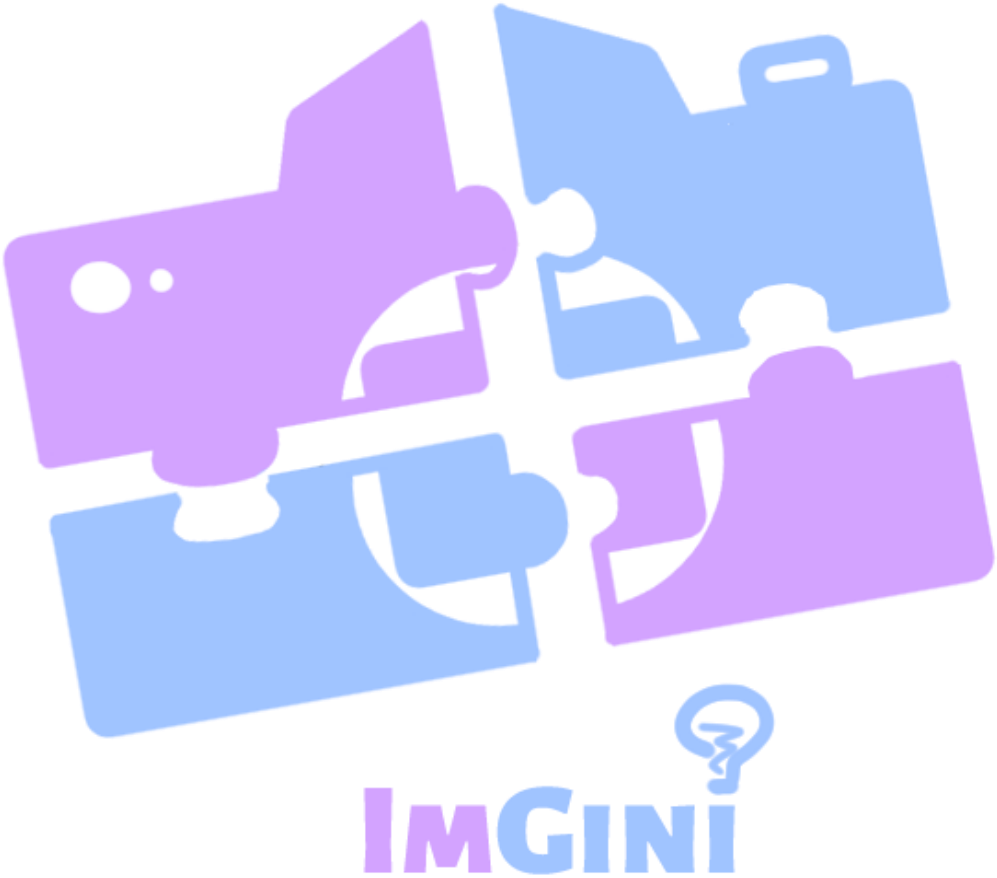
PROYECTO INTEGRADO 2025



2° DESARROLLO DE APLICACIONES MULTIPLATAFORMA

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Project description

Ingini is a mobile app designed to be fun and interactive. The app consists on a guessing game with pictures, where you have to try writing the name of the image on display with

a small handicap, the image starts hidden and reveals itself with each wrong guess until you guess the image or fail once its fully revealed.

With Ingini you can play the way you want since there are no fixed objectives:
* You can play the daily game once a day to keep icreasing your streak.
* Play the endless mode for something more casual and long.
* Compete with others on the rankings to see who has the longest streak.

Ingini also has a premium subscription for once every three months to help you mantain your streak and block adds. (The adds will be implemented in the near future for add revenue).

Feasibility study of the project

1 - Economic Feasibility

Cost Estimation

The main development cost would be the salaries of four programmers for one month. The team will not only be responsible for programming the application and database but also for interface design and testing.

Regarding infrastructure, it will be necessary to contract external server services, as well as to acquire and maintain the necessary devices for development.

Funding Analysis

The project's funding could come from an investor willing to support the initiative. If external investment is not obtained, the team would cover the costs with its own resources.

Currently, we do not have an exact budget figure available, but we will adhere to an optimized financial plan to ensure the project's feasibility.

Revenue Estimation

The application will be monetized through advertising and a premium subscription model. Users who opt for the paid version will be able to remove ads and access exclusive features, ensuring a steady revenue stream.

Return on Investment

Thanks to our monetization model, we estimate that we will be able to recover the investment in a short period, starting to generate profits shortly after launch.

