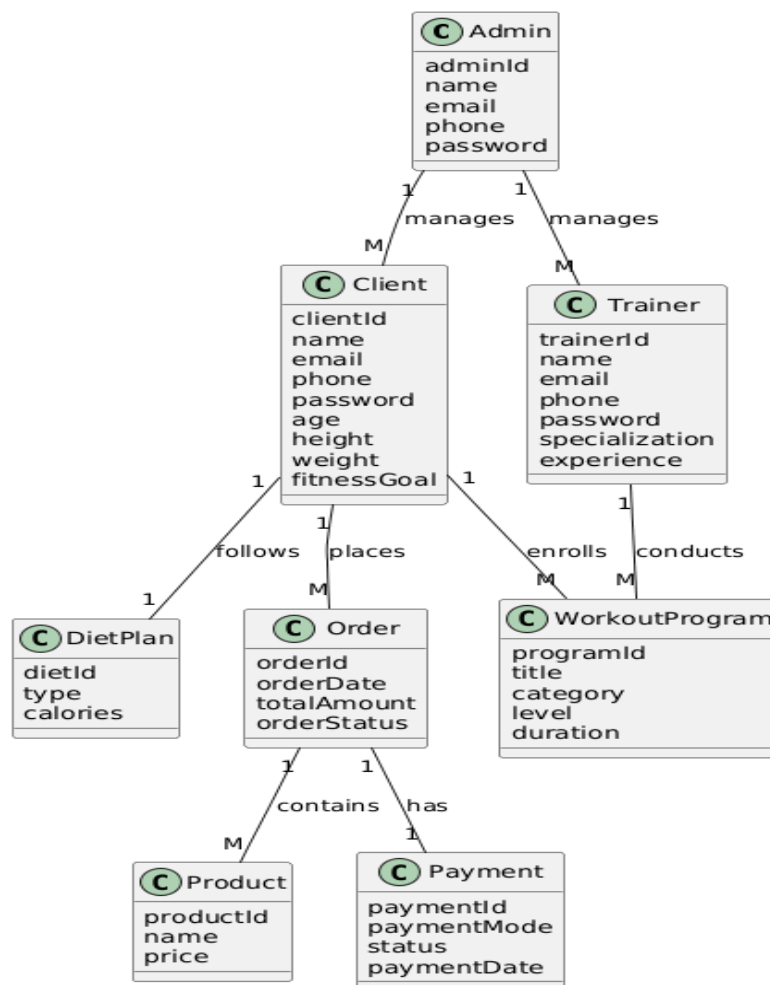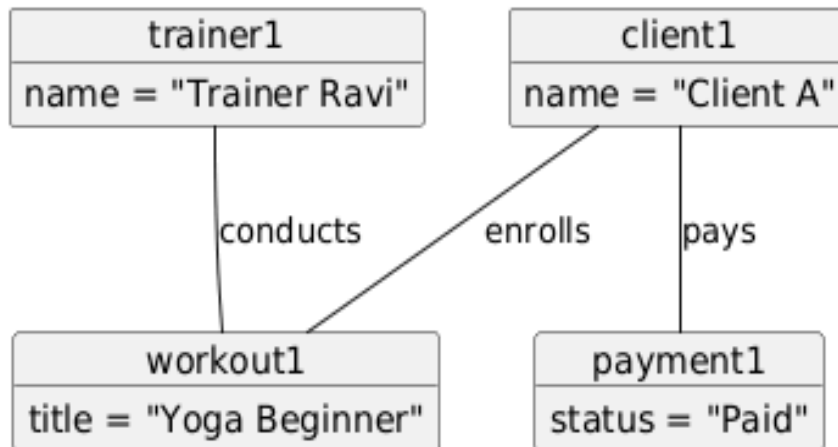# UML DIAGRAM

