

CSE3310-004 Fundamentals of Software Engineering

Fall 2024

Personal Health and Fitness Tracker (PHFT) Project

Part 1 - UML Diagrams

[Group 11]

[Dillian Botello, dtb9096@mavs.uta.edu]

[Jeff Hernandez, jxh2250@mavs.uta.edu]

[Beau Lopez, bml4120@mavs.uta.edu]

[Lan Nguyen, ldn9964@mavs.uta.edu]

[Earl Sanchez, exs2756@mavs.uta.edu]

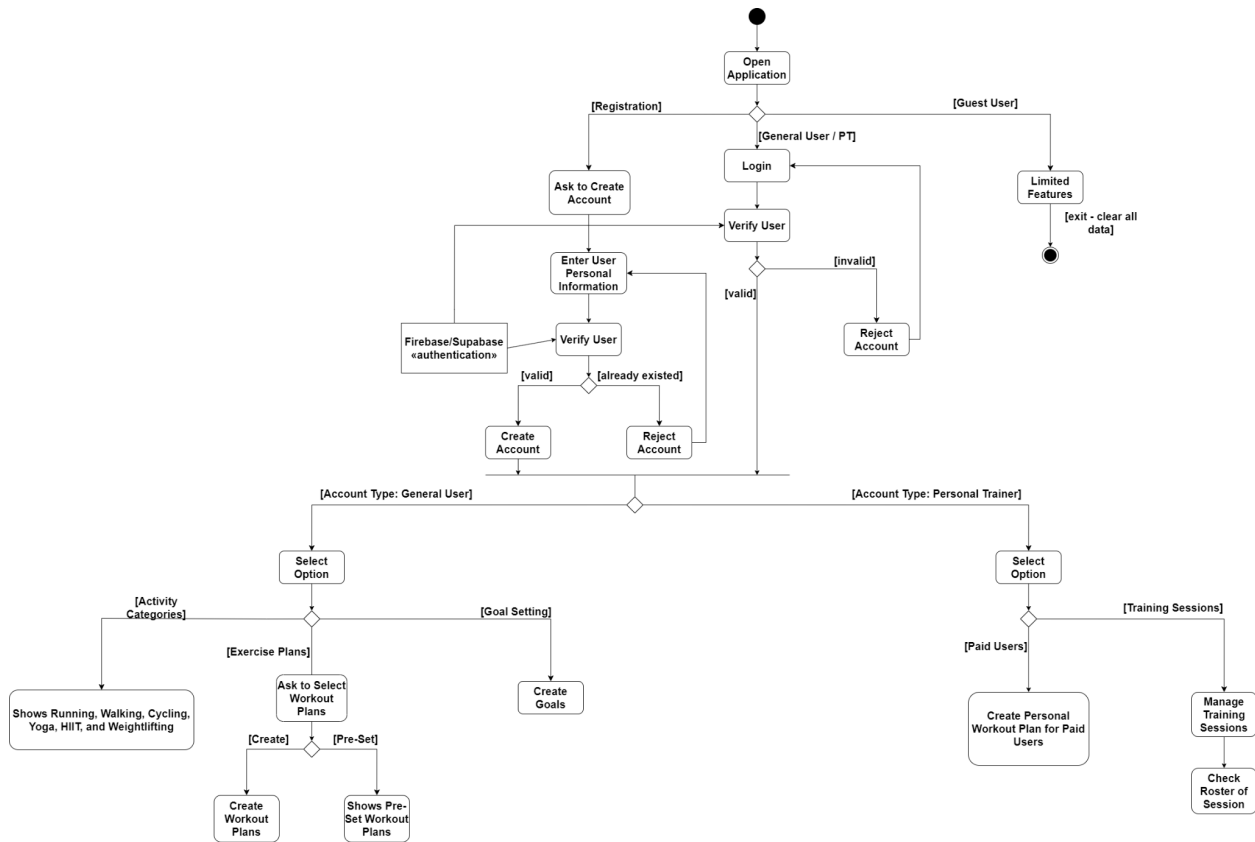
Submission Date: 10/01/2024

Index

Activity Diagrams.....	
General Application Activity Diagram.....	
Subscription Payment Activity Diagram.....	
Class Diagrams.....	
Inheritance-Focused Class Diagram of PHFT App.....	
Composition-Heavy Class Diagram of the PHFT App.....	
Component Diagrams.....	
Simple Component Graph.....	
Component Expansion Graph.....	
Sequence Diagrams.....	
Schedule Activity Sequence Diagram.....	
Create Activity Sequence Diagram.....	
Edit Fitness Goal Sequence Diagram.....	
State Diagrams.....	
Goal Setting State Diagram.....	
Payment Integration State Diagram.....	
Use Case Diagrams.....	
Role of General User in PHFT App.....	
Role of Guest User in PHFT App.....	
Role of Personal Trainer in PHFT App.....	

