

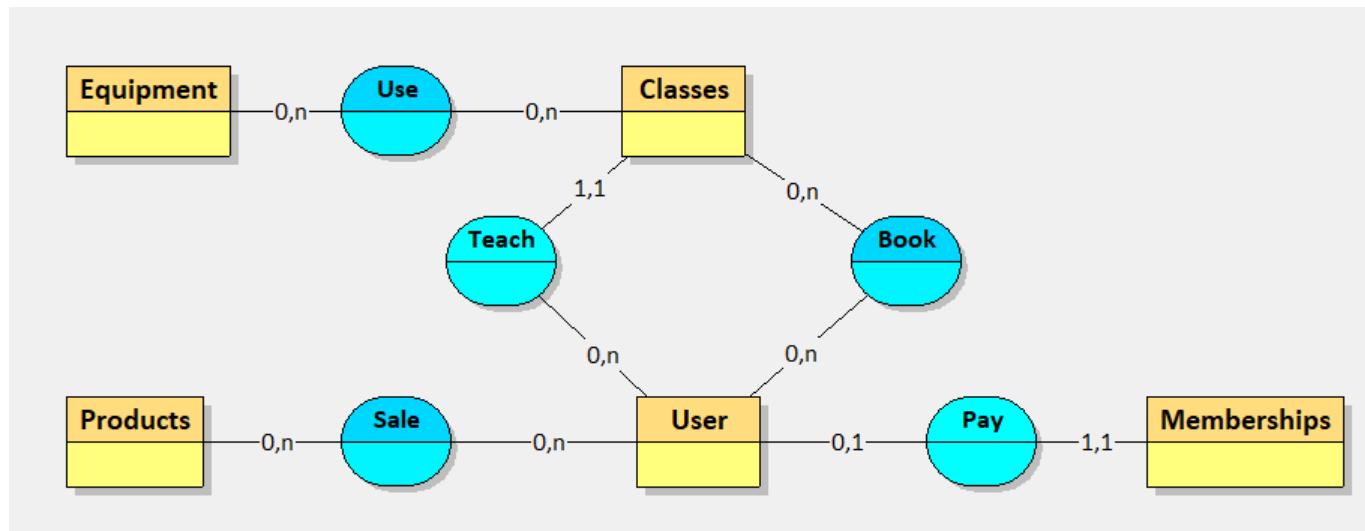
Gym Database Project

Introduction

This document presents the design of a Gym Management Database System. The system models the main entities of a gym, like users, equipment, products, classes and bookings. It also shows the relationships between these entities through an ER diagram and a logical data model.

Entity-Relationship Diagram

The following diagram illustrates the Entity-Relationship (ER) model for the gym database. It shows the entities, their attributes, and the relationships among them.