CLASS DIAGRAM

The class diagram **shows the main classes** of the FitNova system such as User, Trainer, Admin, Workout Program, Product, Order, and Payment, along with their relationships like one-to-many and one-to-one.
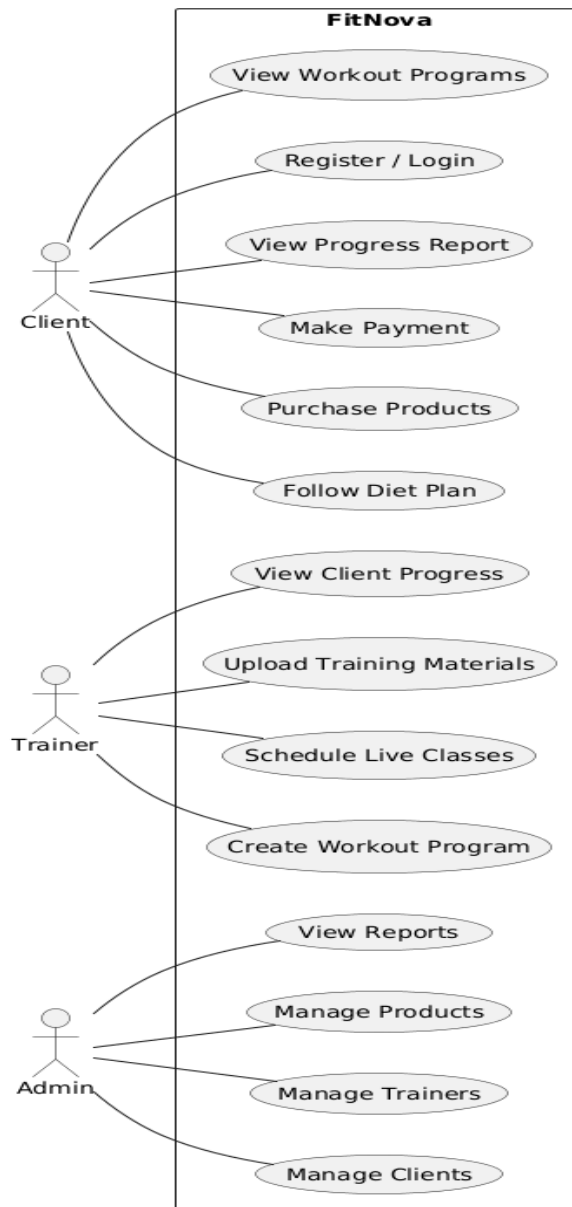
OBJECT DIAGRAM

The object diagram **represents real-time instances of classes** in FitNova, showing how specific users, trainers, workouts, and payments exist at a particular moment.

trainer1
name = "Trainer Ravi"

client1
name = "Client A"

conducts   enrolls   pays

workout1
title = "Yoga Beginner"