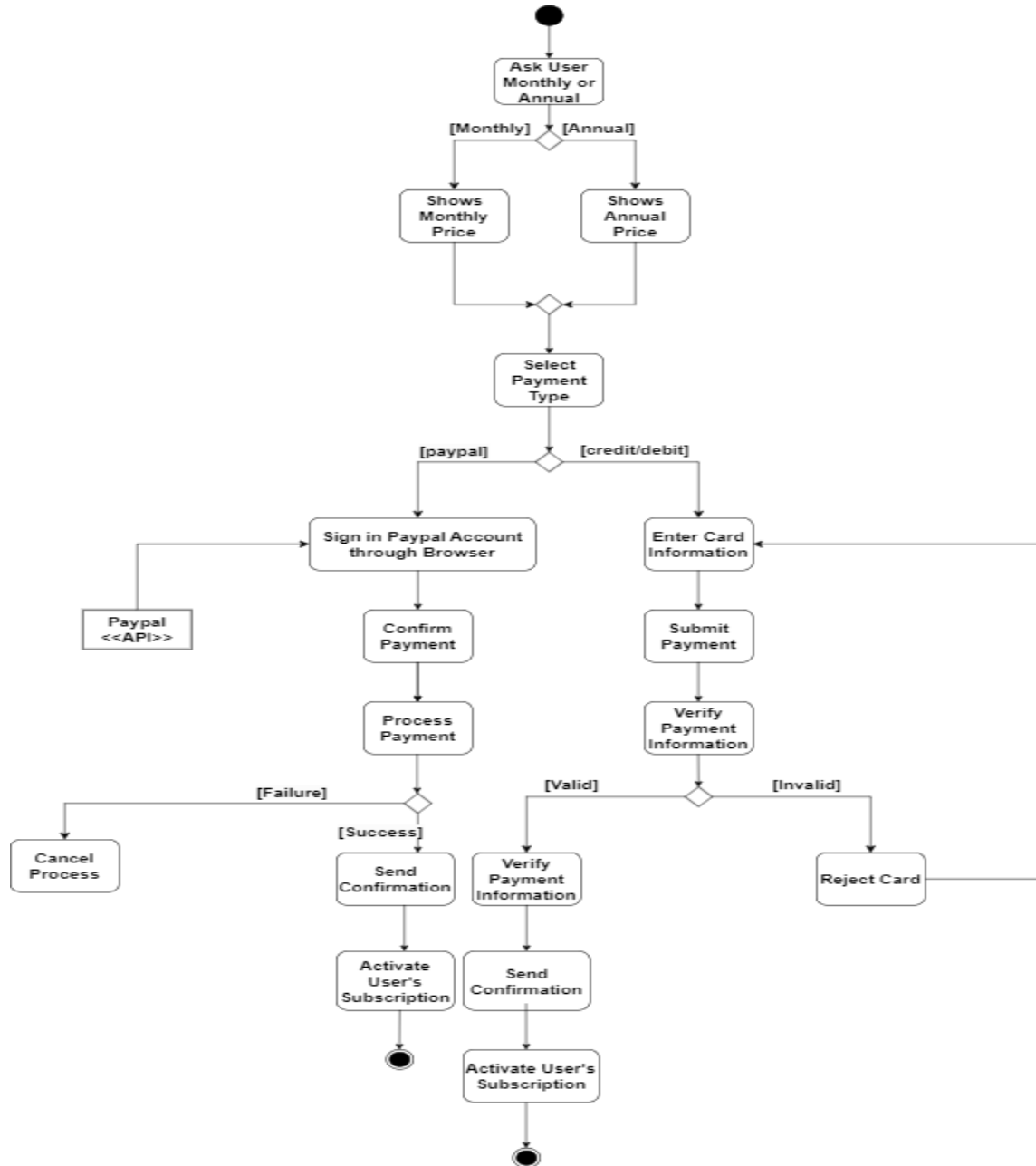
Activity Diagrams

General Application Activity Diagram



This activity diagram illustrates the flow of the PHFT application from initial startup through its core functionalities. It progresses from the app's startup to showcase the main functionalities, including creating fitness goals, developing workout