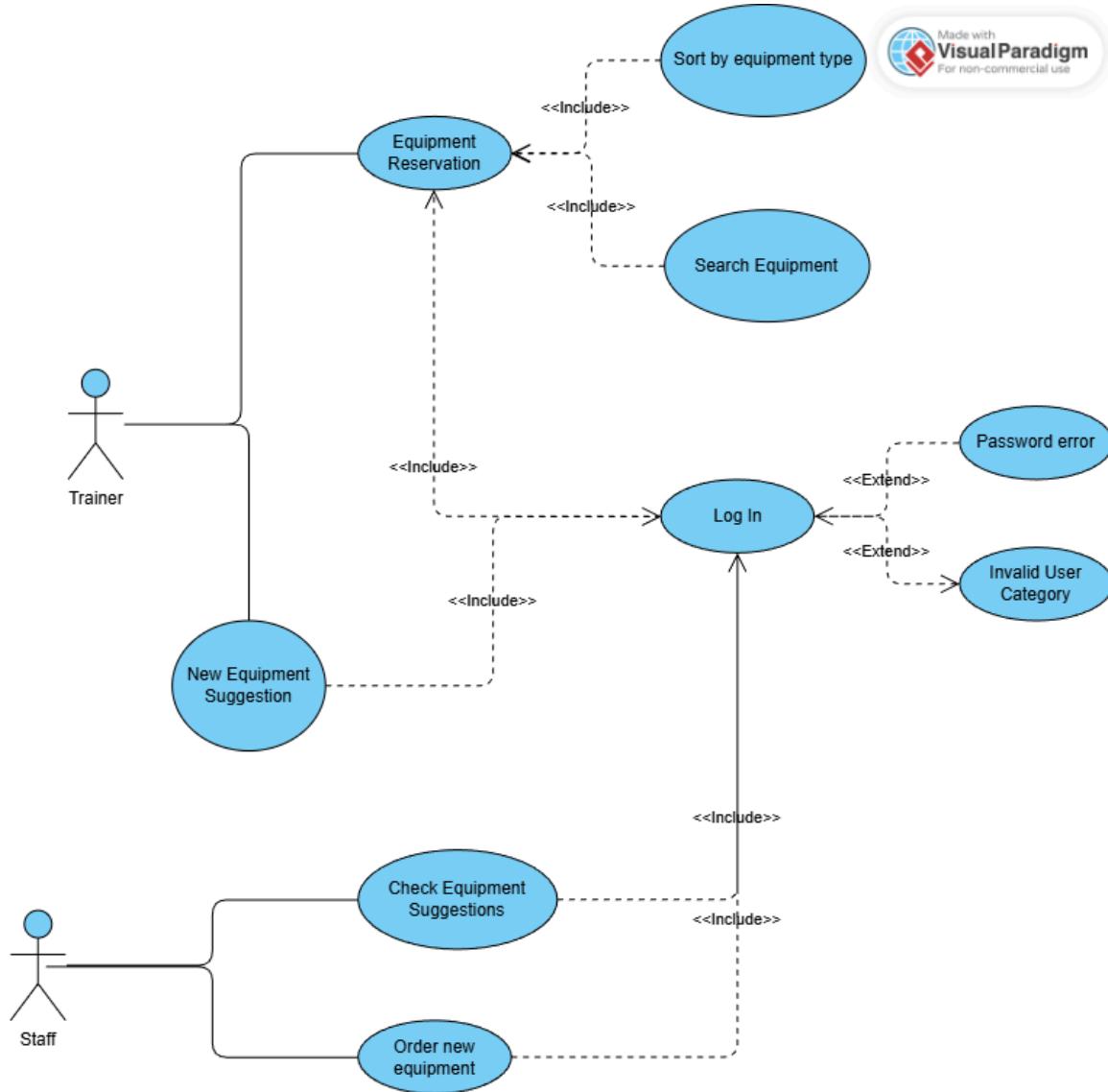


Logical Data Model

The logical data model represents the database structure in terms of tables, columns, and relationships. Below is the logical model for the gym database:

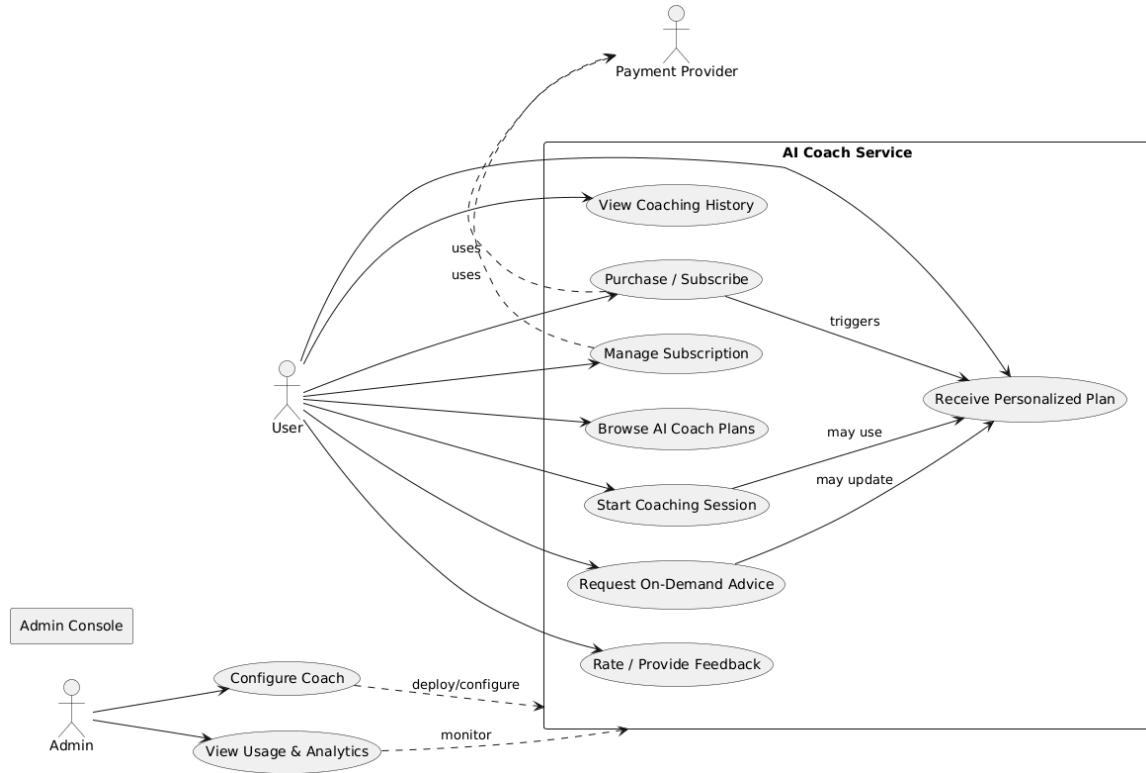
```
Equipment = (#Id_Equipment COUNTER, Name VARCHAR(50), Type VARCHAR(50), PurchaseDate DATE, MaintenanceDate DATE, Price VARCHAR(50), Brand VARCHAR(50), Condition_ VARCHAR(50));
User_ = (#Id_User COUNTER, Name VARCHAR(50), Email VARCHAR(50), Phone VARCHAR(50), DoB DATE, JoinDate DATE, Role VARCHAR(50), Speciality VARCHAR(50), Salary VARCHAR(50));
Products = (#Id_Products COUNTER, ProductName VARCHAR(50), Category VARCHAR(50), Description TEXT, Price CURRENCY, StockQuantity VARCHAR(50), DateAdded VARCHAR(50), Brand VARCHAR(50));
Sales = (#Id_Products, #Id_User, #Id_Sales COUNTER, Quantity VARCHAR(50), TotalPrice CURRENCY, PaymentMethod VARCHAR(50), SaleDate DATE, BillingAddress TEXT);
Classes = (#Id_Classes COUNTER, ClassName VARCHAR(50), Schedule DATETIME, Capacity INT, DifficultyLevel VARCHAR(50), Room VARCHAR(50), #Id_User);
Memberships = (#Id_Memberships COUNTER, StartDate DATE, EndDate DATE, Price CURRENCY, MembershipType VARCHAR(50), Status VARCHAR(50), PaymentMethod VARCHAR(50), #Id_User);
Use = (#Id_Classes, #Id_Equipment);
Book = (#Id_Classes, #Id_User, Date_ DATETIME);
```