2 - Human Feasibility

Human Resources Analysis

The development team consists of four people, who will cover all areas of the project. We consider this team size sufficient to complete the development without additional hires or deadline extensions.

Technical Skills Assessment

All team members possess the necessary skills to implement the project efficiently. We have experience in the required technologies, allowing us to approach development with confidence.

Workload and Deadlines

Although the two-week deadline is tight, we are confident that our team can complete the project within the stipulated time, as we will be fully dedicated to this development without other distractions.

3 - Technical Feasibility

Technological Requirements Analysis

The project requires the use of databases, servers, and appropriate development environments for programming in React Native. Currently, we have all the necessary technological resources for the successful development of the application.

Infrastructure and Compatibility

The application will integrate with an internally developed API and will be compatible with mobile devices and tablets, ensuring broad accessibility.

Technical Risk Assessment

No significant technical risks have been identified that could compromise the project's development. However, we will conduct continuous monitoring to mitigate potential issues.

Conclusion

After analyzing the economic, human, and technical aspects, we conclude that the project is fully viable and has the necessary resources for its successful execution.

Methods SCRUM and Flexygo

Scrum

The **SCRUM methodology** is based on carrying out a set of tasks regularly with the goal of working collaboratively and efficiently on projects of certain complexity.

We have applied SCRUM to our project in various ways:

- Establishing our objectives from the start, determining which ones are priorities and which are long-term goals

- Dividing our work into relatively short sprints due to the limited time frame of our project.

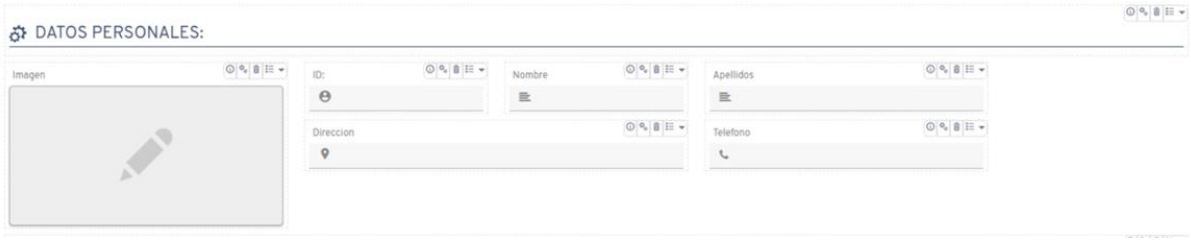
- Conducting daily check-ins before and after each day, as well as after each sprint, to clarify the sprint objectives and identify areas for improvement.

- Distributing tasks among team members based on their skills and roles within the team:

- Product Owner – Ausias Martinez
- Scrum Master – Izan Navarro
- Development Team – Javier Arellano y Didac Arnau (Todos participamos en el desarrollo realmente)