plans, tracking activities, and other features of the PHFT application.

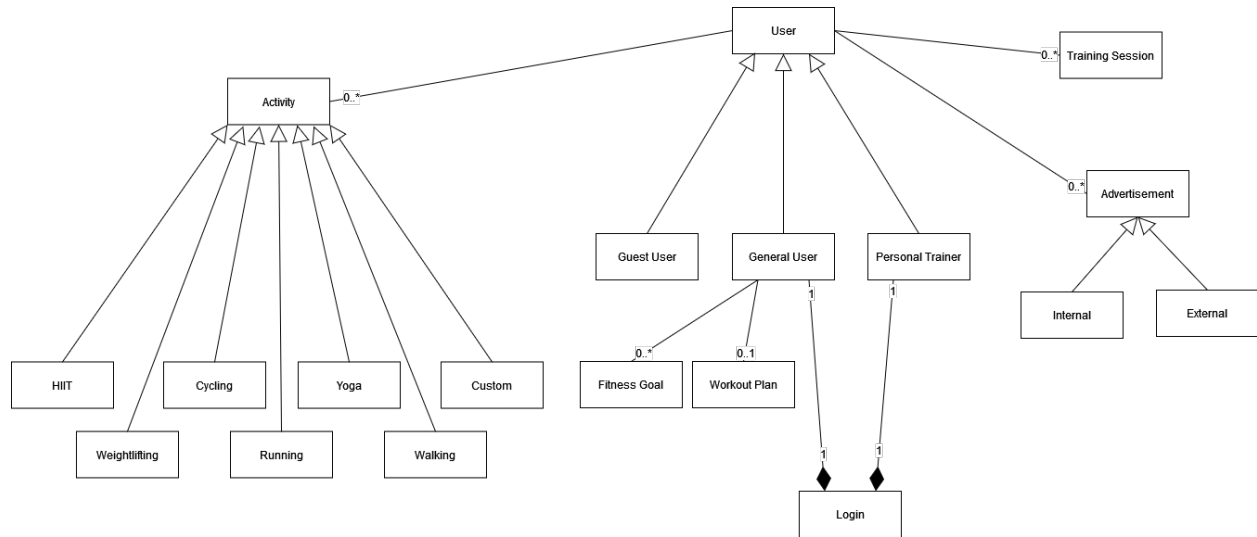
Subscription Payment Activity Diagram



This activity diagram illustrates the complete payment process, starting from the selection of a subscription type to sending a payment request, verifying user information, and processing the payment.

