

## **Workshop 2**

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### **Teacher:**

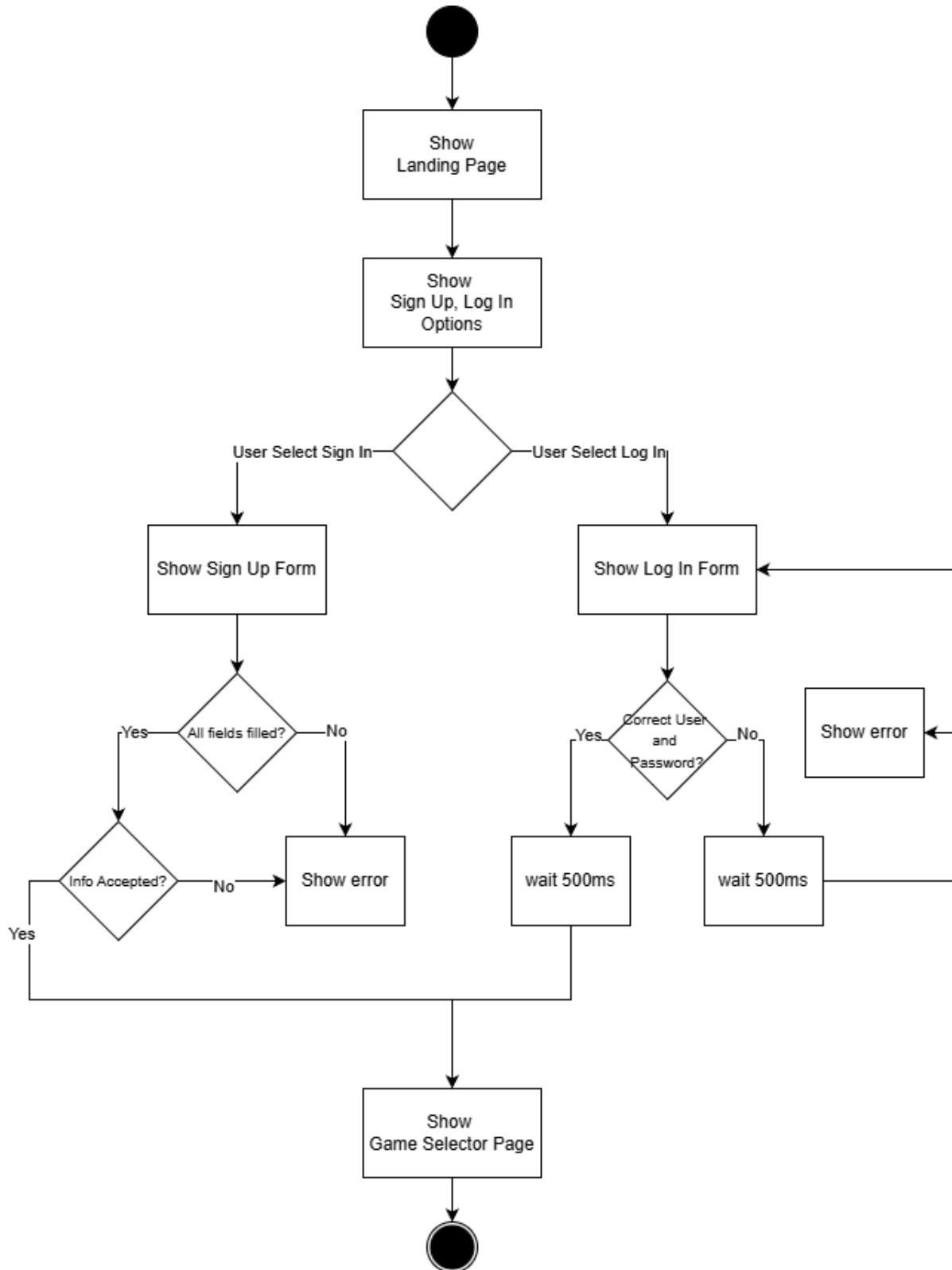
Carlos Andres Sierra Virguez



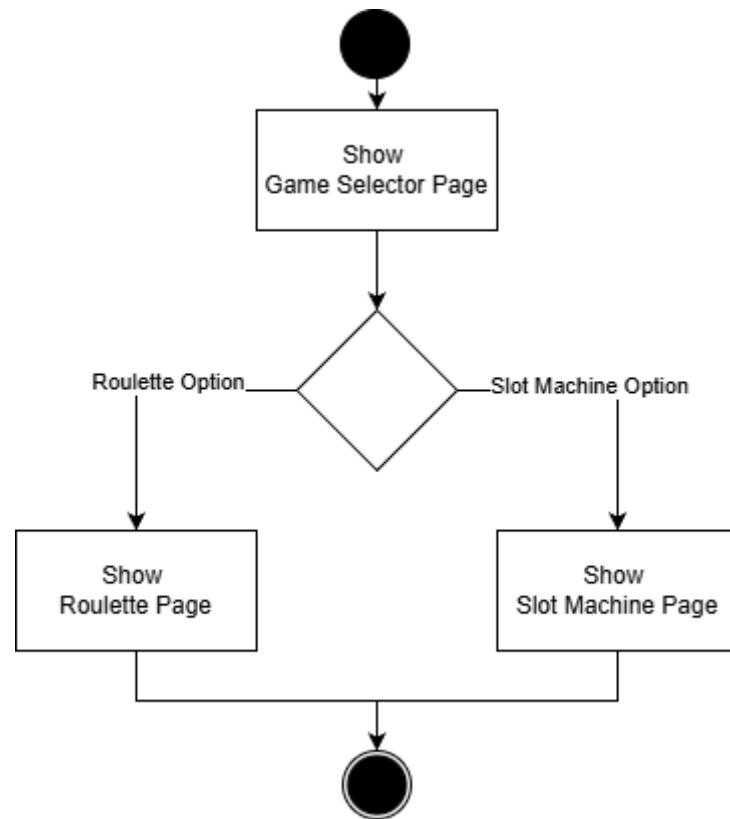
**Universidad Nacional de Colombia  
Faculty of Engineering  
Department of Systems and Industrial Engineering**