Use Case Diagram: Equipment Management (Ilies)



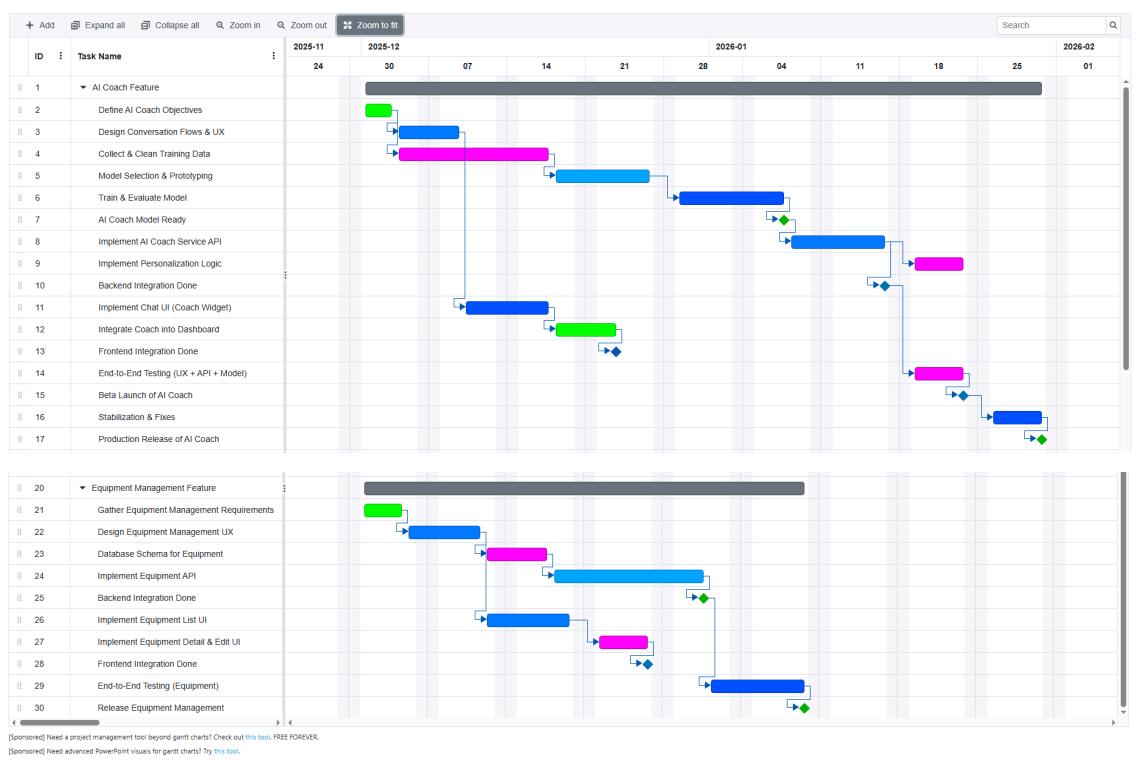
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Use case diagram : AI COACH/TRAINER (Valentin)



