

Inspira Crea Transforma

Proyecto Integrador 1 (PI1) 2025-2

What is PI1?

PI1 is a **project-based** course where we leverage knowledge from the **past**, **present**, and **future** to develop software (and hardware*) products through various challenges.

* depending on the project

Professors

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Subject objectives

O1: Propose a technological solution to address a need within a specific context.

O2: Develop a product incrementally, ensuring each iteration, delivers at least one functionality that aligns with the product owner's priorities, applying agile team practices.

O3: Identify and document the functional and non-functional requirements of a software product.

O4: Use UML diagrams to specify the static and dynamic aspects of a software solution.

O5: Apply foundational principles of layered architecture and separation of concerns to structure solution code.

O6: Actively collaborate within teams, employing agile approaches to achieve project goals.

Simplified subject objectives

- O1:** Identify a problem.
- O2:** Solve the problem by developing software.
- O3:** Create solutions that go beyond basic CRUD (CReate, Update, Delete) operations.
- O4:** Use existing tools like frameworks, APIs, and libraries.
- O5:** Apply good design and programming practices.
- O6:** Effectively manage the project.

Subject placement

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SEMESTER 1	SEMESTER 2	SEMESTER 3	SEMESTER 4
Fundamentos de Programación	Lenguajes de Programación	Base de Datos	Teoría de la Conmutación
Principios de Desarrollo de Software	Estructuras Datos y Algoritmos 1	Estructuras Datos y Algoritmos 2	Ingeniería de Software
Seminario Ingeniería de Sistemas		Electrónica Digital	Proyecto Integrador 1
		Lenguajes Formales y Compiladores	

... a vast amount of prior knowledge

Guidelines for the project

Technical requirements



- ☐ **Web** application
- ☐ **Python** and **Django**
- ☐ **Data analytics***

Teamwork



- ☐ **Three** (to five) students
- ☐ Work in **English**
- ☐ **No** changes allowed

Development practices



- ☐ **Layers**
- ☐ **Modeling**
- ☐ **Continuous integration**
- ☐ **Continuous delivery**

* process of examining, cleaning, and transforming data to extract valuable insights, identify patterns, and support decision-making

Project goals

- Develop a challenging project.
- Apply knowledge acquired in previous semesters.
- Foster creativity and explore global problem-solving ideas.
- Deliver a **minimum viable product (MVP)** with impactful functionality.

Strategies

- Agile practices.
- Constant monitoring (weekly) of the project.
- Work in autonomy.
- Evolutionary engineering process.
- Group and individual evaluation.

Evaluation

Category	Item	%	Date**
Group work* - Project	Deliverable 1: Problem, requirements, high-level architecture, proof of concept	20	10/08/2025 (Delivery) 13/08/2025 – 15/08/2025 (Review)
	Deliverable 2: MVP, detailed architecture	20	07/09/2025 (Delivery) 10/09/2025 – 12/09/2025 (Review)
	Deliverable 3: More detailed architecture and new functions that provide additional value	20	15/10/2025 – 17/10/2025 (Delivery) 15/10/2025 – 17/10/2025 (Review)
	Deliverable 4: Final product with improvements and documentation	20	09/11/2025 (Delivery) 12/11/2025 – 14/11/2025 (Review)
Individual work - Workshops	Workshop 1	5	30/07/2025 – 01/08/2025
	Workshop 2	5	20/08/2025 – 22/08/2025
	Workshop 3	5	17/09/2025 – 19/09/2025
	Workshop 4	5	22/10/2025 – 24/10/2025

* Presentation during the class session. Group and individual performance are evaluated.

** Depending on the class day.

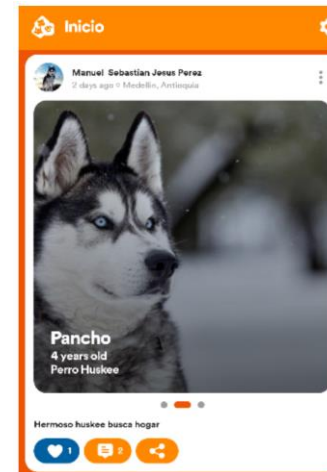
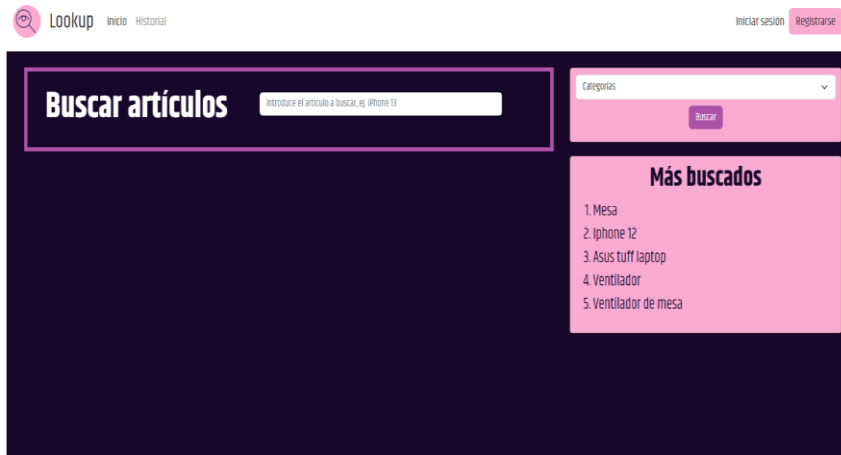
Links

Schedule (to check each week): [1.2. ST0251-2025-2-Schedule.xlsx](#)