## Business Model Processes

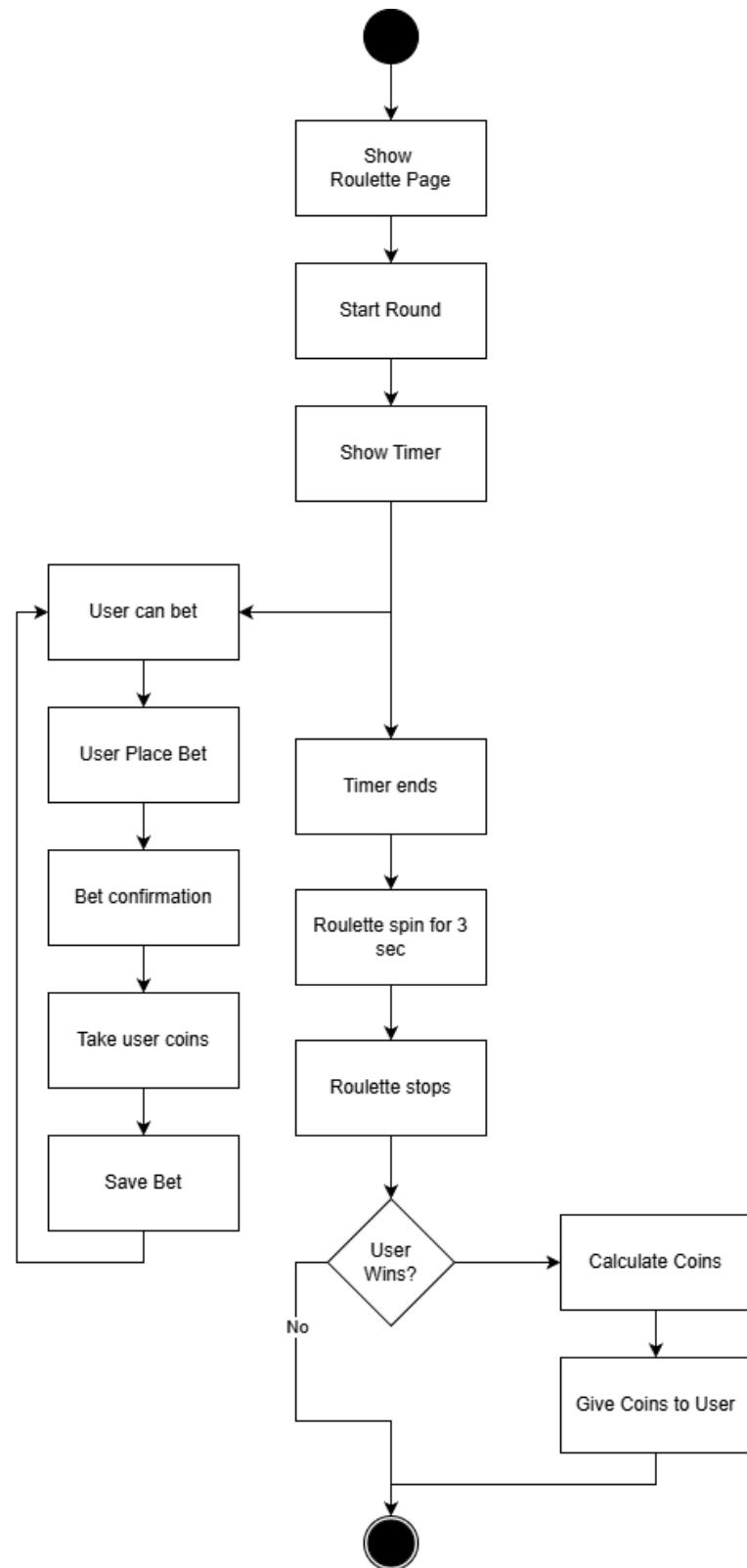
Log In/ Sign Up:



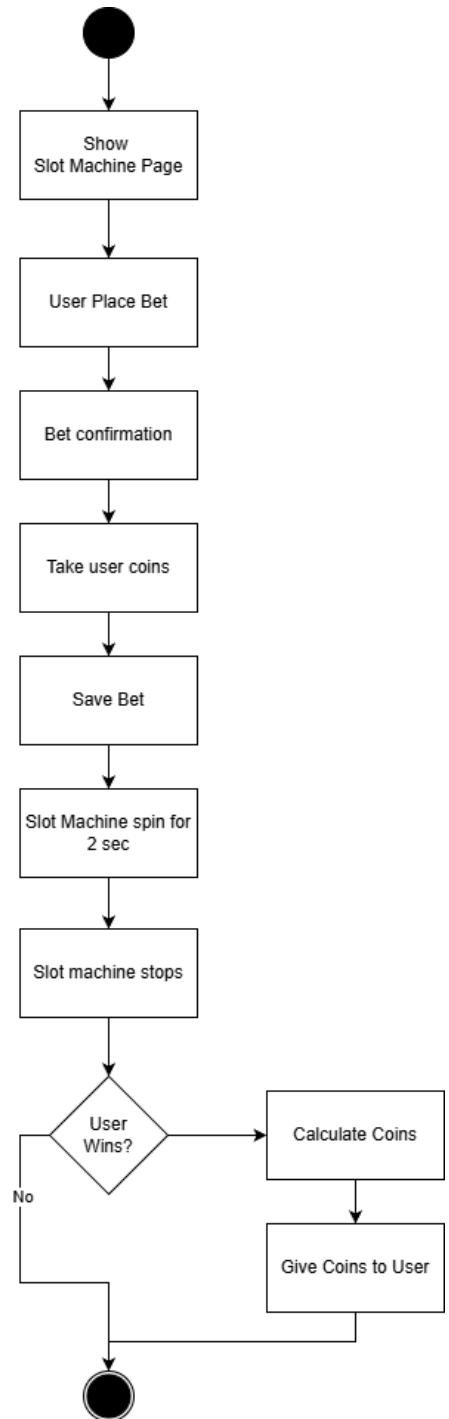
Game Selector:



Roulette:



Slot Machine:

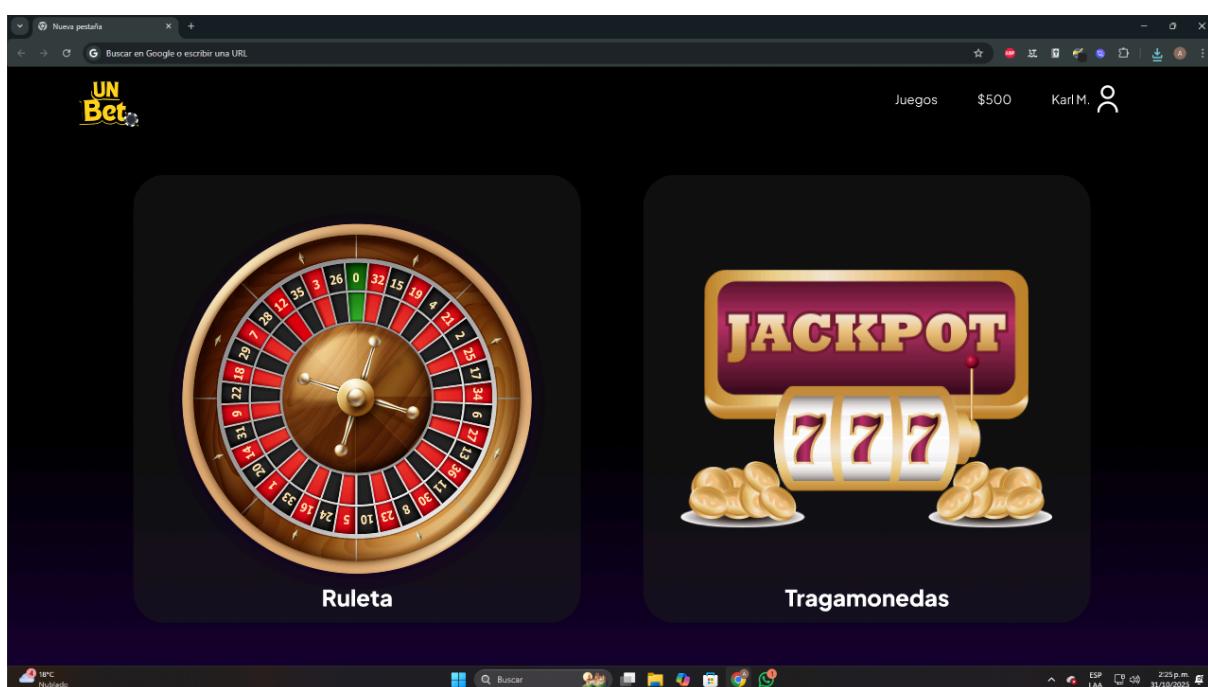
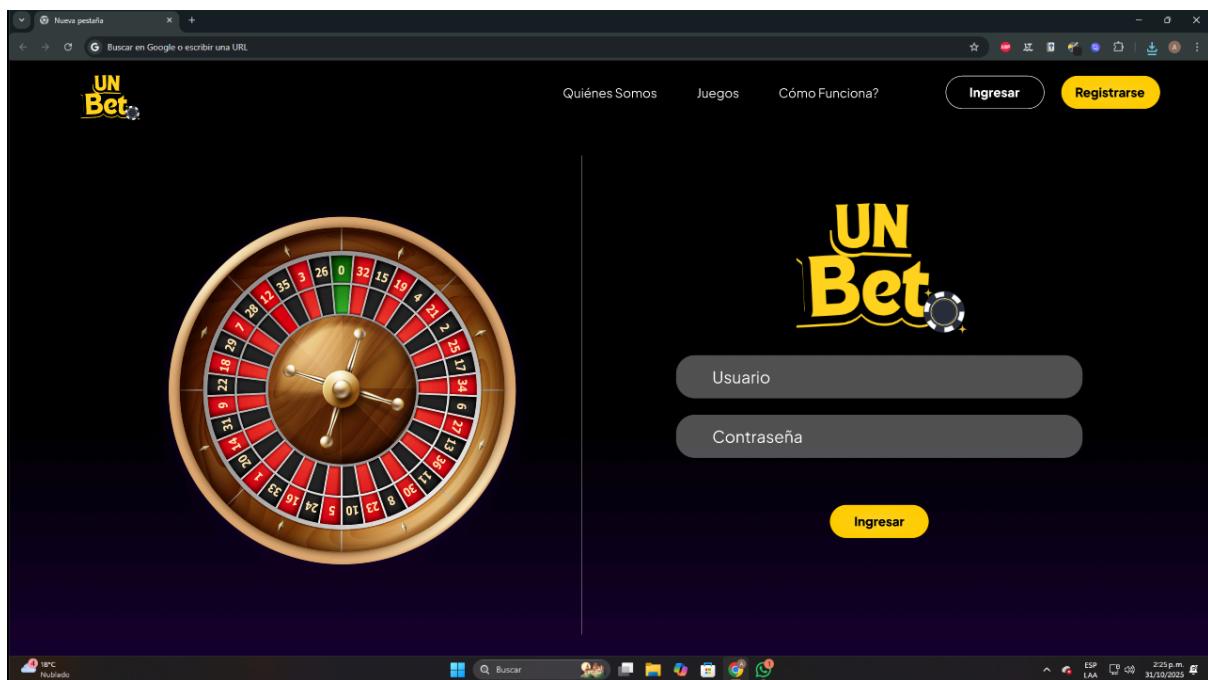


## Mockups

The screenshot shows the homepage of UN Bet. At the top left is the UN Bet logo. Below it is a large roulette wheel graphic. To the left of the roulette wheel, the text "Juega y Gana! en UN Bet" is displayed in yellow and white, with "Te regalamos 500 Coins con tu registro\*\*" underneath. Below this are two buttons: "Registrarse" (yellow) and "Ingresar" (white). The background is dark with a roulette wheel graphic.