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Gantt diagram

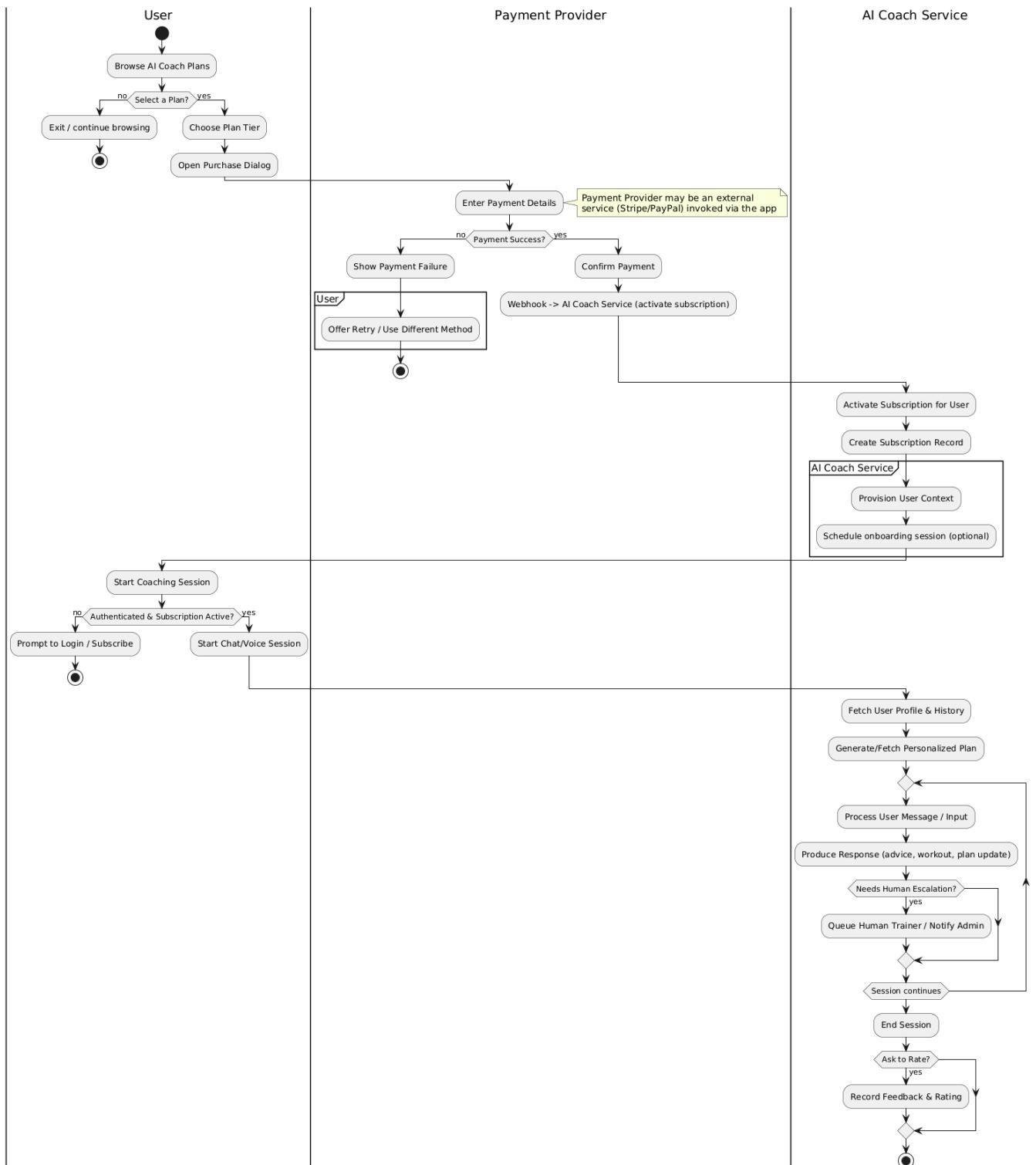


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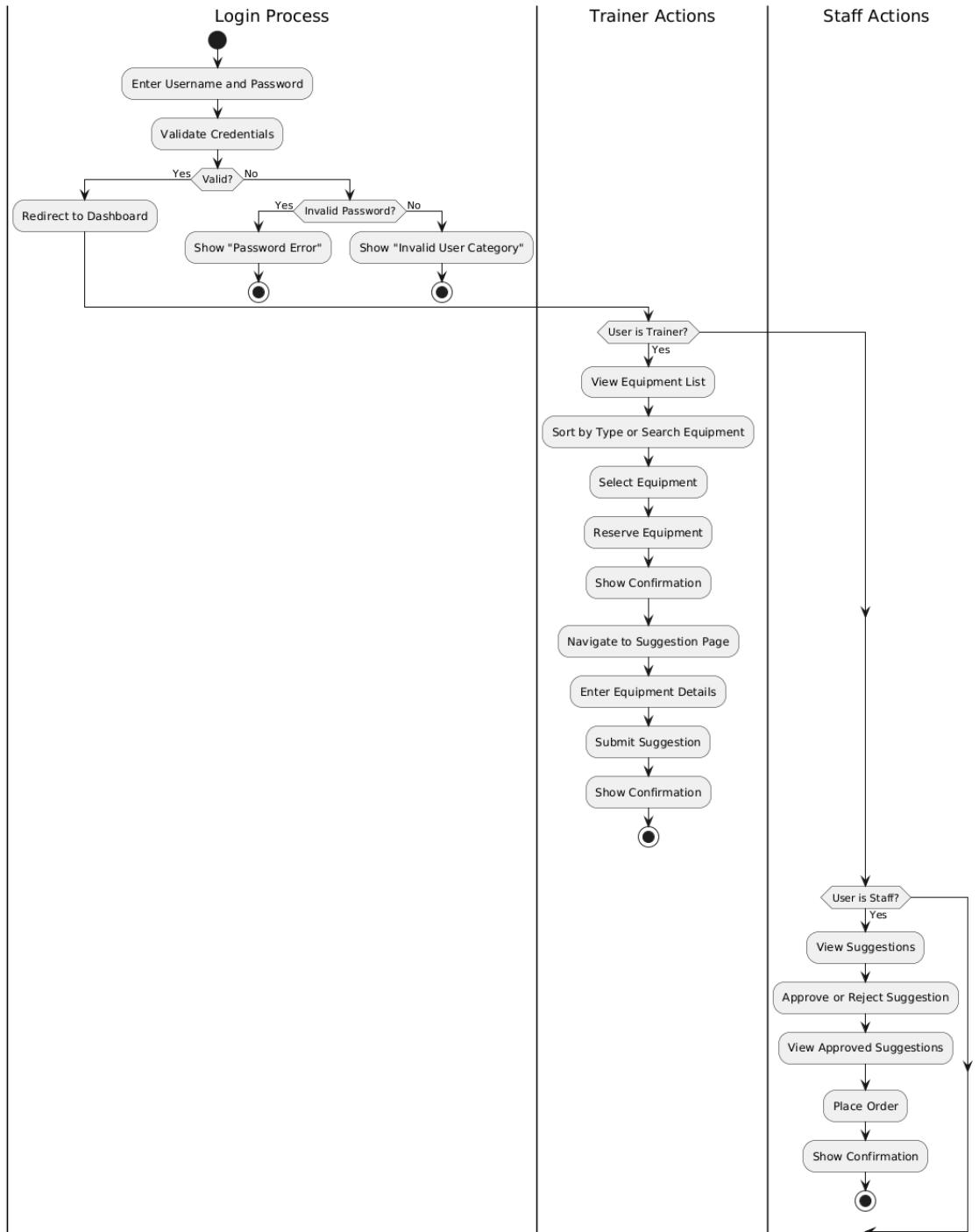
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Activity diagram : Ai coach (Valentin)