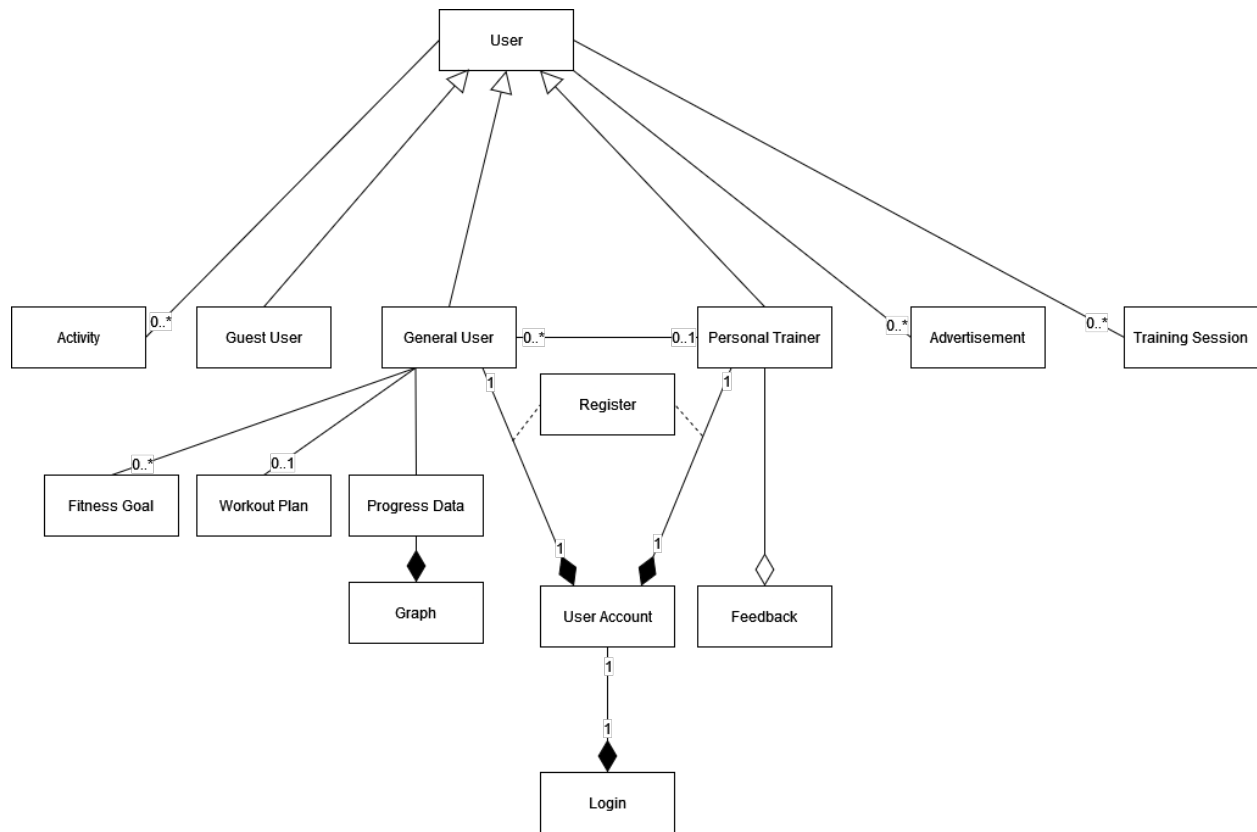
Class Diagrams

Inheritance-Focused Class Diagram of PHFT App



The above diagram is a class diagram showing the relationships and ratios between different proposed classes in the PHFT application and mainly highlights the possible forms of inheritance integration related to users, activities, and advertisements.