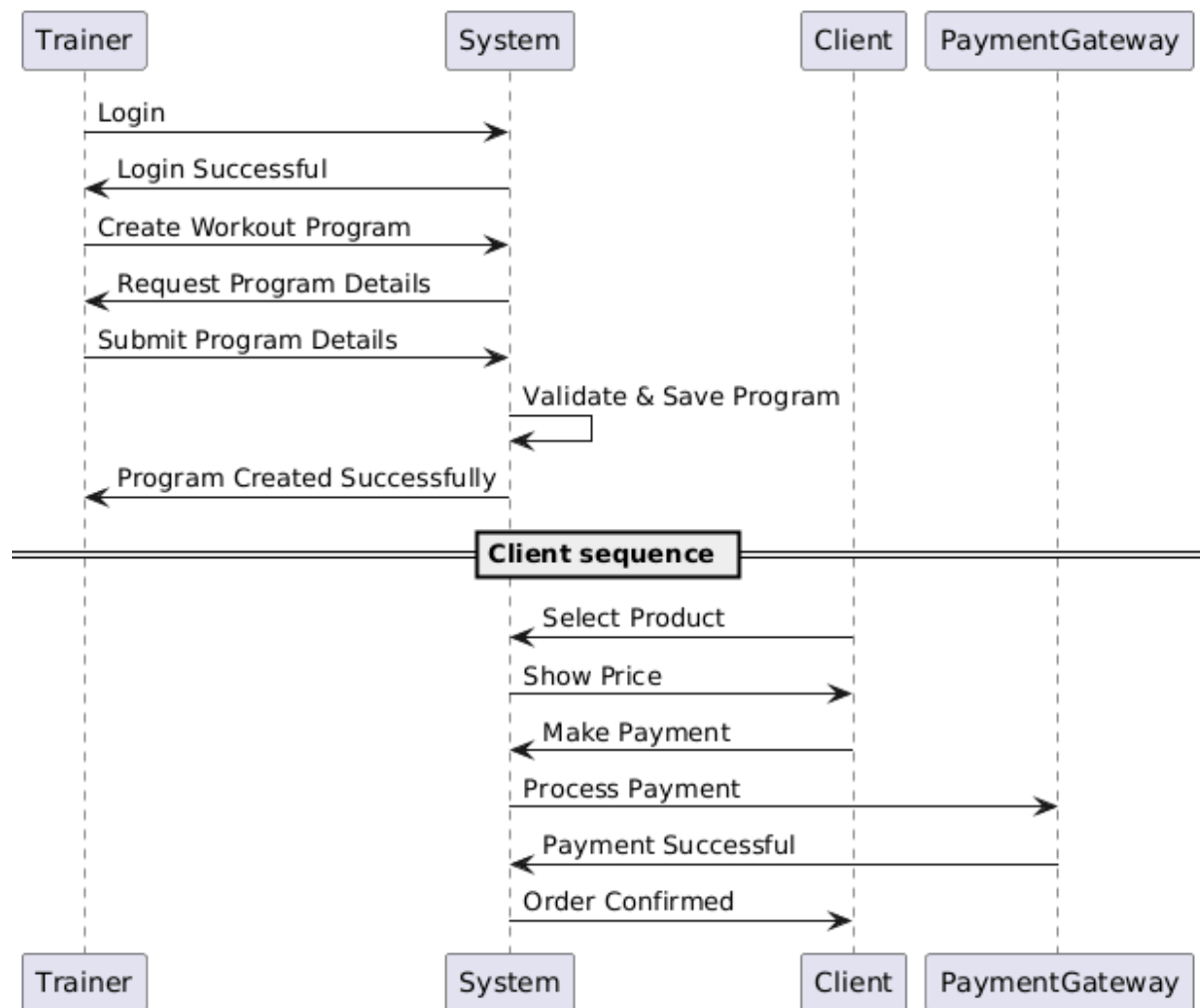| payment1 |
| --- |
| status = "Paid" |

USE CASE DIAGRAM

The use case diagram **illustrates the interactions between actors** (User, Trainer, Admin) and the FitNova system, highlighting the functionalities each actor can perform.
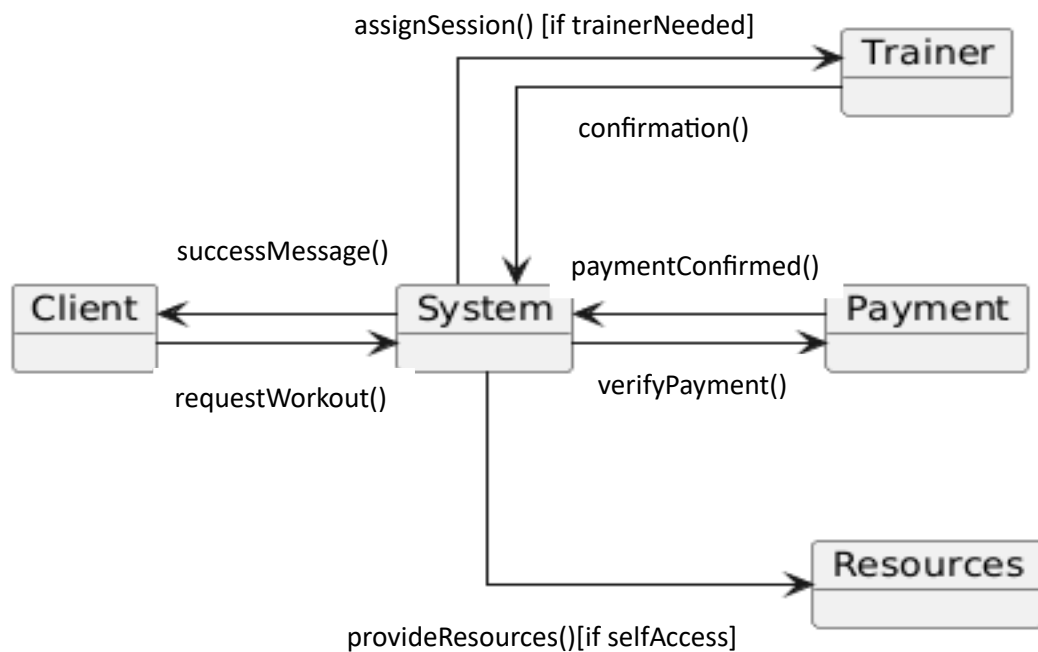
SEQUENCE DIAGRAM

