



Universidad Nacional de Colombia - Bogotá

Faculty of Engineering

Department of Systems and Industrial Engineering

Course: Ingeniería de Software 2

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Workshop No. 2 — Design Artifacts and System Modeling

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Project

Name

- CACVi-UN

Description

- An online reporting center that allows members of the National University of Colombia's Bogotá campus community to view and report incidents of violence within the university and its surrounding areas

Objective

- CACVi-UN aims to improve security on campus and in the surrounding area by providing users with an interactive map where the university community can report incidents of violence and view recent incidents.

We aspire to be the foundation of a reporting center that not only disseminates information but also serves as a connection between victims and support professionals of all kinds; and a source of data for studies aimed at improving campus security.

CRC Cards

Location

Location	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Represent the geographical coordinates of an incident.• Maintain attributes such as latitude and longitude.• Exist as a component object associated with a single Report.	<ul style="list-style-type: none">• Report → the report that owns this location data.

Report

Report	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Represent a gender-based incident reported within the system.• Store descriptive information including title, details, date, category, area and location(object).• Associate each report with its geographical Location and reporting User.• Validate input data before persistence or transmission.	<ul style="list-style-type: none">• User → the reporter who submitted this report.• Location → defines where the incident occurred.

Report History

ReportHistory	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Represent a collection of Report instances.• Provide filtering and querying capabilities by date, category or user.• Serve as a logical abstraction for retrieving user-specific or system-wide report records.• Support analytical or visualization modules that rely on historical data.	<ul style="list-style-type: none">• User → to retrieve personal report history.• Report → the elements contained and managed by this class.

Sessions

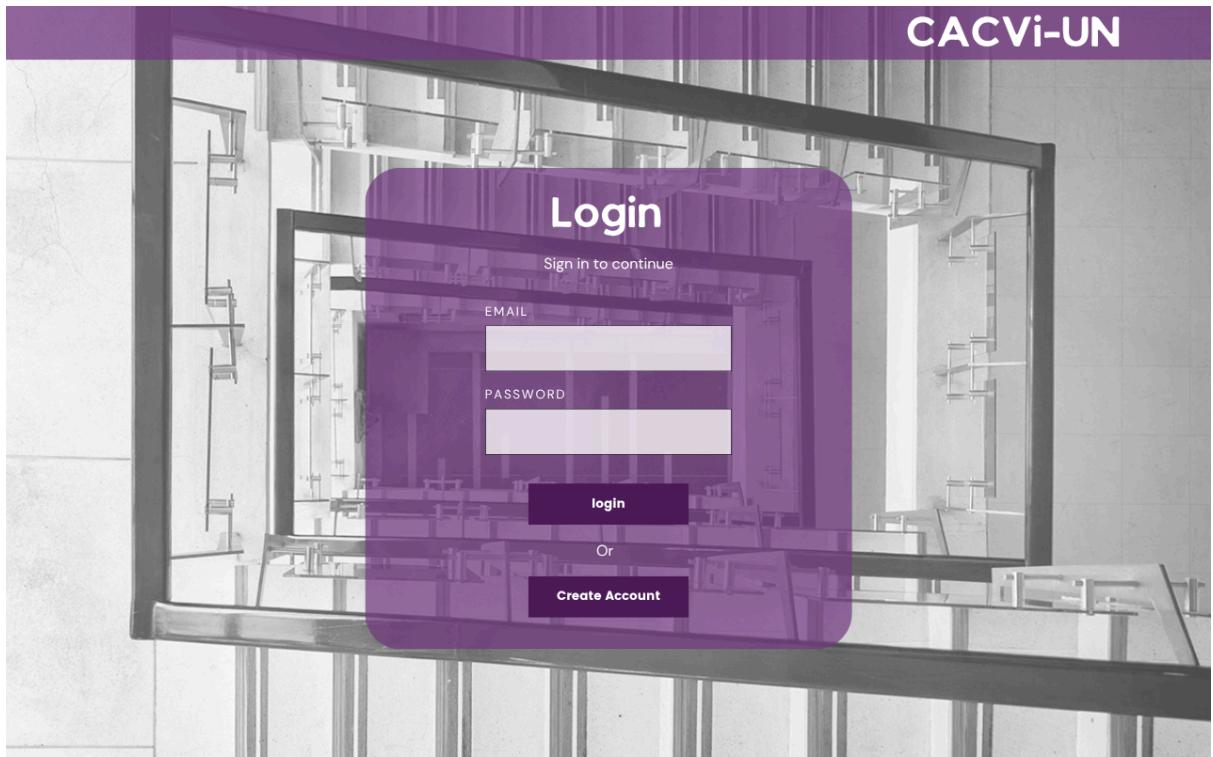
Session	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Represent an active authenticated user session.• Maintain session metadata, including access token and creation time.• Validate session integrity and determine whether it remains active.• Provide mechanisms to terminate or refresh an existing session.	<ul style="list-style-type: none">• User → the account that owns the session.