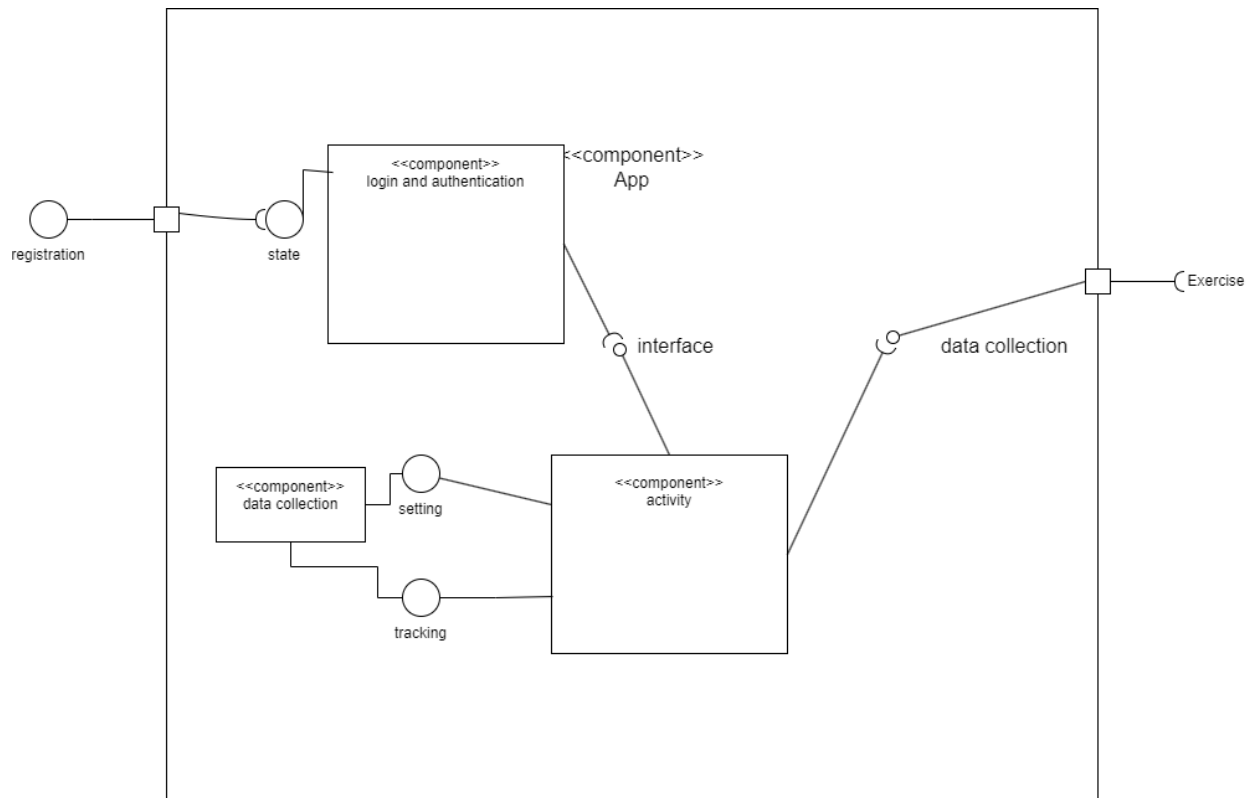
Composition-Heavy Class Diagram of the PHFT App



The class diagram above shows the associations between proposed classes for the PHFT application with an emphasis on compositional relationships, specifically within the user classes.