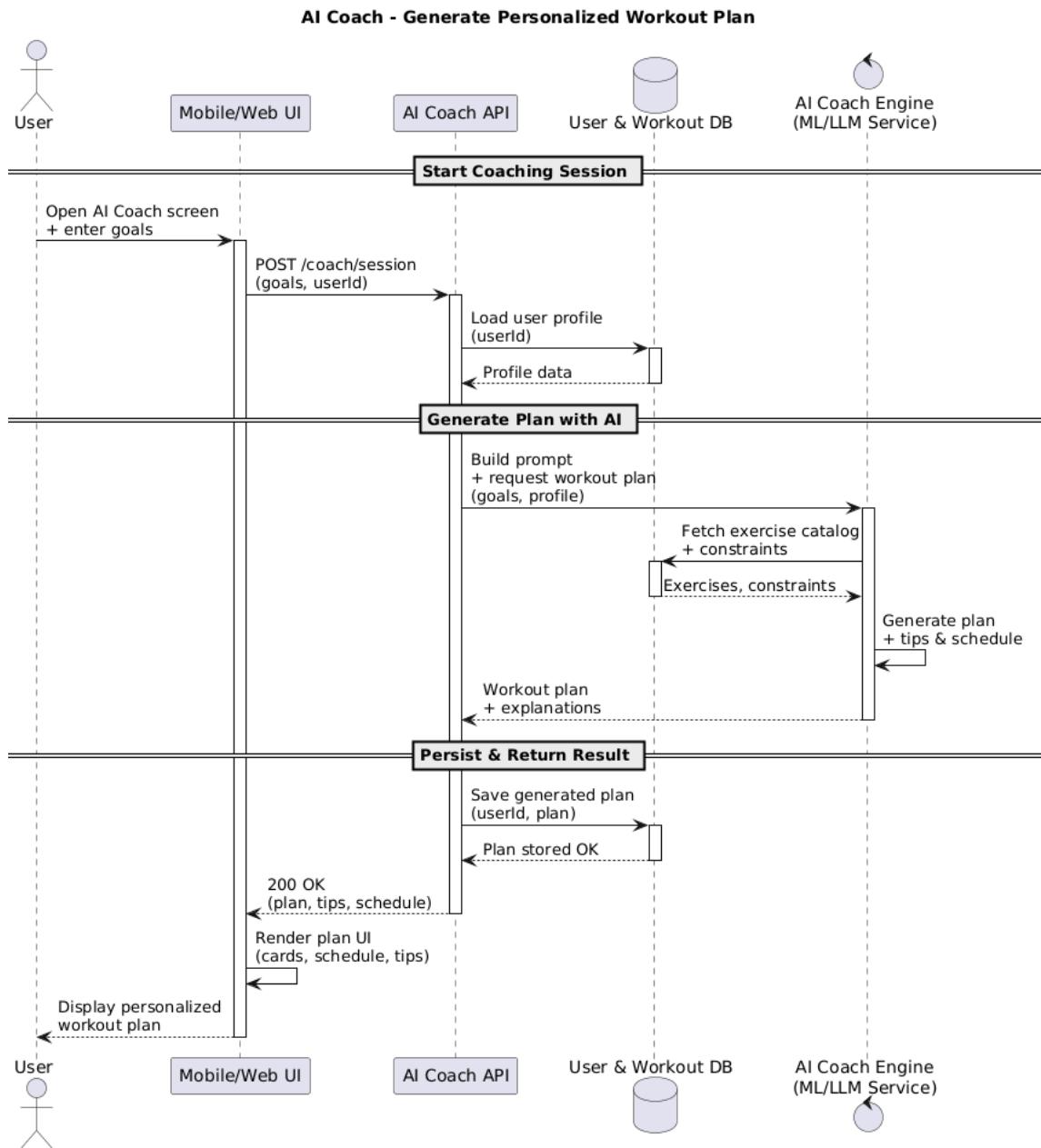


Activity diagram : Equipment Management (Ilies)