User

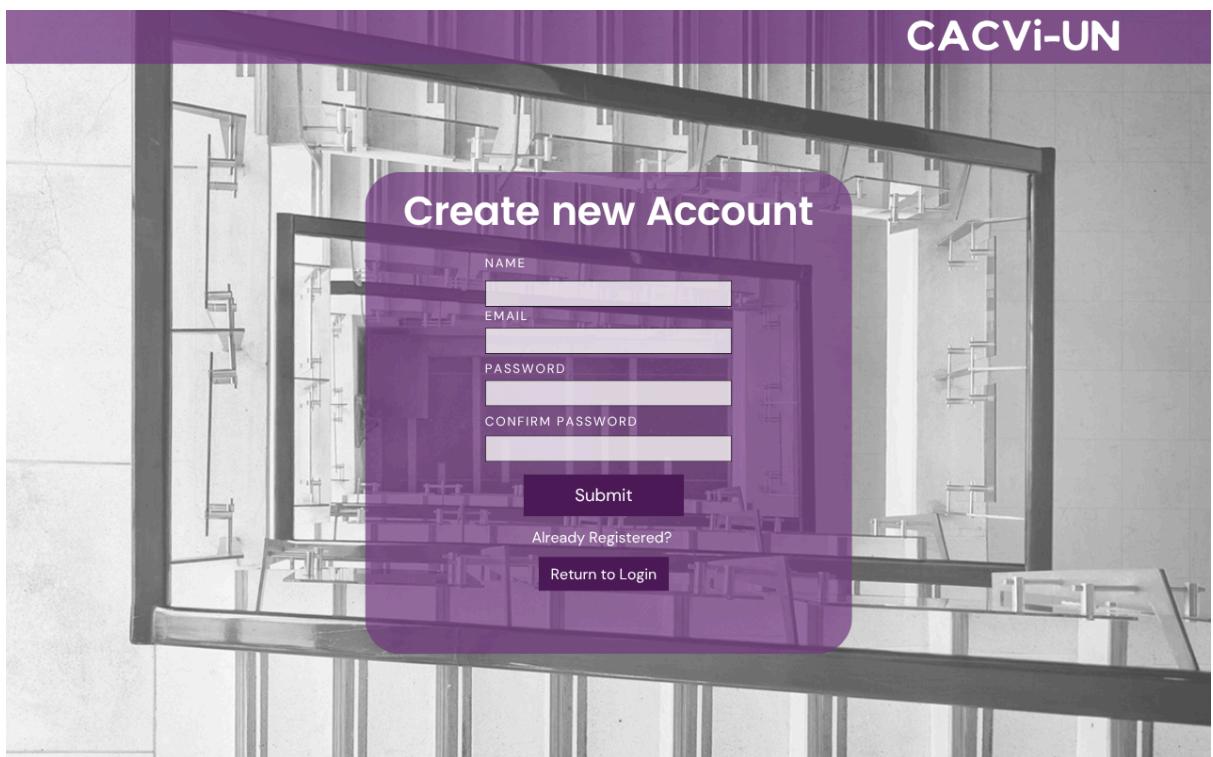
User	
Responsabilities	Collaborators
<ul style="list-style-type: none">• Represent an individual registered in the system.• Maintain personal data such as name, email, role, and registration date.• Validate credentials and determine access permissions based on role.• Keep an association with all Report instances submitted by this user.	<ul style="list-style-type: none">• Report → represents the incidents reported by this user.• Session → represents the current authenticated session of the user.