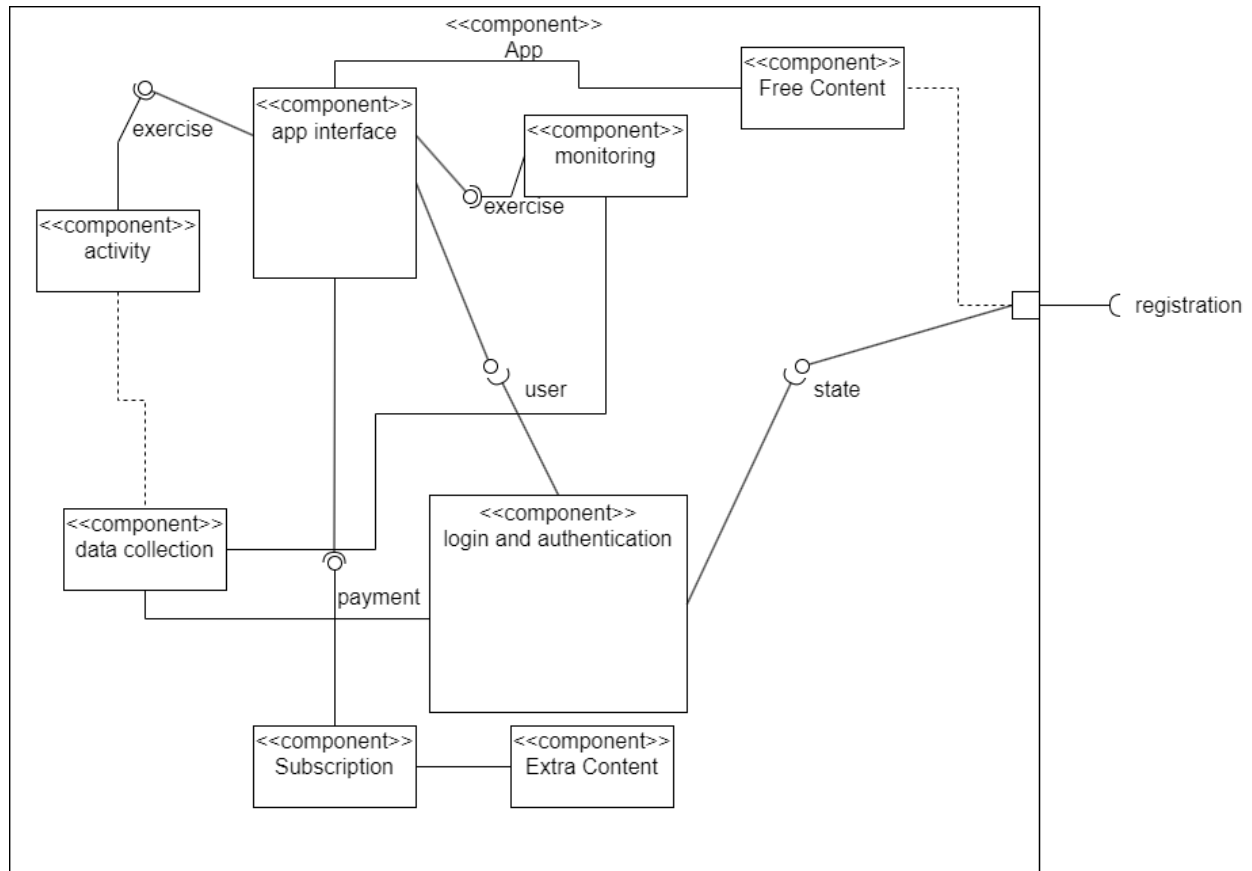
Component Diagrams

Simple Component Graph



This component diagram delves into the simplicity of the app. It deals more with how simple it can be with collecting data which will be involved with setting and tracking activities to what can be done inside the app. The logic and authentication is what leads to different interfaces and activities depending on the user whether they are a guest, non-paying or paying customer, or even a trainer.