"Pacto pedagógico": [1.3. ST0251-2025-2 PactoPedagogico.docx](#)

Teams: [1.4. ST0251_2025-2_Teams.xlsx](#)

Previous projects (2022-2)

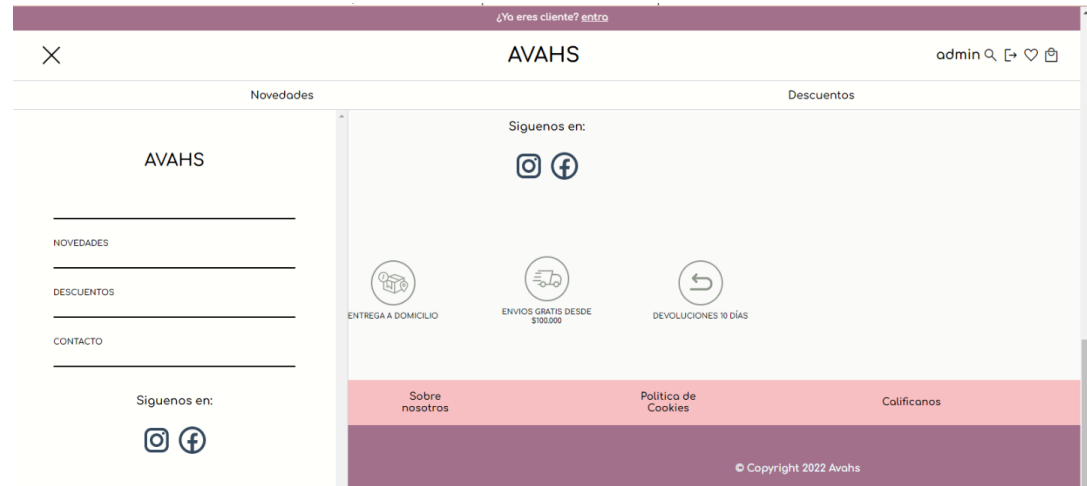


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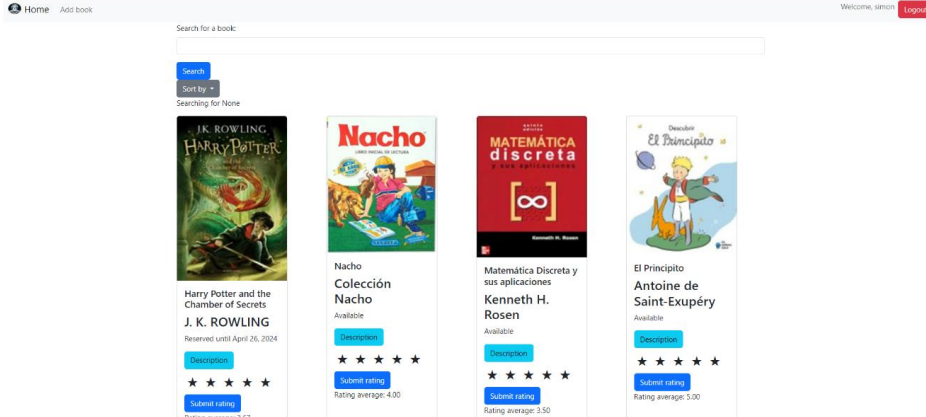
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Previous projects (2022-2)

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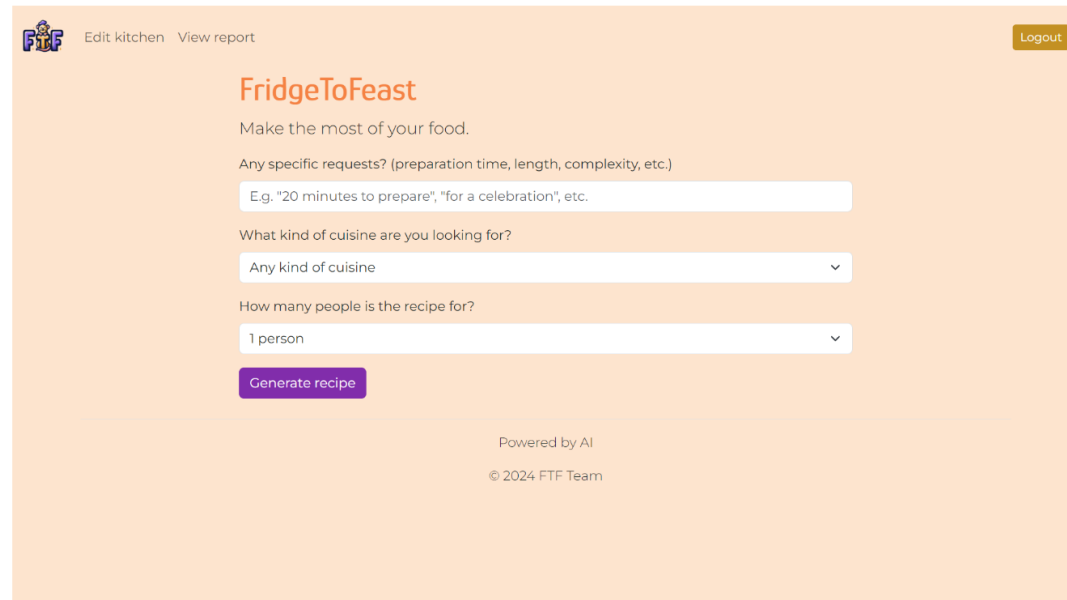


Previous projects (2024-1)



Library information
management

Library Recommendation of
recipes with ingredients available
in the kitchen management



Questions?

Myths?

Fears?

Thank you!!!!