\*UNBET no maneja ningún tipo de activo o bien aceptados como medio de pago, los premios son definidos por la plataforma y no tienen ningún valor comercial dentro o fuera de la misma.  
\*\*Los Coins son créditos virtuales sin ningún tipo de valor comercial, los administradores podrán otorgar más para seguir jugando.

The screenshot shows the registration page of UN Bet. At the top right are navigation links: "Quiénes Somos", "Juegos", "Cómo Funciona?", "Ingresar" (disabled), and "Registrarse". Below the roulette wheel graphic, there are input fields for "Nombre(s)", "Apellidos", "Usuario", "Contraseña", "Repetir Contraseña", "Correo Electrónico", "Teléfono", "Fecha de Nacimiento", and "Cédula de ciudadanía". At the bottom, there are two checkboxes: "He leído y acepto los términos y condiciones." and "La información suministrada es real y soy mayor de 18 años.", followed by a "Registrarse" button.



The image consists of two screenshots of a web browser displaying the UNBet platform.

**Screenshot 1: Deposit Offer**

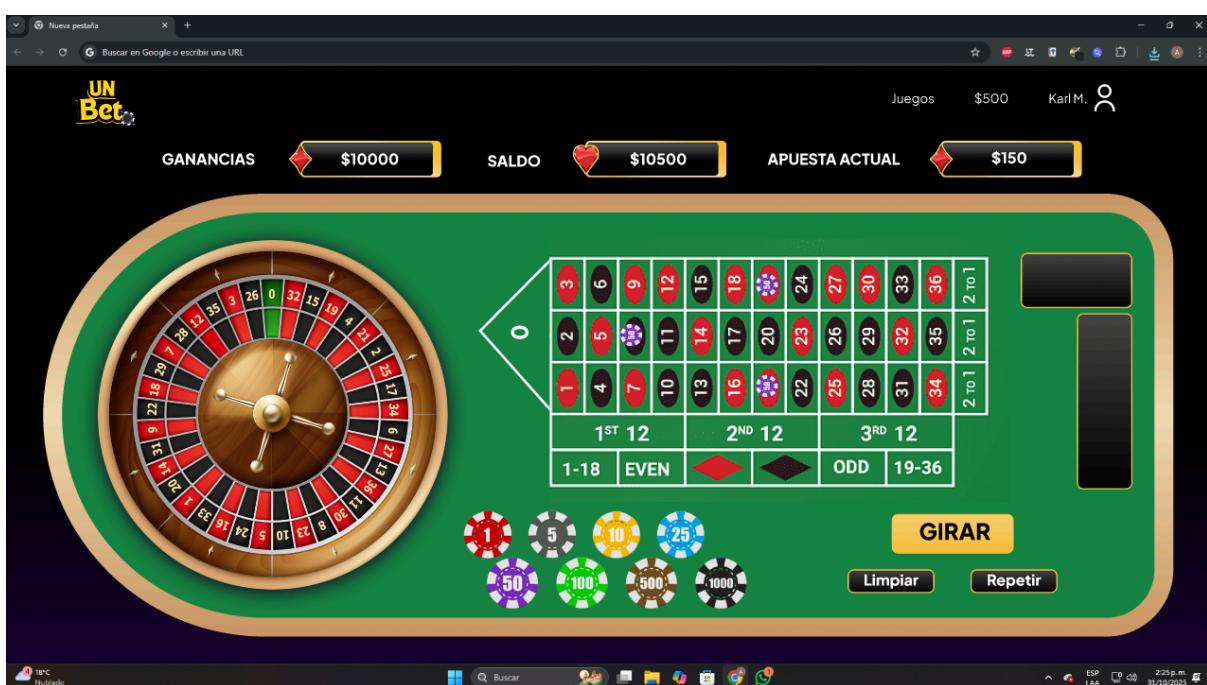
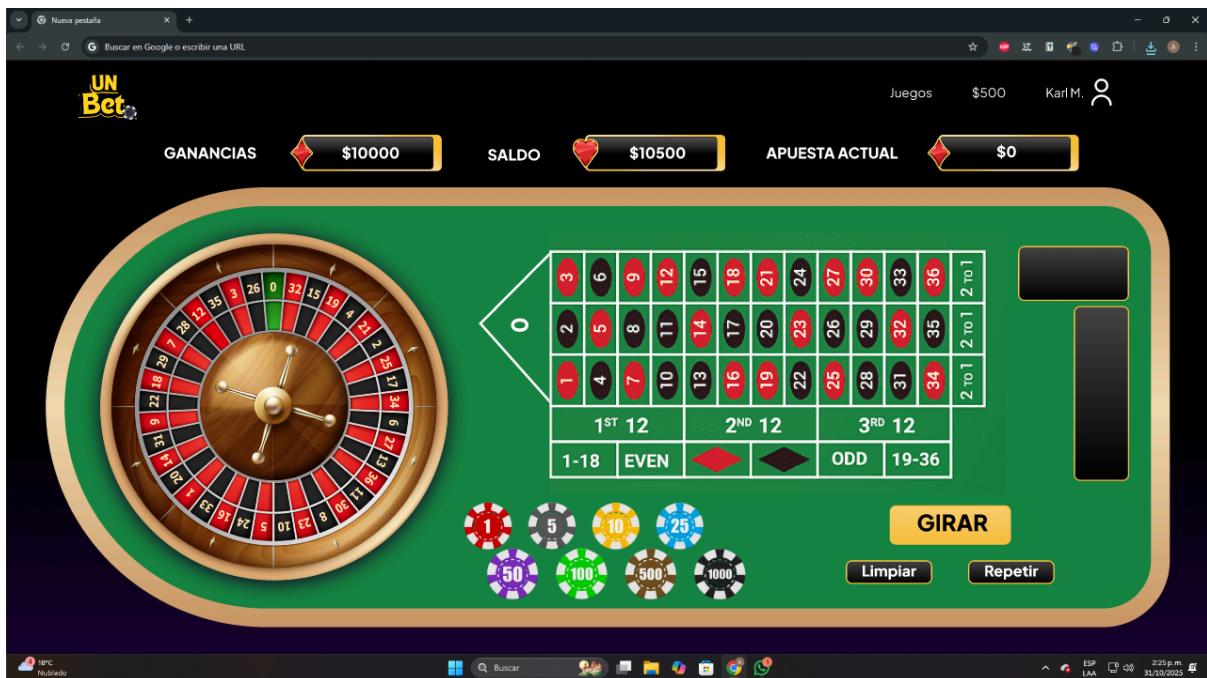
This screenshot shows a large '\$500' in white text against a dark background. Below it is a grey input field with a dollar sign (\$) icon. A yellow 'Solicitar' button is positioned below the input field. At the top right, there are links for 'Juegos', '\$500', and a user profile for 'Karl M.'.