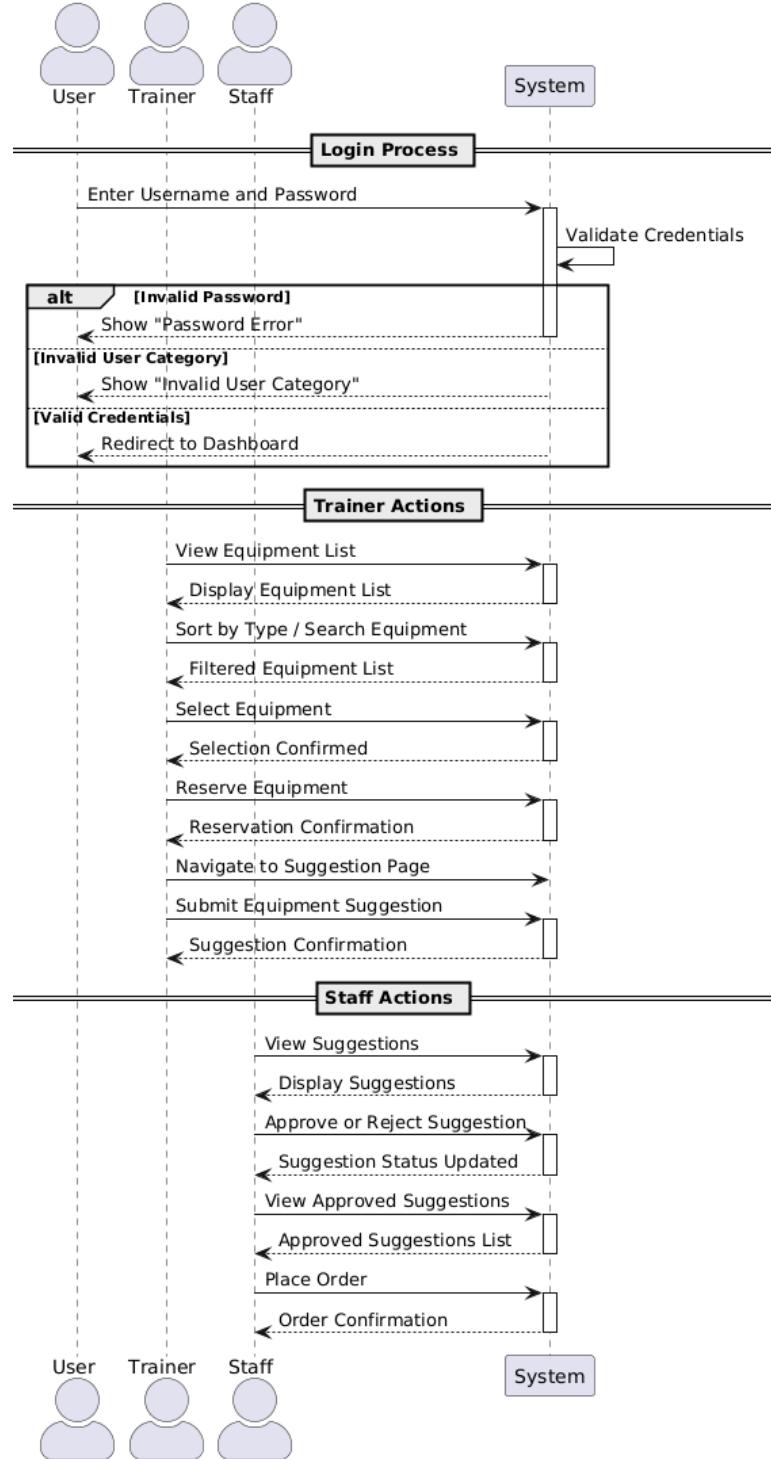
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Sequence diagram : Ai coach (Valentin)



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Sequence diagram : Equipment Management (Ilies)

