within the data protection module and in accordance with the policy you define.

**56. Q:** That's right, it was clarified in a previous meeting, but I'm still not 100% clear about my question. I understand that the Admin can create the Patient profile and leave the User as inactive, but how does the activation happen?

**57. Q:** That's right, it was clarified in a previous meeting, but I'm still not 100% clarified about my question. I understand that the Admin can create the Patient profile and leave the User as inactive, but how does the activation happen? If that patient eventually wants to register himself, should there be an option to activate an existing profile? For example, associate the email from registration input with the existing profile's email? The feature 5.1.3 asks for the full registration but doesn't say anything about profiles that already exist.

**57. A:** The admin registers the patient (this does not create a user for that patient). Optionally, the patient self-registers in the system by providing the same email that is currently recorded in their patient record, and the system associates the user and the patient. There is no option for someone who is not a patient of the

system to register as a user. Hope this is the clarification you were missing. If not, let me know.

**64. Q:** So, when the administrator starts creating the patient profile, what format(s) of the date of birth will they need to enter? Furthermore, what will be the format of the Medical Record Number generated after recording the data?

**64. A:** From a usability perspective, dates should be presented to the user using the operating system's locale definitions. since for this sprint you are building an API, you

should use a standard format like ISO 8601. medical record numbers are generated by the system following the format YYYYMMnnnnnnn where YYYY and MM are the year and month of the registration and nnnnnn is a sequential number.

**54. Q:** Hello Mr. Client. The filters are AND or OR. For example, if I filter for a Patient named John and Age 24, do you want every John who is 24 years old or every Patient who is called John or is 24 years old?

**54. A:** If more than one search/filter parameter is used, the combination of filters should be considered as AND.

**50. Q:** Regarding the editing of patient information, is contact information the only sensitive data? Is it the only data that triggers an email notification?

**50. A:** It is part of your responsibilities within the data protection module and in accordance with the policy you define.

**69.Q:** When one of the contents that administrator edits is a sensitive content (eg. email), the notification is sent for what patient's email, the email in patient account, the old email of patient or the new email of patient?

**69.A:** if the email is changed, the notification should be sent to the "old" email

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## Perguntas sobre Tipos de Operação (Operation Types)

**10. Q:** Will there be a list of specializations in the system?

**10. A:** Yes, a predefined list of specializations will be provided, but the system should allow for future additions.

**20. Q:** Should actions like removing an operation type be accessed only through specific methods?



**20. A:** Yes, operations like removal or deactivation should be available via specific API methods.

**21. Q:** Is removing an operation type the same as deactivating it?

**21. A:** Yes, deactivating makes the operation type unavailable for future use but retains historical data.

**22. Q:** Are roles like "instrumenting" or "circulating" specializations?

**22. A:** Yes, these represent specializations, but the system focuses more on general specializations (e.g., orthopedic, pulmonologist).

**51. Q:** In the document with the surgeries, they all have 3 phases and respective duration:

- Anesthesia/patient preparation
- Surgery
- Cleaning

Can we assume while creating a new operation type, that the surgery must always have these 3 phases?

**51. A:** Yes.

**52. Q:** Can you clarify this? "Historical data is maintained, but new operation requests will use the updated operation type information."

**52. A:** It means that if an operation type is changed, we need to keep track of its changes. For instance, Operation Type "A" is defined as taking 30 minutes preparation, 1 hour surgery, and 30 minutes cleaning, with a team of 1 doctor with specialization X and one nurse with specialization Y. Some operations are requested, scheduled, and performed based on this definition. After some time, the hospital changes its procedures and defines Operation Type "A" as needing 30 minutes prep, 30 minutes surgery, and 30 minutes cleaning, with a team of 3 doctors and one nurse. New operations will be requested, scheduled, and performed using this new definition. However, we need to keep historical data, so that if the admin wants to know the details of an operation in the past, the system must show the operation type as it was defined at the time of the operation request.

**55. Q:** 5.1.20 - In the creation of a new operation type, we have a name, 3 phases of the surgery, and a required list (specializations, quantity).