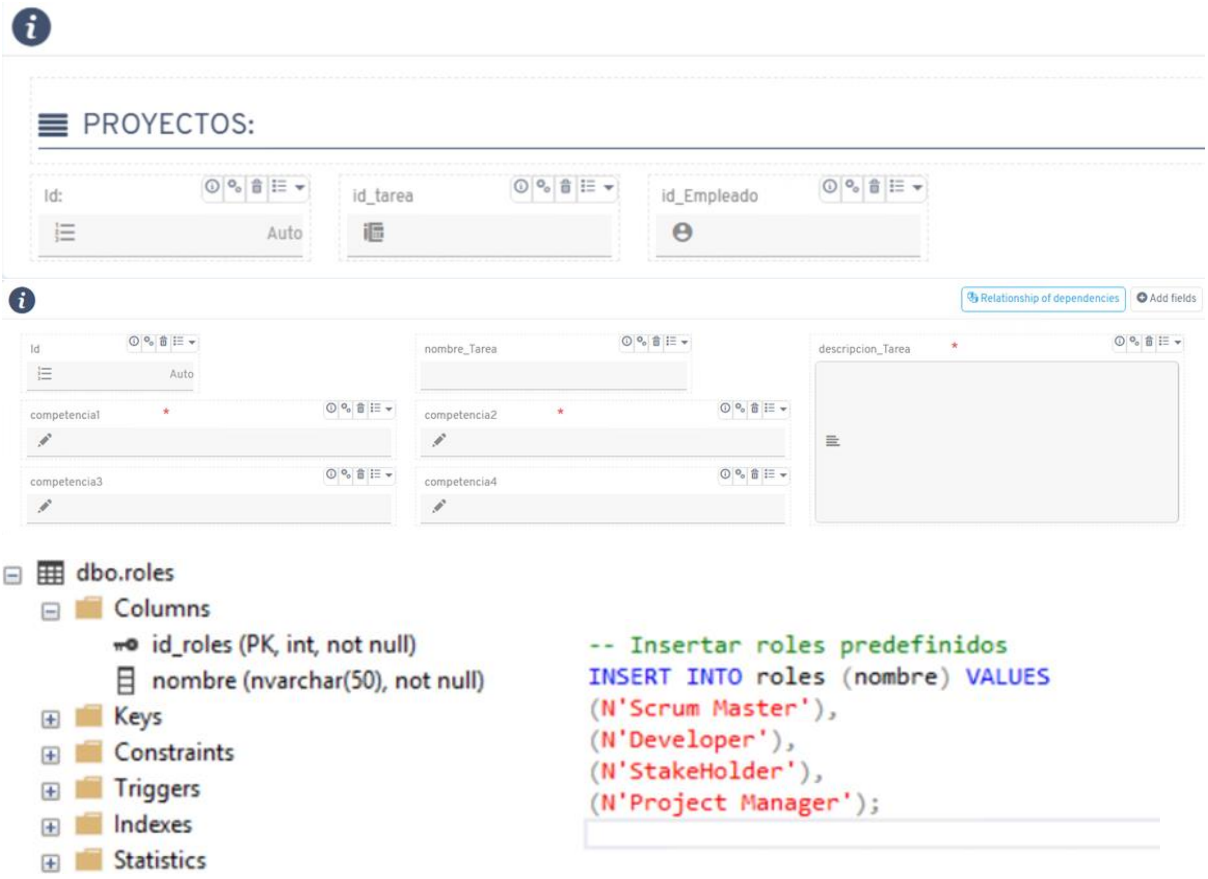
Flexygo

FORMULARIO TABLA EMPLEADO; Asignación de Rol, Proyecto y Tarea como función principal.

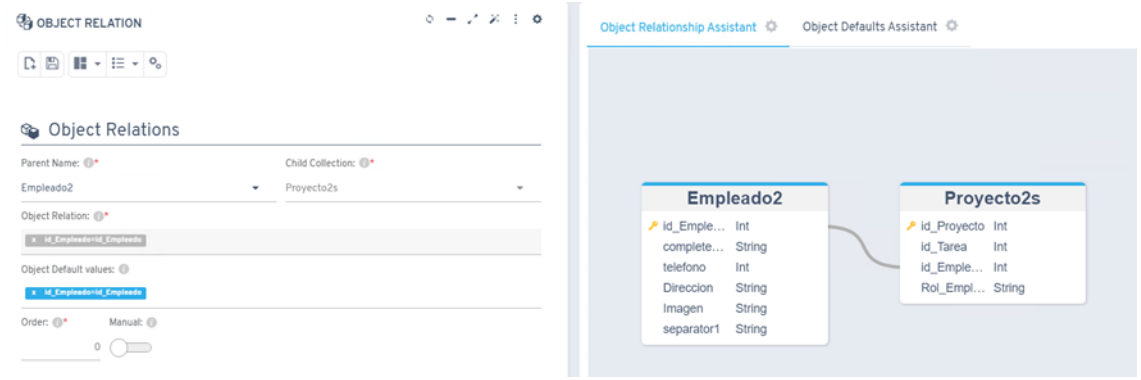


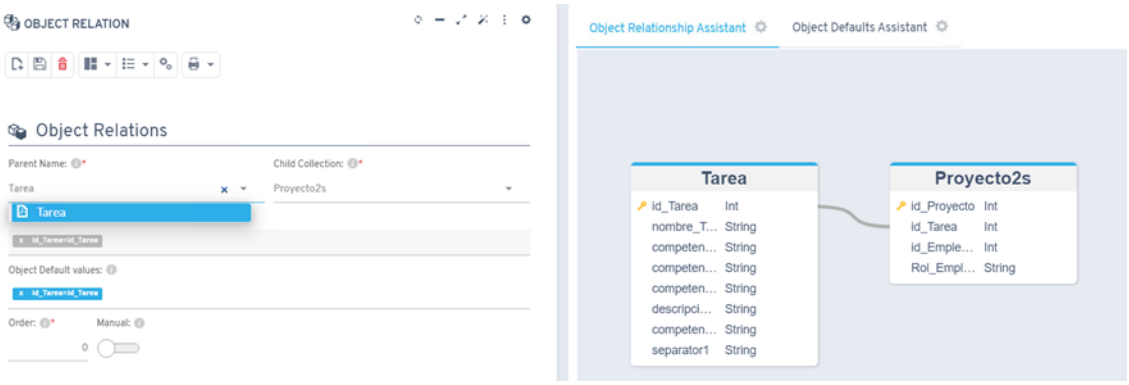
TASK TABLE FORM; Assignment of Role, Project, and Task as the main function.