Mockups

Login



Create account



Make report

CACVi-UN

SEE THE STATISTICS SEE THE MAP SING OUT

Make your Report

Please complete the survey

PLEASE DESCRIBE THE EVENT

PLEASE SELECT THE AREA ON THE MAP WHERE THE EVENTS OCCURRED.

SEND THE REPORT

CACVi-UN

SEE THE STATISTICS SEE THE MAP SING OUT

Make your Report

Please complete the survey

NAME AND LAST NAME

EMAIL

AGE

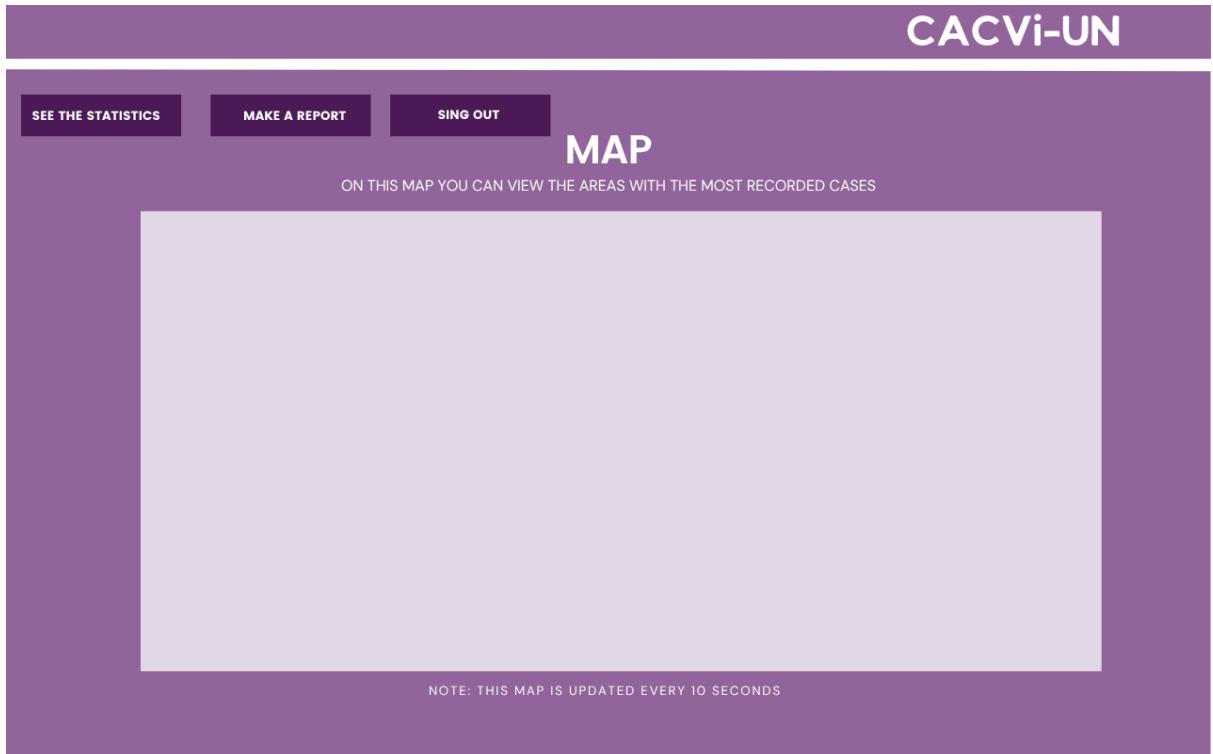
LINK WITH THE UNIVERSITY

DATE OF EVENT

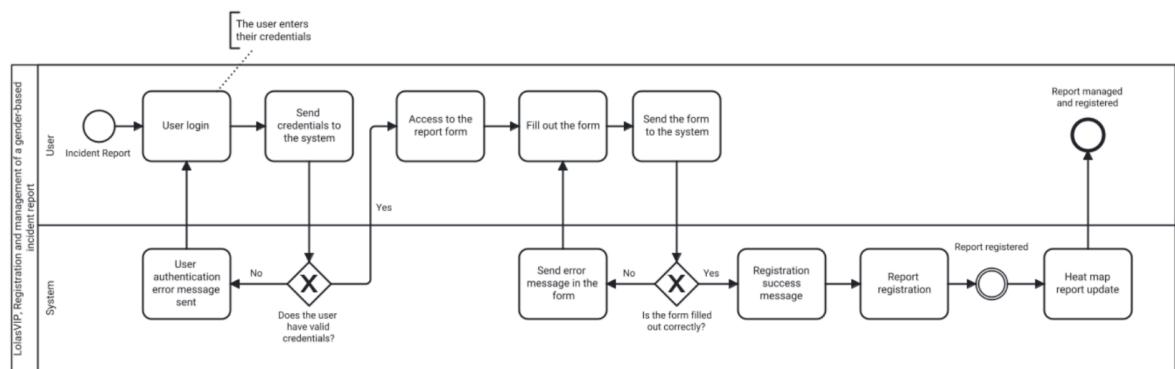
TYPE OF VIOLENCE YOU HAVE BEEN A VICTIM OF

SEND THE REPORT

Map



Business Model Processes



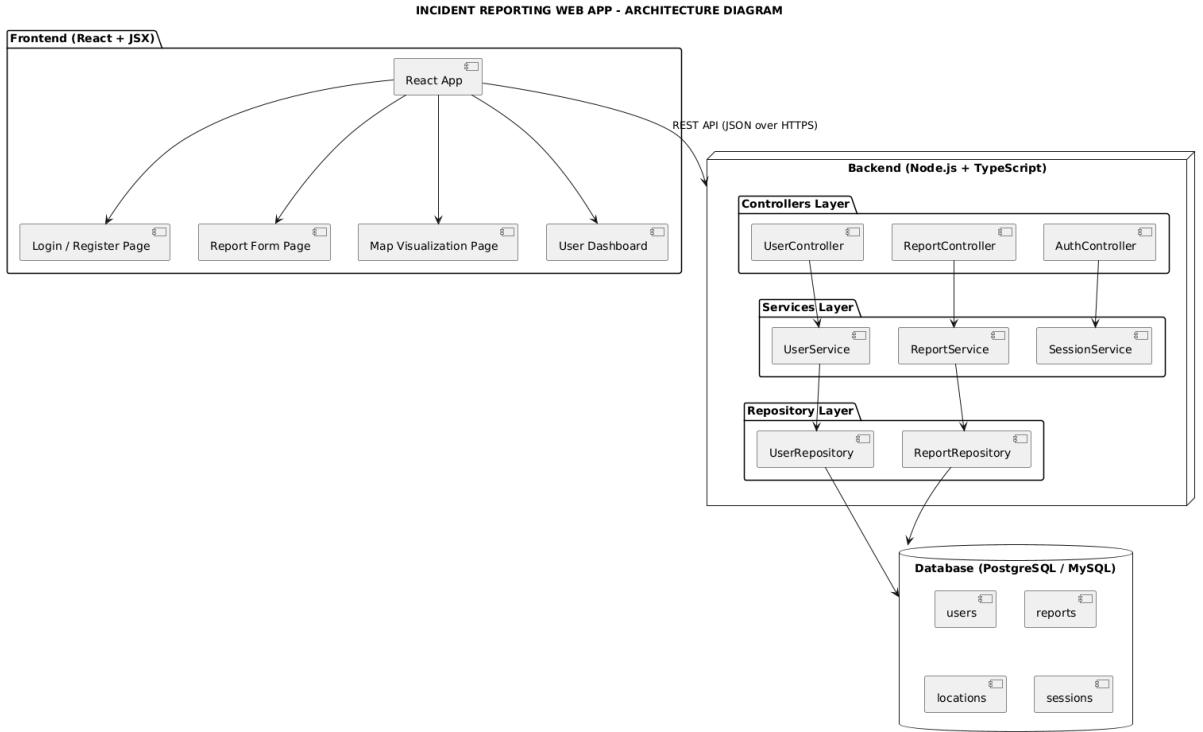
Process: Registration and management of gender-based incident reports.