The sequence diagram **shows the step-by-step flow of messages** between user, system, and payment service during activities such as booking a workout or purchasing a product.
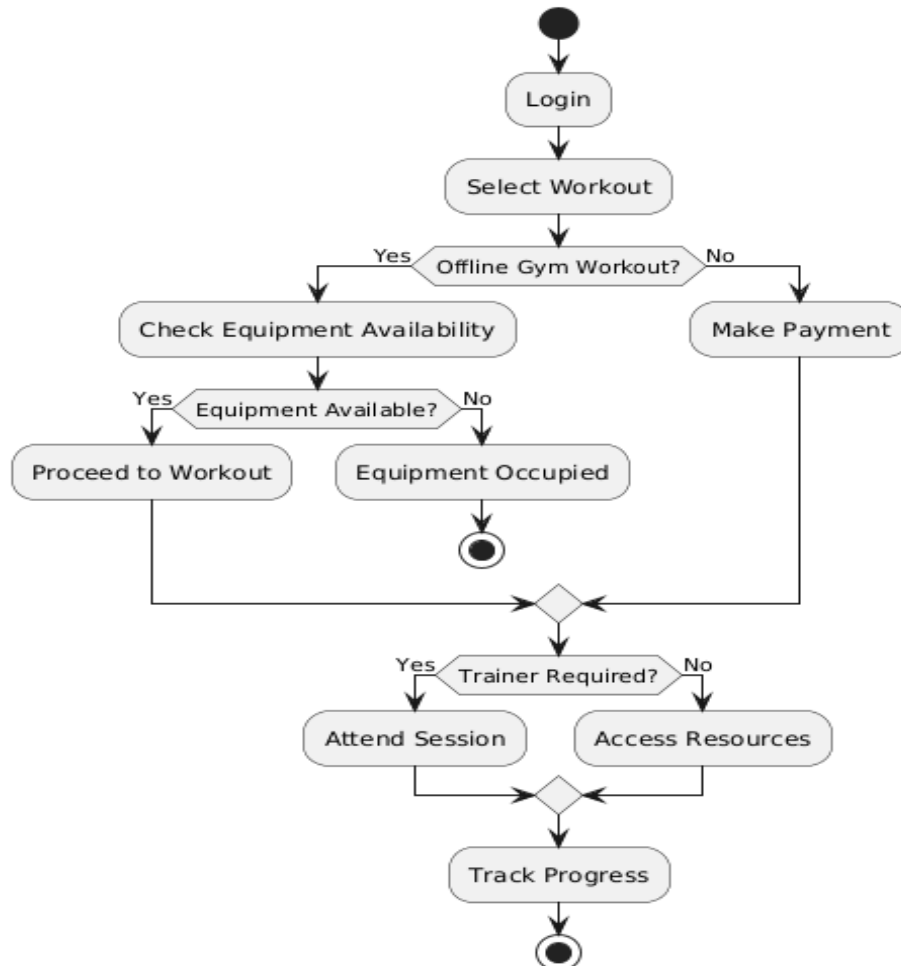
COLLABORATION DIAGRAM