PROJECT TABLE FROM; Assignment of Role, Project, and Task as the main function.
Roles Table;

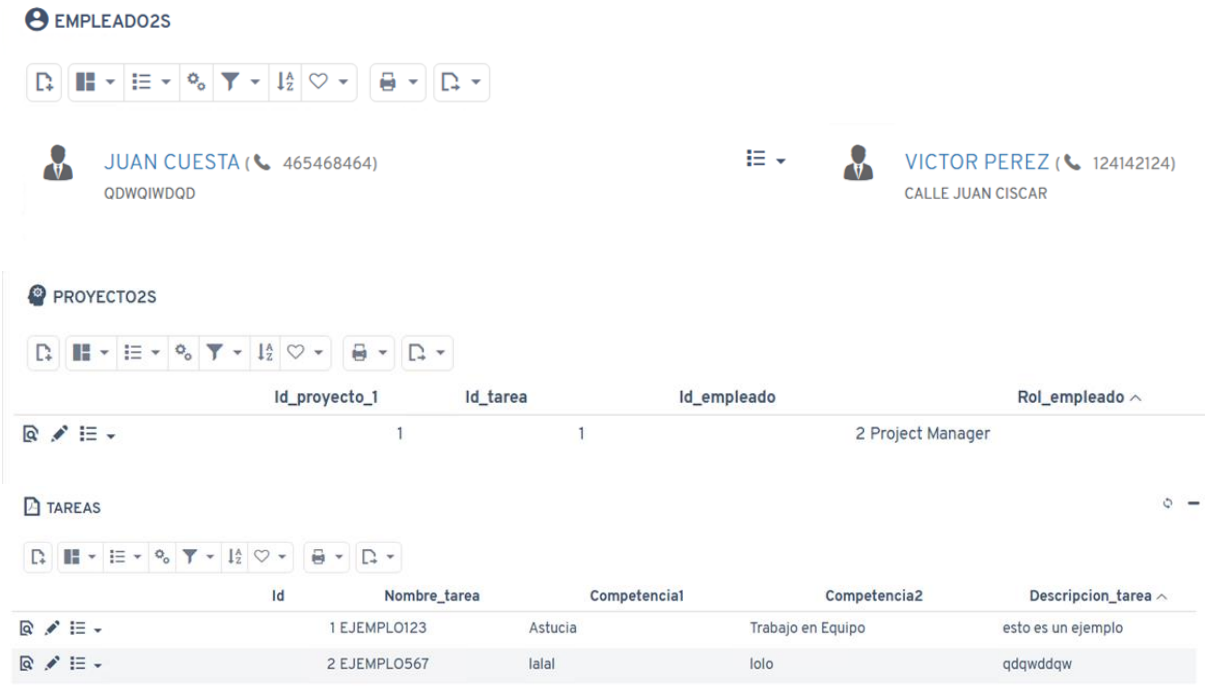


3. Relations between tables:





4. List of tables with data saved:



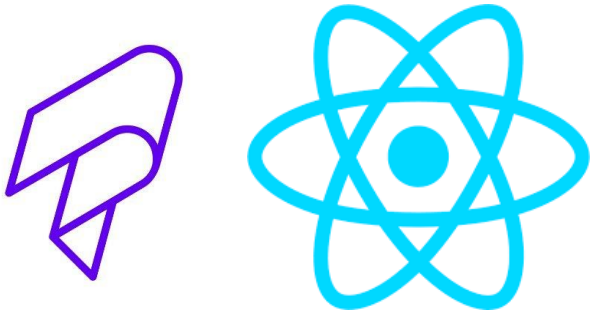
Tecnologies used

Regarding programming languages, we have used **JavaScript** for the majority of the application's programming, along with a bit of **JSON** for API content and **MarkDown** for structuring the README file.