Represent the complete flow by which a user:

- Accesses the system,
- Creates a new incident report,
- And the system processes, stores, and displays it in the overview or map view.

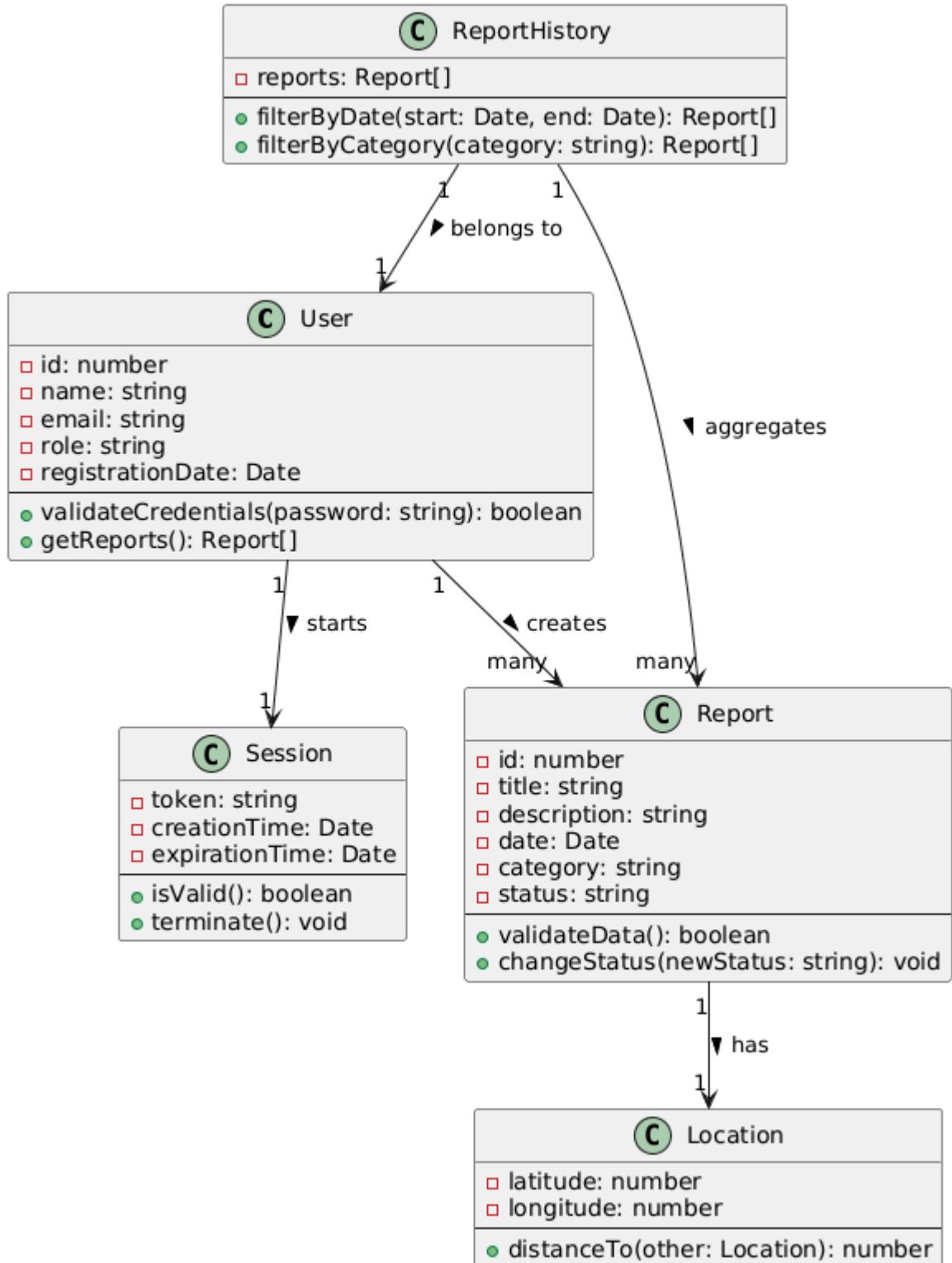
This is the core business process, as it reflects the application's mission: to record and analyze gender-based incidents to generate information and action.