The collaboration diagram depicts how objects in FitNova **interact with each other by exchanging messages to complete a task**, focusing on object relationships.
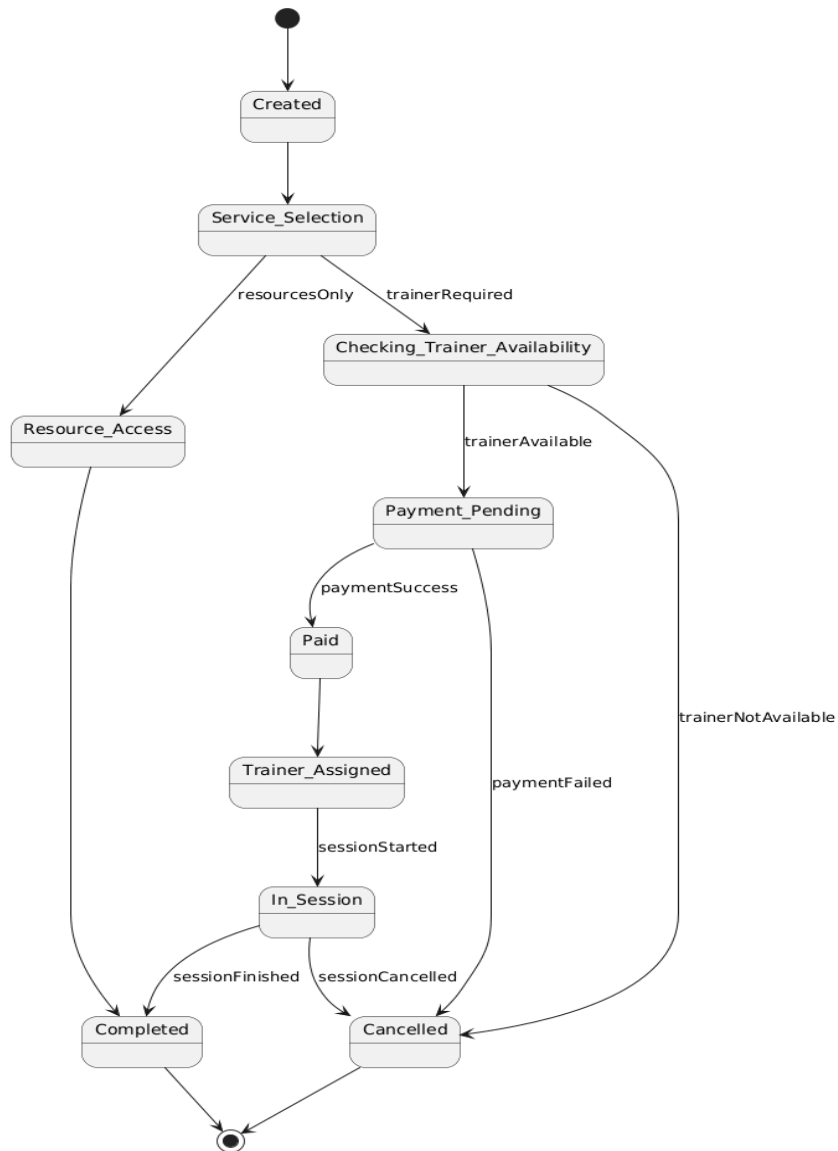
ACTIVITY DIAGRAM

The activity diagram **represents the workflow of user activities** in FitNova, from login and workout selection to payment and progress tracking.
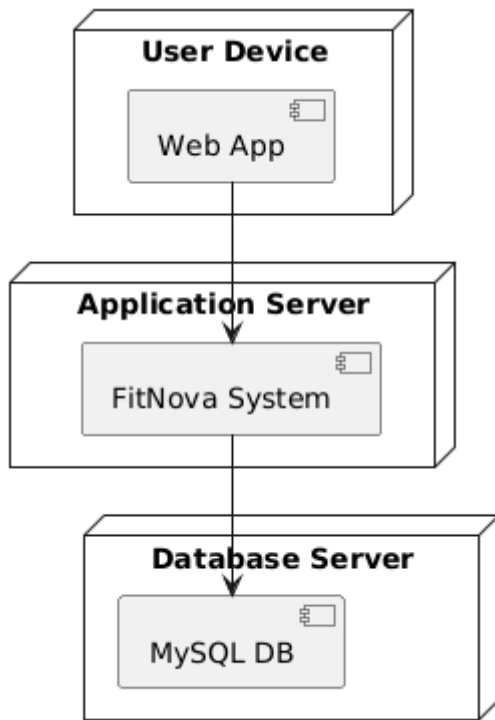
STATE CHART DIAGRAM

The state chart diagram **shows the different states of an order service** in FitNova, such as created, payment pending, paid, and completed.

DEPLOYMENT DIAGRAM

The deployment diagram **shows the physical deployment** of the FitNova system, including the user device, application server, and database server.

COMPONENT DIAGRAM

The component diagram **displays the major modules** of FitNova such as user management, trainer management, product store, payment module, and database.