The rest of the technologies we have used for the creation and development of our application are:

- **Expo React Native** for the development of the application's frontend, as Android Studio was causing us issues.

- **React native** and react **native paper** for all the libraries we need for the frontend



- **Spring boot** to send requests to our database without the need of SQL

- We also use **MongoDB** to connect and interact with our database

- **Amazon Web Services** as a host for our database so we can access it from remote

- As a human capital management tool, we have used **Flexygo**.

Data protection law

Imgini complies with the data protection laws of Spain, ensuring that our users' information is kept secure.

All matters related to how we use users' information are outlined in the application's terms and conditions, which are displayed just before registering a new user. It is necessary to read and accept these terms before completing the registration process.

Sesion Backlog

Daily Day 1, Sprint 0 (10 min.)
Monday - 03/02/2025:

- **What work was done in the previous meeting?**
  It's the first day of starting the project. Let's go all out!
- **What work will be done until the next meeting?**
  Different sprints will be carried out, starting with the following tasks:
  - **Didac:** Created Trello, worked on screen navigation, and Login/Registration.
  - **Javi:** Worked on the business model and logo, and reviewed Figma tutorials.
  - **Ausiás:** Created the database (tables, keys, and relationships), defined the Product Backlog, outlined basic and advanced tasks, and started the API logic.
  - **Izan:** Developed HCM, organized daily Scrums, and sketched out the screens for Imgini.
- **Sprint Backlog:**
  - Define the Product Backlog.
  - Set up the Trello board (tasks to do with Product and Sprint Backlog).
  - Define interface sketches.
  - Start the main navigation between screens.
  - Begin HCM development.
  - Start API development.
  - Develop company documentation.
  - Define aesthetics and logo.
- **Feedback from today's Sprints:**
  - **Ausiás:** All sprints were completed successfully except for the API development, which couldn't be progressed much due to time constraints. More to come next day.
  - **Izan:** Everything went well, but HCM development was challenging due to difficulties with connections and dropdown tables.
  - **Javi:** Completed the EIE sprint easily and continued with Figma.
  - **Didac:** Everything was successful and resolved without issues.
  - **General:** Difficulty managing data due to the lack of a repository, which slowed down our agility.

Daily Day 2 (10 min.)
Tuesday - 04/02/2025:

- **What work was done in the previous meeting?**
  Yesterday (Monday, 03/02/2025), different parts of the project were worked on:
  - **FrontEnd:** Interface sketches, screen navigation, and HCM processing.
  - **BackEnd:** Database creation and structuring, backlog definition, and starting the API logic.
  - **Additional Documents:** Trello, logo and aesthetics, and company documentation.
- **What work will be done until the next meeting?**
  We will continue with the mockup process and design the different screens of the project (for mobile) to later start applying the corresponding Endpoints.
- **Sprint Backlog:**
  - Set up the GitHub repository.
  - Configure the Spring Boot server.
  - Start working on Endpoints.
  - Process the mockup.
  - Develop the screen designs in Expo.
  - Continue HCM processing in Flexygo.
- **Feedback from today's Sprints:**
  - **Ausiás:** Restructured the database in MongoDB, prepared the REST API to start programming all Endpoints, configured the GitHub repository, and completed 2 Endpoints (View Image, Random Image). The logic flowed smoothly without issues, but urgent progress on EndPoints is needed.
  - **Izan:** Continued with HCM processing, almost finished the document. Supervised team members and their tasks. Filled out the Florida Expo form. NEED TO FINISH FLEXYGO HCM (FOR GOD'S SAKE).
  - **Javi:** Completed the Figma mockup (possible changes) and the business viability model. Everything was done correctly and without difficulties.
  - **Didac:** Interfaces were completed, but there were issues implementing third-party components that we will definitely need. Everything else was successful and without issues.

Daily Day 3 (10 min.)
Wednesday - 05/02/2025:

- **What work was done in the previous meeting?**
  Yesterday (Tuesday, 04/02/2025), we finalized the basic mobile interface for Imgini, allowing us to start adding third-party components. The mockup was completed, the AWS server was instantiated, several API Endpoints were started, and the database was reconfigured in MongoDB.