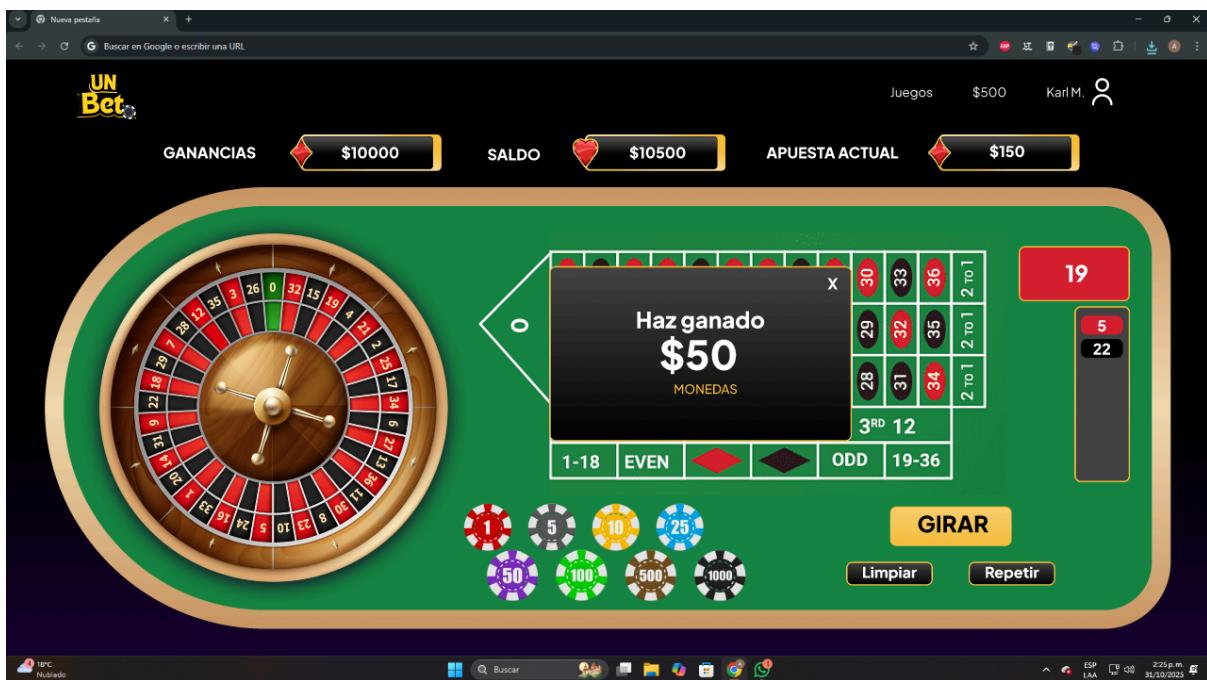
**Screenshot 2: Credit Requests**

This screenshot shows a table of credit requests:

| Usuario    | Saldo actual | Cantidad solicitada | Aprobar   | Denegar   |
|------------|--------------|---------------------|---|---|
| anago2025  | \$10500      | \$5000              | <span style="background-color: green; color: white; padding: 5px;">Aprobar</span> | <span style="background-color: red; color: white; padding: 5px;">Denegar</span> |
| arturo2025 | \$1100       | \$100000            | <span style="background-color: green; color: white; padding: 5px;">Aprobar</span> | <span style="background-color: red; color: white; padding: 5px;">Denegar</span> |
| manuel2025 | \$0          | \$8000              | <span style="background-color: green; color: white; padding: 5px;">Aprobar</span> | <span style="background-color: red; color: white; padding: 5px;">Denegar</span> |
| daniel2025 | \$85000      | \$5500              | <span style="background-color: green; color: white; padding: 5px;">Aprobar</span> | <span style="background-color: red; color: white; padding: 5px;">Denegar</span> |

The top navigation bar includes links for 'Quiénes Somos', 'Juegos', 'Cómo Funciona?', 'Admin', and a red 'Salir' button. The bottom of the screen shows a Windows taskbar with various icons and system status.