Architecture Diagram



The architecture diagram shows how the files, modules, APIs, and other components that make up the project structure will be defined. It illustrates the communication and general flow of a user and the data they provide to the application.

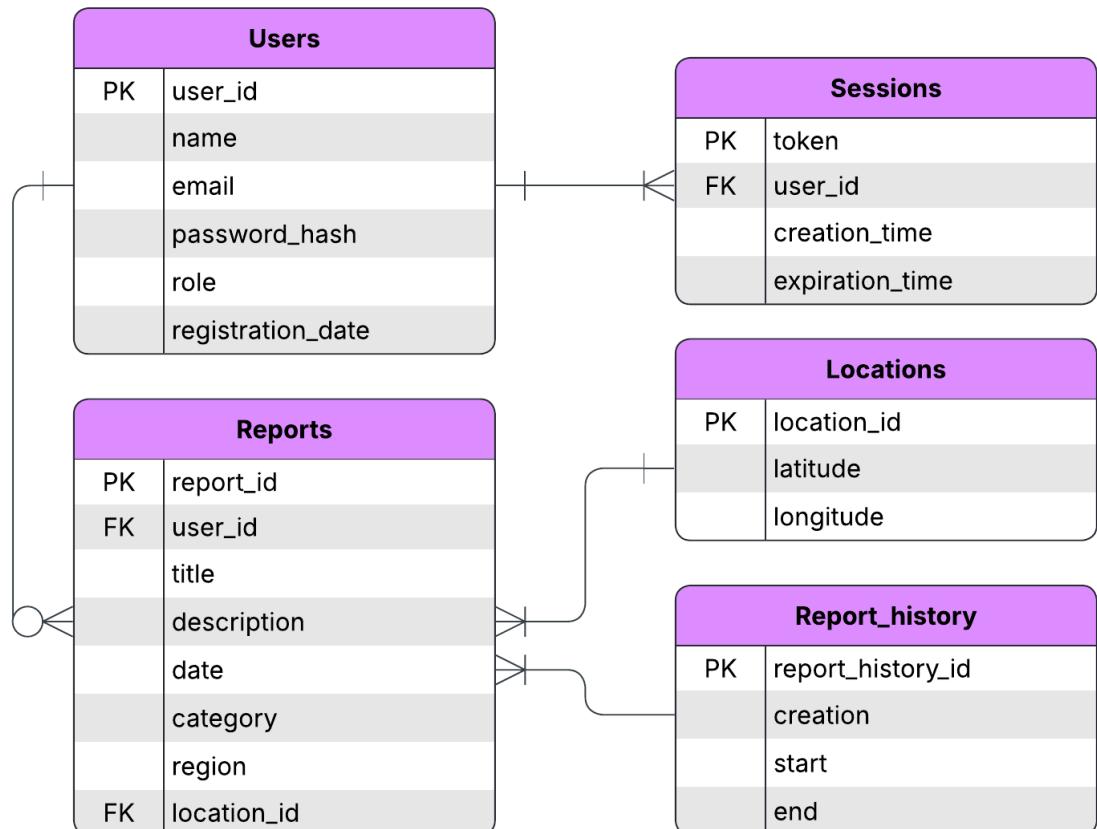
Class Diagram



This diagram, created using UML notation, describes in detail the classes that will be instantiated as objects in the back-end of the application project. They will function as templates, maintaining consistent terminology across all modules and allowing for all desired operations.

Furthermore, the cardinality and therefore the relationships between these classes are shown, relationships that define the business rules that will govern the web application.

Relational Database Model



All these files are attached in the project's repository:
<https://github.com/juserranor/VIPIngeSoftII.git>