- **What work will be done until the next meeting?**
  In this meeting, the tasks outlined in the Sprint Backlog will be carried out throughout the afternoon. Ausiás will continue with Endpoint development and the AWS server. Javi and Didac will continue with the graphical interface, and Izan will finish the HCM and review the EndPoints and the status of each team member.
- **Sprint Backlog:**
  - Develop EndPoints: Login, Registration, etc.
  - Test API queries from the interface with requests.
  - Finish HCM.
  - Search for third-party libraries and implement them.
  - Adjust interface styles.
  - Redo the viability study.
  - Start the AWS server.
- **Feedback from today's Sprints:**
  - **Ausiás:** Processed the Login and Registration Endpoints and made several database modifications. Everything was successful except for starting the AWS server.
  - **Izan:** Continued contributing ideas to the interface and consulted about tablet implementation. Provided support and resolved team members' questions. Everything in order.
  - **Javi:** Improved the "Viability Study" document and searched for third-party libraries. Everything went well.
  - **Didac:** Added third-party components and improved the application's aesthetics. Started programming the logic for the "Daily" screen and its styles. Everything was successful.

Daily Day 4 (10 min.)
Thursday - 06/02/2025:

- **What work was done in the previous meeting?**
  Yesterday (Wednesday, 05/02/2025), different parts of the database were adapted to implement SpringBoot with MongoDB. The HCM was completed, allowing us to manage the database.
- **What work will be done until the next meeting?**
  The AWS server will be deployed, logic for making POST requests to the API will be implemented, the interface and its components will be improved, and we will

start preparing the presentation for the exposition. Additionally, we will continue developing the application's EndPoints.

- **Sprint Backlog:**
    - Deploy and test the AWS server.
    - Logic for the app's main screen with POST methods.
    - Logic for global variables.
    - Research components to add + audio.
    - Develop more Endpoints.
    - Research tablet development + responsiveness.
    - **ENGLISH:** Elevator Pitch + 3-minute explanation.
    - Include documentation associated with a software creation project.
- **Feedback from today's Sprints:**
    - **Ausiás:** Configured the AWS server on Linux due to errors on Windows, continued developing EndPoints, and worked hard to integrate the database correctly on the AWS server. Everything was successful.
    - **Izan:** Continued contributing ideas to the interface and consulted about tablet implementation. Provided support and resolved team members' questions. Everything in order.
    - **Javi:** Started developing the presentation and worked on the logic for the main screen with Didac. Everything was successful.
    - **Didac:** Continued developing the interface and adding new components to improve the user experience. Started programming the logic for the "Daily" screen and its styles. Everything was successful.

Daily Day 5 (10 min.)
Friday - 07/02/2025:

- **What work was done in the previous meeting?**
  Yesterday (Thursday), the database was deployed on a publicly accessible AWS server. Several API Endpoints were created, and we continued with the logic for the app's main screen and the implementation of third-party libraries.
- **What work will be done until the next meeting?**
  Deploy the API on the AWS server and establish connections from the React Native app. Develop more API Endpoints to provide additional functionality. Continue working on the English promotional video script. Continue developing the logic and styles of the React Native app.
- **Sprint Backlog:**

    - Deploy the API on the AWS server.
    - Connect the React Native app to the remote API.
    - Develop more Endpoints.
    - Work on the English promotional video script.
    - Develop the logic for the app's main games.
    - Develop interfaces with third-party components.
- **Feedback from today's Sprints:**
    - **Ausiás:** Faced complications with the AWS server instance due to persistent errors.
    - **Izan:** DID NOT ATTEND CLASS.
    - **Javi:**
    - **Didac:**

Daily Day 6, Sprint 0 (10 min.)
Monday - 10/02/2025:

- **What work was done in the previous meeting?**
  Last week (Friday, 07/02/2025), complications with the server continued, interface development and its respective logic progressed, and we started thinking about the presentation and the English video.
- **What work will be done until the next meeting?**
  We will start structuring the project documentation to be deployed on GitHub. We will continue developing the app's dark mode and implementing user and login/logout Endpoints to have them functional as soon as possible.
- **Sprint Backlog:**
    - Apply programming logic to each screen with API calls.
    - Develop different EndPoints for the app.
    - Create the project and documentation section in the GitHub repository.
    - Develop different parts of the interface (settings screen, dark mode).

    - Deploy the API on the AWS server.
- **Feedback from today's Sprints:**
    - **Ausiás:** Faced errors with server deployment, but Endpoint development was done correctly.
    - **Izan:** Developed the user interface correctly but had doubts about the data update EndPoint.
    - **Javi:** Developed the project presentation and documentation in the GitHub repository. Everything was correct and completed.
    - **Didac:** Developed the dark mode for Imgini, created the settings screen, and worked on the logic for the app's main screen.