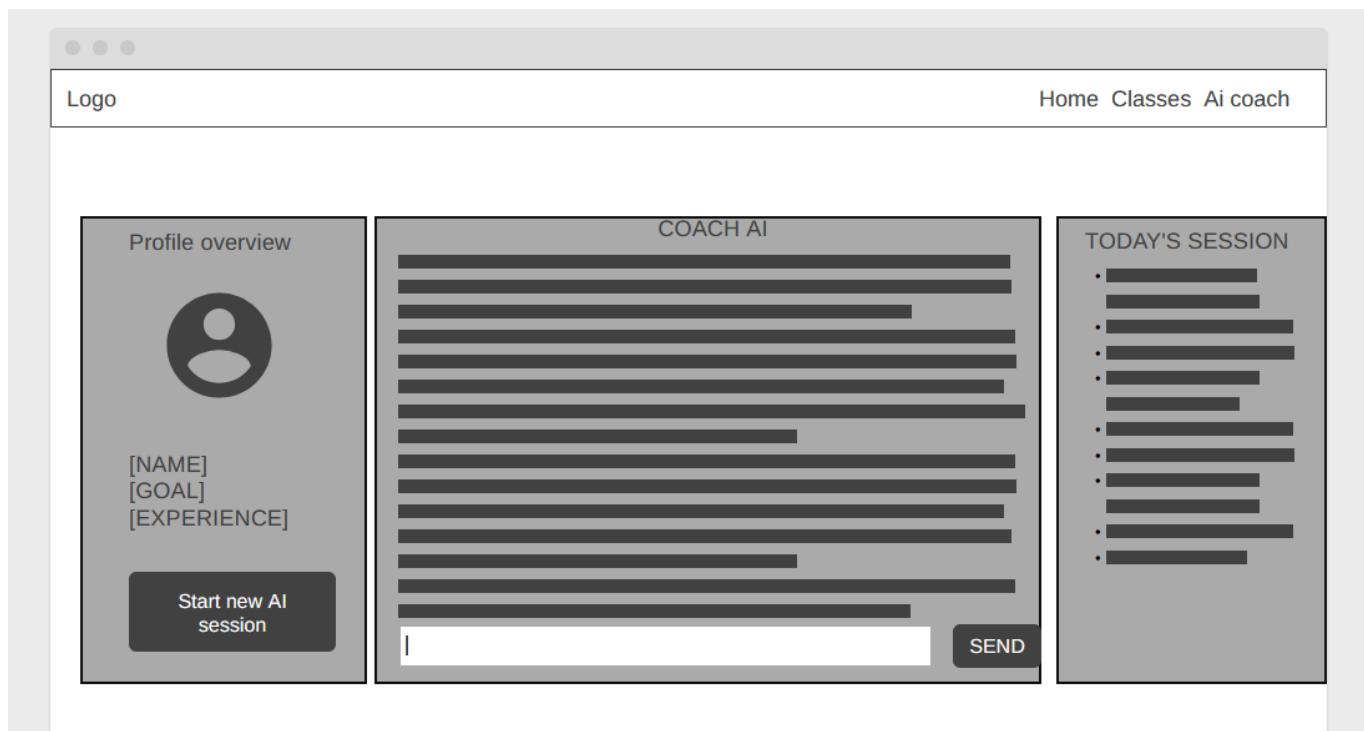


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Wireframe : Ai coach (Valentin)



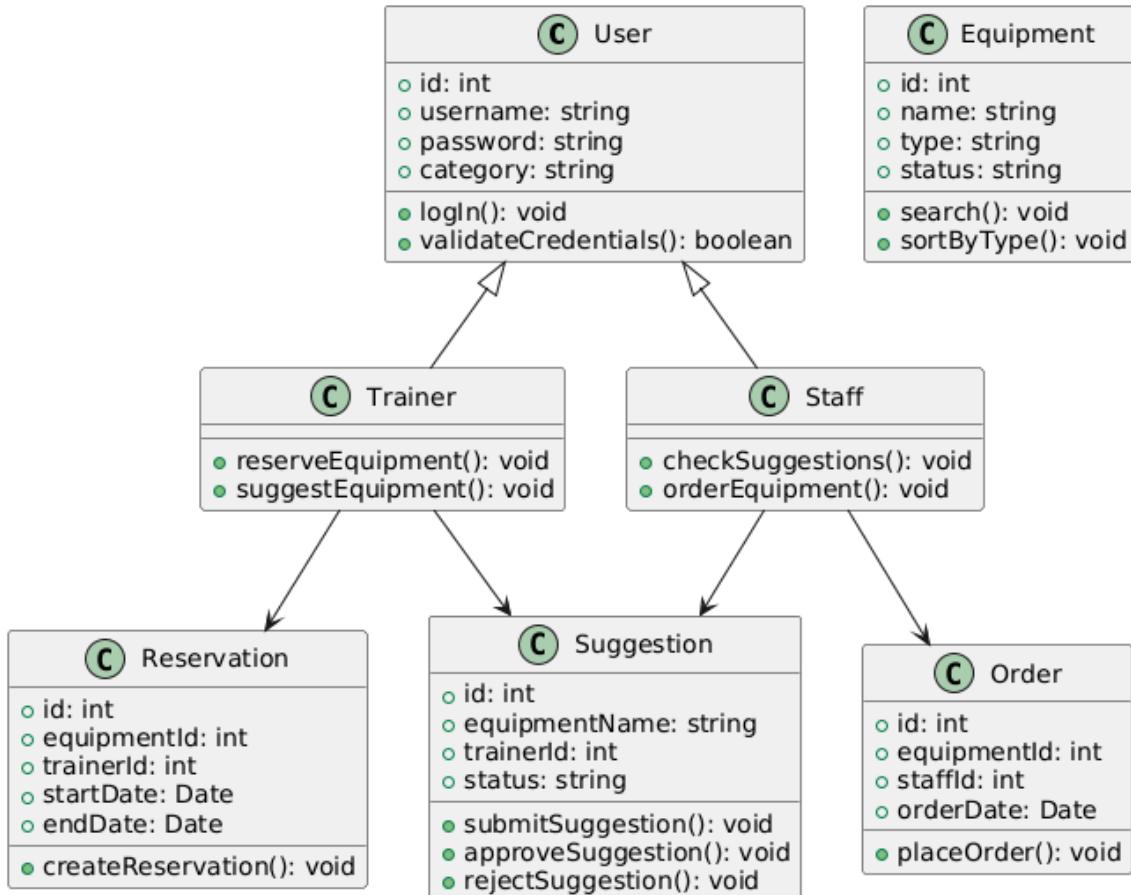
Wireframe : Equipment Management (Ilies)

The wireframe displays two main panels. The left panel, titled 'Equipment', lists 'Equipment 1', 'Equipment 2', 'Equipment 3', and 'Equipment 8' with a 'Reserve' button below each. 'Equipment 5' is listed with a 'Reserve' button. A callout bubble for 'Equipment 1' shows a 'Reserve equipment Equipment 1' button and two text input fields for 'jj/mm/aaaa'. Below this is a 'Request new equipment' button and a 'Request equipment' form with fields for Type, Brand, and Model. The right panel, titled 'STAFF EQUIPMENT MANAGEMENT', shows 'Current reservations' with a table and 'Equipment suggestions' with a table.