Nuevo pantalla

Buscar en Google o escribir una URL

UNBet

Quiénes Somos Juegos Cómo Funciona? Salir

## MI PERFIL



**Nombre(s)** Ana María **Apellidos** González  
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**Fecha de Nacimiento** 15/05/2004  
**Cédula de ciudadanía** 1010000234

**Editar**

**SALDO**  \$10500

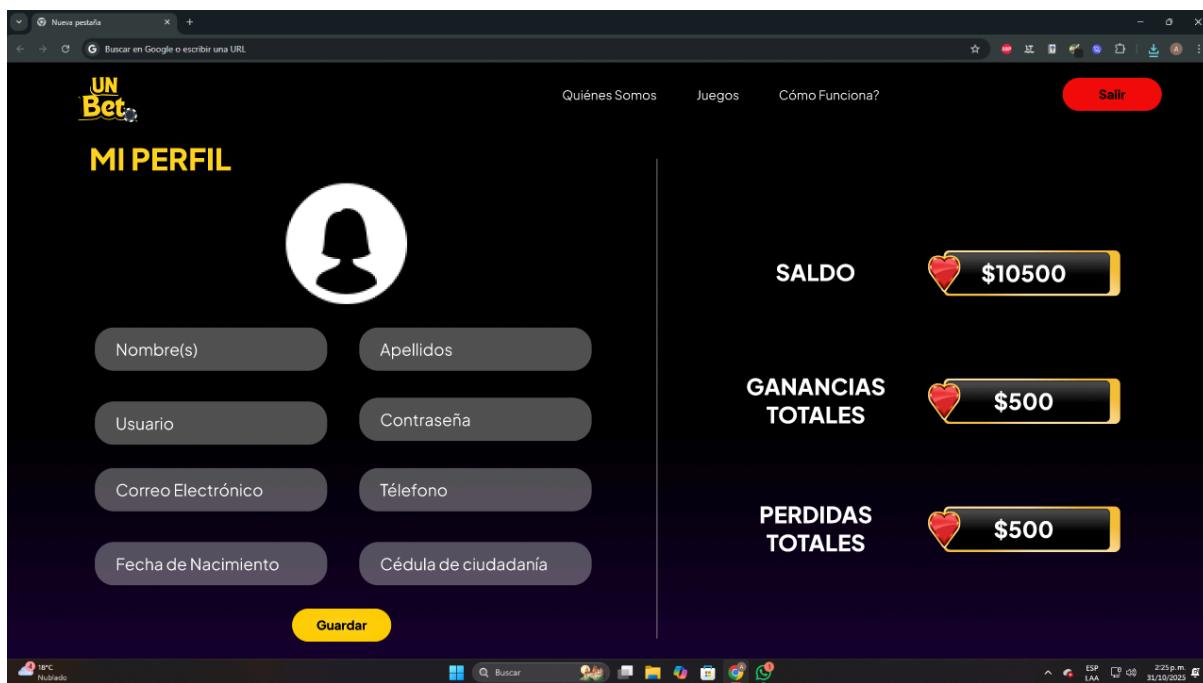
**GANANCIAS TOTALES**  \$500

**PERDIDAS TOTALES**  \$500

Nuevo pantalla

Buscar en Google o escribir una URL

ESP LAA 2:25 p.m. 31/10/2025



### Link de Figma:

<https://www.figma.com/design/AUS8aHxcnwu14by7D9SVqi/Mockups?node-id=18-2&t=60uSlzXoHqxus7F2-1>

### CRC Cards

| User  |                        |
|---|------------------------|
| <ul style="list-style-type: none"> <li>- Register and authenticate.</li> <li>- Maintain user information (name, email, balance).</li> <li>- Place bets and view betting history.</li> </ul> | AuthService, Bet, Game |

| AuthService   |                |
|---|----------------|
| <ul style="list-style-type: none"> <li>- Verify login credentials.</li> <li>- Register new users.</li> <li>- Generate and validate tokens (JWT).</li> </ul> | User, Database |

| Database  |                              |
|---|------------------------------|
| <ul style="list-style-type: none"> <li>- Store and retrieve data about users, bets, and results.</li> <li>- Manage connection with Azure SQL</li> </ul> | User, AuthService, Game, Bet |

| Game  |                                  |
|---|----------------------------------|
| <ul style="list-style-type: none"> <li>- Abstract base class for all games.</li> <li>- Define general structure (start, play, calculate winnings).</li> </ul> | User, Bet, Roulette, SlotMachine |

| Roulette  |           |
|---|-----------|
| <ul style="list-style-type: none"> <li>- Implement roulette game logic.</li> <li>- Spin and determine winning number/color.</li> <li>- Calculate winnings based on bet type.</li> </ul> | Game, Bet |

| SlotMachine  |           |
|--|-----------|
| <ul style="list-style-type: none"> <li>- Implement slot machine logic.</li> <li>- Generate random symbol combinations.</li> <li>- Calculate prize based on the combination.</li> </ul> | Game, Bet |

| Bet  |            |
|--|------------|
| <ul style="list-style-type: none"> <li>- Record amount, game type, and result.</li> <li>- Calculate winnings or losses.</li> <li>- Update user balance.</li> </ul> | User, Game |

| PaymentService  |                |
|---|----------------|
| <ul style="list-style-type: none"> <li>- Manage user balance deposits and withdrawals.</li> <li>- Validate transactions.</li> </ul> | User, Database |

| AzureService   |                       |
|--|-----------------------|
| <ul style="list-style-type: none"> <li>- Connect to Azure (Database, deployment, API).</li> <li>- Handle environment variables and storage.</li> </ul> | Database, AuthService |

## Database:

- **Proposal of entities, tables and attributes**

### User:

- **id** : UUID PRIMARY KEY DEFAULT gen\_random\_uuid()
- **email** : CITEXT UNIQUE NOT NULL
- **username** : VARCHAR(32) UNIQUE NOT NULL
- **password\_hash** : TEXT NOT NULL
- **role** : NOT NULL DEFAULT 'gambler'
- **avatar\_url** :TEXT
- **is\_active** : BOOLEAN NOT NULL DEFAULT TRUE
- **created\_at** : TIMESTAMPTZ NOT NULL DEFAULT now()

### Sessions :

- **id** : UUID PRIMARY KEY DEFAULT gen\_random\_uuid()
- **user\_id**: UUID NOT NULL REFERENCES users(id)
- **started\_at**: TIMESTAMPTZ NOT NULL DEFAULT now()
- **ended\_at** : TIMESTAMPTZ
- **status** : TEXT CHECK (status IN ('active','closed')) DEFAULT 'active',
- **ip\_address** :INET
- **user\_agent** : TEXT