This new operation type must not have a specialization beyond those required according to 5.1.16 AC2 (a doctor can only schedule a surgery in their specialty). Is the process to create the new operation type and then add the list of required specializations?

5.1.21 - The name of the surgery type is unique, but when it is updated, can we keep the same name? The previous type is deactivated, the new one is activated with the creation date but keeps the same name. To maintain history.

**55. A:** 5.1.20 - Yes, the operation type is associated with a given specialty. The list of specializations is an integral part of the operation type. The creation is done in one step, not in two as suggested.

**62. Q:** Is marking operation types intended to be permanent, or should we anticipate the possibility of reactivating them in the future? When I say "marking" I'm talking about this acceptance criteria: "Admins can search for and mark operation types as inactive (rather than deleting them) to preserve historical records."

**62. A:** For now you don't need to implement reactivating a previously deactivated operation type, but that might be a requirement in the future.

**43. Q:** Should the system, therefore, store and specify the time spent on each phase of the surgery?

**43. A:** When describing an operation type, the system must record the time for each phase.

**72.Q: What is the process for handling the editing of operations, specifically regarding their type and history?**

72.A:When editing an operation, the system needs to maintain the history of the original operation type. The challenge is that operation names must be unique, and you may want to track versions of operations over time. One approach is to use an auxiliary table to store operation history, ensuring you can track changes and retrieve past data, much like how VAT changes in invoices are handled.

**73.Q: What are the technical options for managing reference data that changes over time, like VAT rates?**

73.A: There are two main approaches:

1. **\*\*Store exact values\*\***: In this method, when creating an invoice, you save the exact VAT value in the invoice record, ensuring that past invoices reflect the VAT rate at the time they were issued.
2. **\*\*Versioned reference data\*\***: You maintain a versioned VAT table, with columns for the effective start and end dates, ensuring that the system uses the correct VAT rate for any given period. This allows for tracking changes over time without altering historical data.

**74.Q: Is the concept of operation history represented in the Domain-Driven Design (DDD) model?**

74.A: Yes, the historical concept of operations is part of the domain model.

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## **Perguntas sobre Solicitações de Operações (Operation Requests)**

**7. Q:** What is the difference between appointment, surgery, and operation?

**7. A:** Surgery is a medical procedure (e.g., hip surgery), while an operation request is when a doctor schedules that surgery for a patient. An appointment is the scheduled date for the operation, determined by the planning module.

**8. Q:** Can surgeries be rescheduled?

**8. A:** Yes, surgeries can be rescheduled due to various reasons like emergencies or changes in staff availability. There will be notification system for a patient who has a surgery that is going to be.

**9. Q:** Who has the authority to schedule or reschedule surgeries?

**9. A:** The planning module automatically handles the scheduling, though administrators may trigger a manual update.

**18. Q:** What information can physicians update on an operating requisition?

**18. A:** Physicians can update the operating time, priority, and description text, but not change the patient.

**19. Q:** What does "status" refer to in the context of searching for operating requisitions?

**19. A:** Status refers to whether the operation is planned or requested.

**27. Q:** How does a Doctor suggest a deadline date?

**27. A:** The doctor will decide the "best" due date based on their experience. They will enter it in the system as an indication so that the planning module eventually takes that into account alongside priority and other criteria.

**28. Q:** How is an operation's priority defined?

**28. A:** Operations are classified into three priority levels:

- Elective Surgery: A planned procedure that is not life-threatening and can be scheduled at a convenient time (e.g., joint replacement, cataract surgery).
- Urgent Surgery: Needs to be done sooner but is not an immediate emergency. Typically within days (e.g., certain types of cancer surgeries).
- Emergency Surgery: Needs immediate intervention to save life, limb, or function. Typically performed within hours (e.g., ruptured aneurysm, trauma).

**29. Q:** Operations cannot exceed the estimated time unless rescheduled. Can you explain this?

**29. A:** The planning module will schedule the operation for the average time of setup + surgery + cleaning. During normal operation of the hospital, a surgery might take longer than expected, which will then require a rescheduling of all other surgeries for that room and staff.