Equipment	Trainer	Start Date	End Date	Status
Equipment 1	Takenori Akagi	31/01/2012	28/02/2012	Taken
Equipment 2	Antonin CREK	24/02/2012	30/02/2012	Reserved

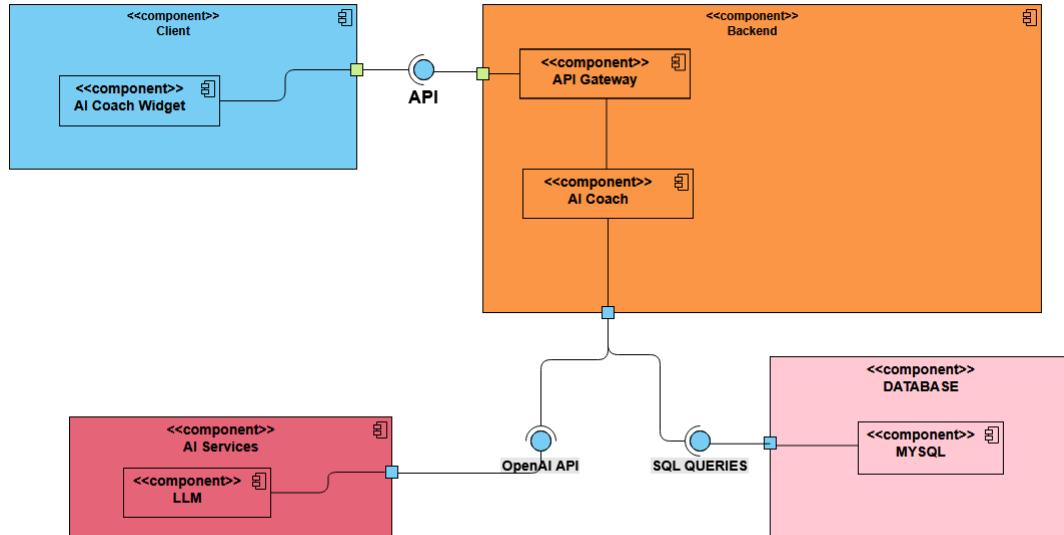
Type	Brand	Model	User

Class Diagram: Equipment Management (Ilies)

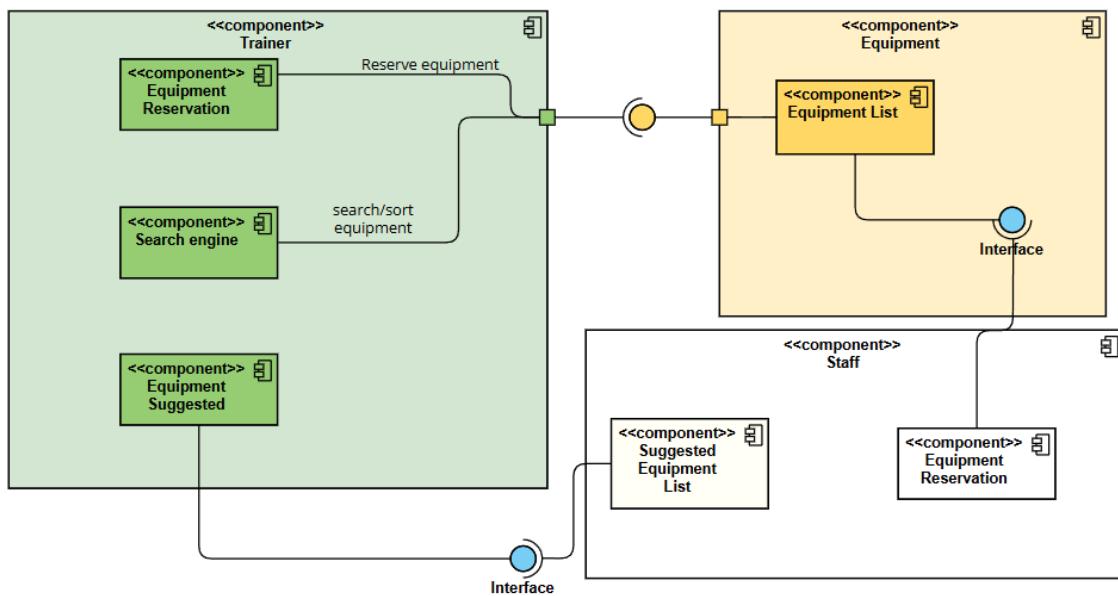


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Ilies NASR
Angel BOURDIOL

Component Diagram: AI Coach (Valentin)



Component Diagram: Equipment Management (Ilies)



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Conclusion

This database model provides a foundation for implementing a functional gym management system. It ensures that all essential aspects such as memberships, class schedules, trainer assignments, equipment tracking, and member bookings are properly represented.