### credit\_ledger :

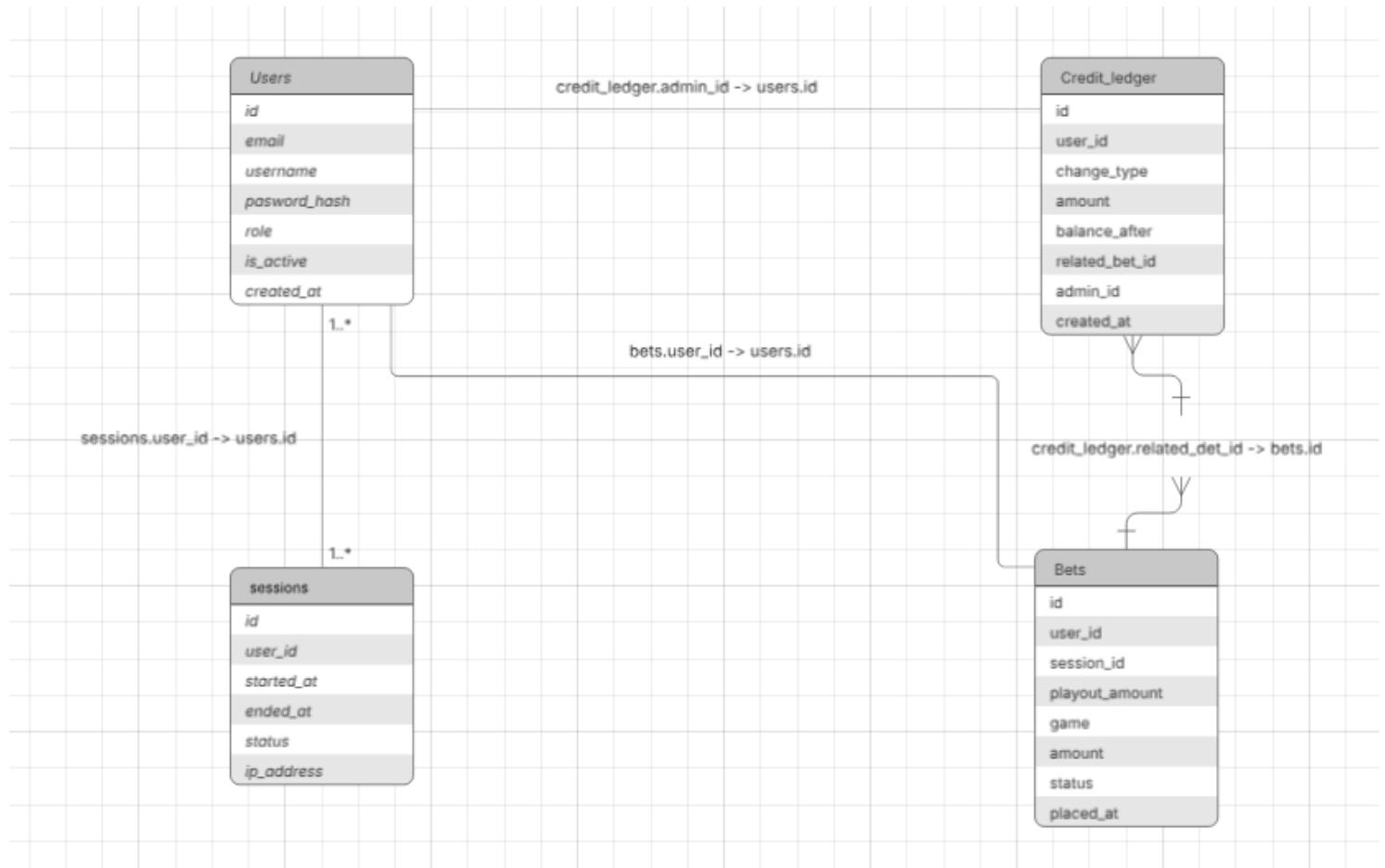
- **id** : BIGSERIAL PRIMARY KEY
- **user\_id**: UUID NOT NULL REFERENCES users(id)
- **change\_type**: credit\_change NOT NULL
- **amount** : NUMERIC(12,2) NOT NULL
- **balance\_after** : NUMERIC(12,2) NOT NULL
- **related\_bet\_id** :BIGINT REFERENCES bets(id) DEFERRABLE INITIALLY DEFERRED
- **admin\_id** : UUID REFERENCES users(id)
- **note**:TEXT
- **created\_at**:TIMESTAMPTZ NOT NULL DEFAULT now()