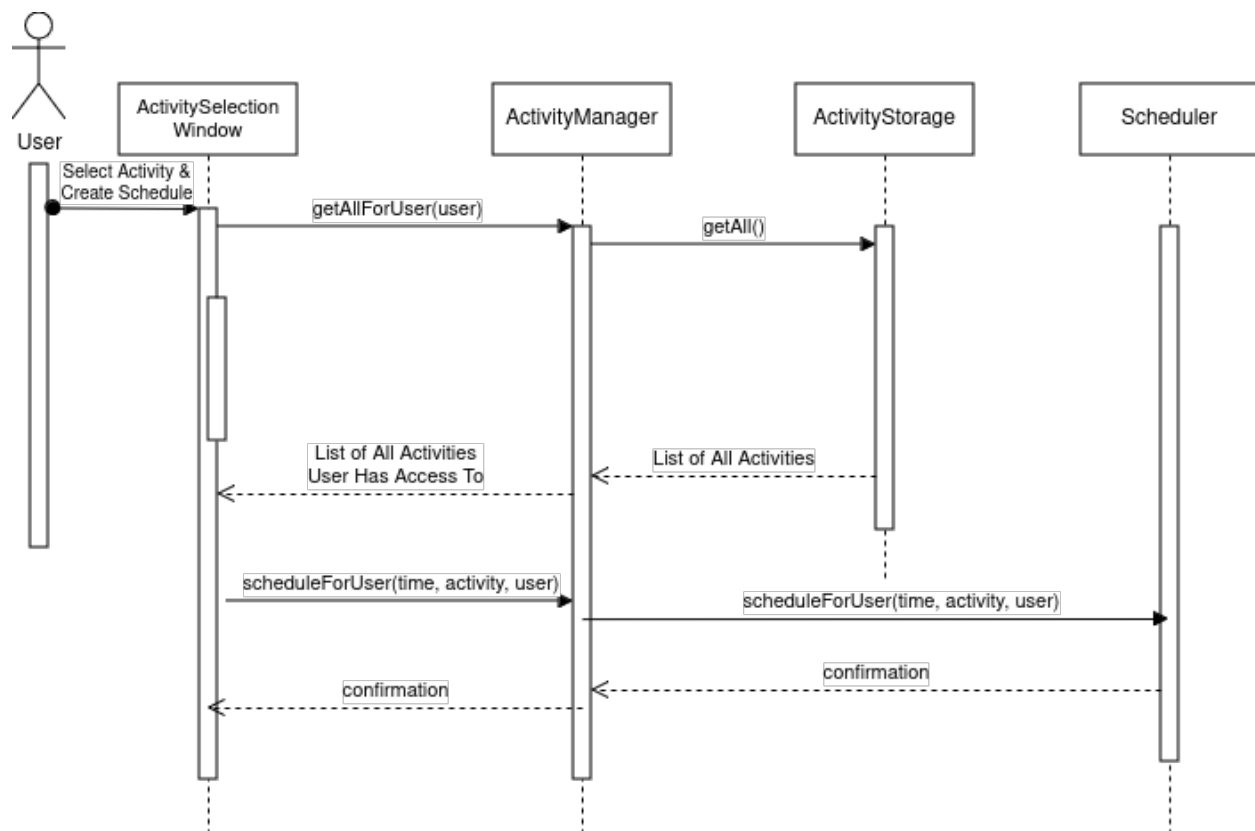
Component Expansion Graph



This graph corresponds more with the specifications of the app when dealing with free and non-paying users. As long as a user is registering, then they should be able to see the state of their account. This will then be connected to a specific type of user in which the app interface would have been set up. Then the app interface interacts with multiple components to separate any functions and unlike the first component graph, is much more strict on what is and isn't allowed. This allows for allocation to certain components instead of dealing with overlapping ideas. Of the two component graphs, this can be seen as a better one to work with and modify.