**35. Q:** The operation request has a priority field. What priorities exist?

**35. A:** The priorities are Elective, Urgent, and Emergency Surgery, as defined in the previous answer about operation priority.

**44. Q:** When listing operation requests, should only the operation requests associated to the logged-in doctor be displayed?

**44. A:** A doctor can see the operation requests they have submitted as well as the operation requests of a certain patient. An Admin will be able to list all operation requests and filter by doctor. It should be possible to filter by date of request, priority, and expected due date.

**63. Q:** When editing an operation, what happens to the scheduled ones? Do they get updated accordingly and rescheduled, or do they remain the same?

Also regarding 5.1.20 and 5.1.21 Can the name be edited and can the name be the same as a deactivated operation?

**63. A:** The name of the operation type must be unique. Even if an operation type is "deactivated" it still exists in the system, and as such no other operation type can have the same name. When editing an operation type there is the need to indicate a date when that configuration will be put in place. If there are operations of that type, scheduled after that date, the system should ideally start a rescheduling.

**65. Q:** You want to log all updates to the operation request. Do you plan to have this info available in the app or is this just for audit purposes?

**65. A:** The history of the operation type definition is part of the application's data. If the user needs to view the details of an operation that was performed last year, they need to be able to see the operation configuration that was in place at that time.

**42. Q:** Are the different phases of surgery relevant to the business and should they be recorded in the system?

**42. A:** Yes, they are important due to the time it takes each phase and in the future for the planning of different teams (e.g., cleaning team).

**12. Q:** Can the same doctor who requests a surgery perform it?

**12. A:** Not necessarily. The planning module may assign different doctors based on availability and optimization.

**4. Q:** What factors should be considered for surgery scheduling?

**4. A:** A combination of professional seniority, surgery duration, and urgency will be considered. Scheduling will occur in the second sprint.

**67.Q:** Hello, When the doctor is creating the operation request, which data fields should be selectable, and which data fields should require manual input?

**67.A:** if a field is a reference to another concept, from an usability perspective, the user should not be forced to enter the value manually but should be allowed to select it or search and select it.

follow your common sense :-)

PS: remember that in this sprint you are developing an API. this question is more related to the usability of the user interface. From the API perspective it doesn't matter how the value was collected from the user

## Admin

**47. Q:** In this US, an admin can edit a user profile. Does the system display a list of all users, or does the admin search by ID? Or both?

**47. A:** This requirement is for the editing of the user profile. From a usability point of view, the user should be able to start this feature either by searching for a specific user or listing all users and selecting one. Note that we are not doing the user interface of the system in this sprint.

## Outras

**2. Q:** How should the capacity of a surgery room be interpreted?

**2. A:** The capacity refers to the number of staff in the room, not patients.

**13. Q:** Can users hold multiple roles?

**13. A:** No, each user can have only one role.

**15. Q:** Will we need to add more room types in the future for the system?

**15. A:** No, only the room types mentioned in the document are required.

**33. Q:** Can a user only be a staff or patient, or could they be something else?

**33. A:** The system users are administrators, nurses, doctors, as well as patients (with limited functionality).

**37. Q:** For the date and time attribute in the appointment, is there a specific format?

**37. A:** The format is YYYY/MM/DD HH

**46. Q:** Dear Client, can you clarify the username and email requirements? Thank you for your time.

**46. A:** The username is the "official" email address of the user. For backoffice users, this is the mechanographic number of the collaborator, e.g., D240003 or N190345, and the DNS domain of the system. For instance, Doctor Manuela Fernandes has the email "D180023@myhospital.com". The system must allow for easy configuration of the DNS domain (e.g., environment variable).

For patients, the username is the email address provided in the patient record and used as identity in the external IAM. For instance, patient Carlos Silva has provided his email csilva98@gmail.com the first time he entered the hospital. That email address will be his username when he self-registers in the system.