### bets :

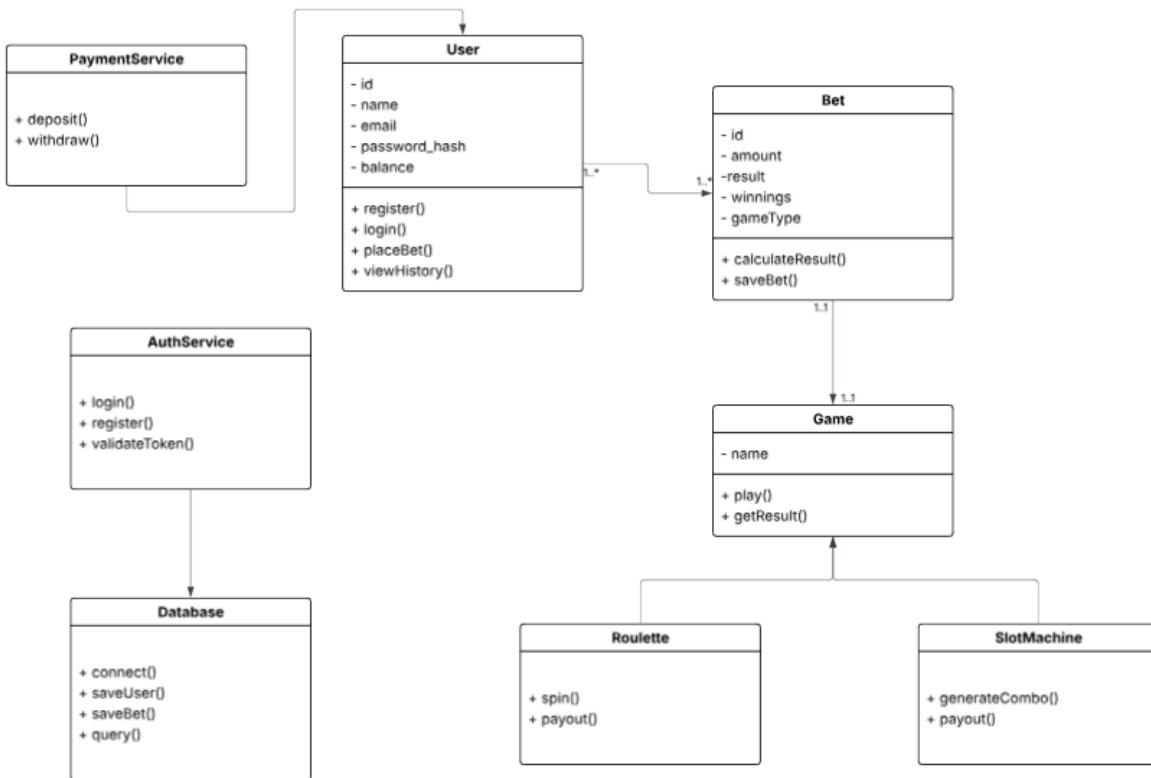
- **id** : BIGSERIAL PRIMARY KEY
- **user\_id**: UUID NOT NULL REFERENCES users(id)
- **session\_id** : UUID REFERENCES sessions(id)
- **game** : game\_type NOT NULL
- **amount** :NUMERIC(12,2) NOT NULL CHECK (amount > 0)
- **placed\_at**:TIMESTAMPTZ NOT NULL DEFAULT now()

- **status** : bet\_status NOT NULL DEFAULT 'placed'
- **payout\_amount**:NUMERIC(12,2) NOT NULL DEFAULT 0
- **winning\_note**:TEXT

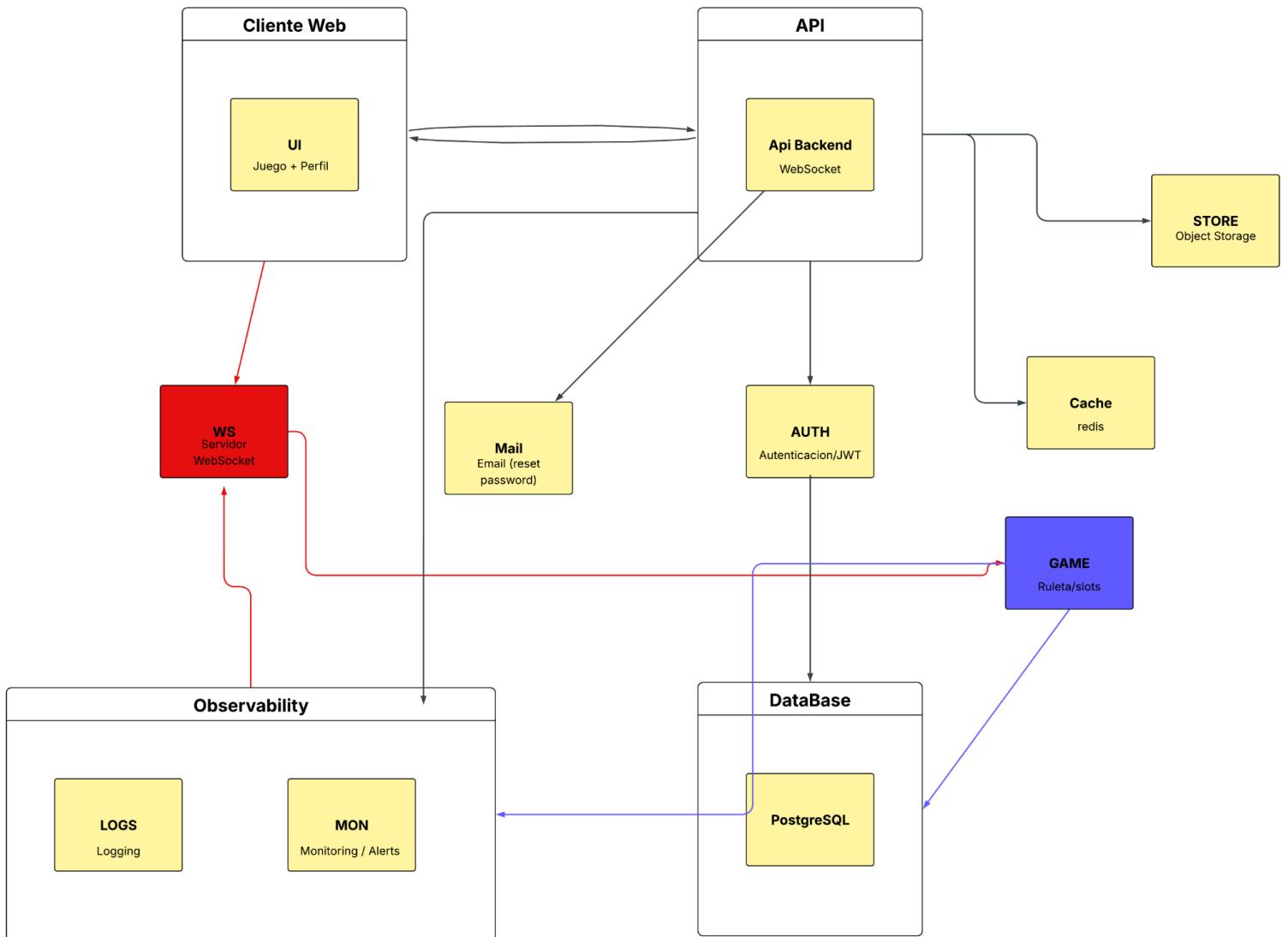
## Data base UML Diagram



## Class UML Diagram



## Architecture Diagram



Github : <https://github.com/Alejonavas24/Ingesoft2-2025>