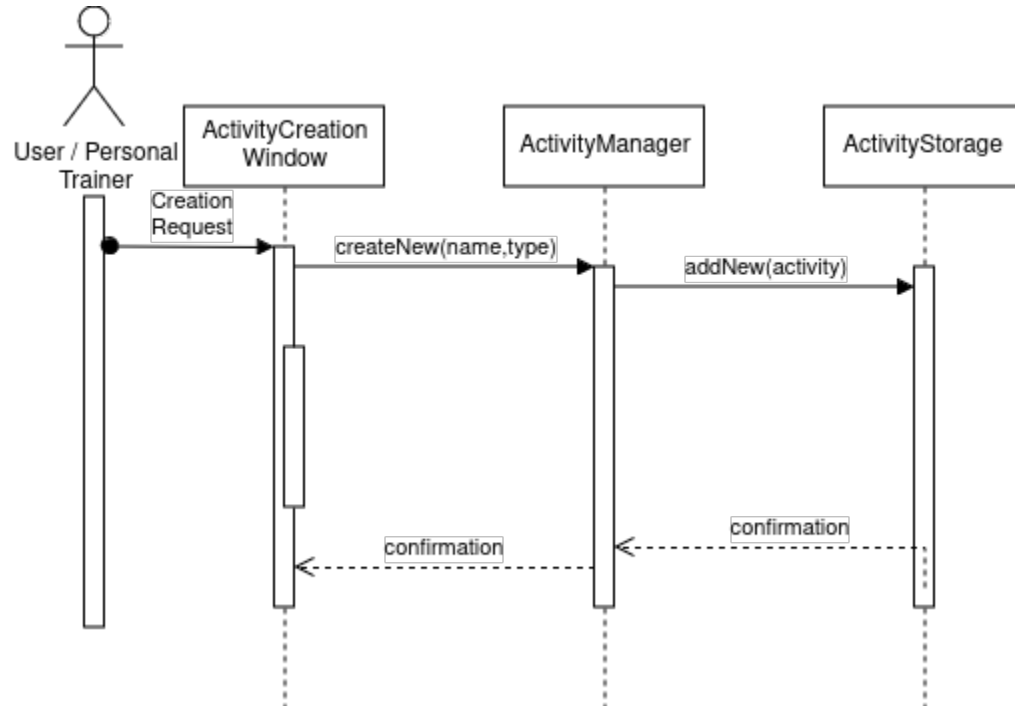
Sequence Diagrams

Schedule Activity Sequence Diagram



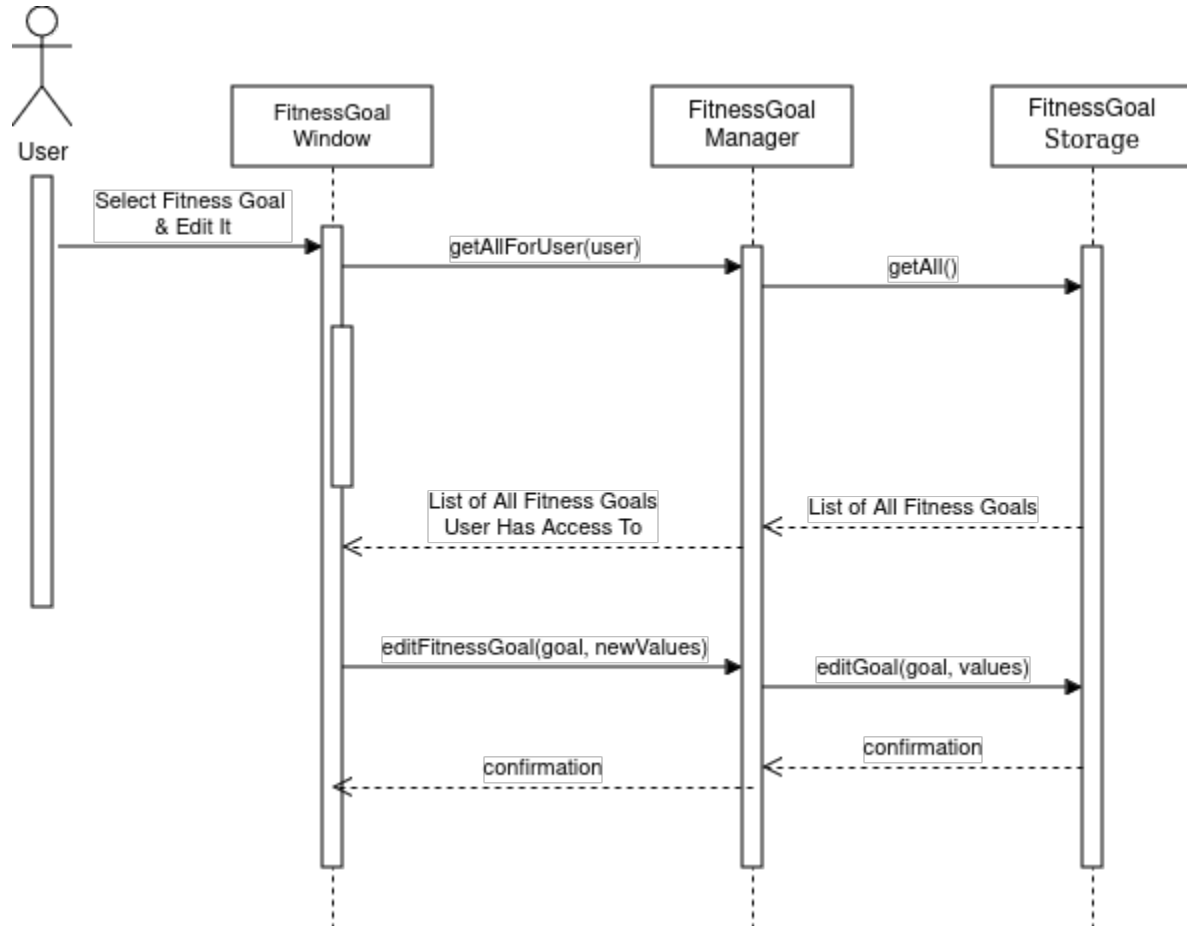
This diagram depicts the sequence of calls and returns that is part of a user scheduling an existing activity in the PHFT app.

Create Activity Sequence Diagram



This diagram depicts the sequence of calls and returns for a user to create a new activity in the PHFT app.

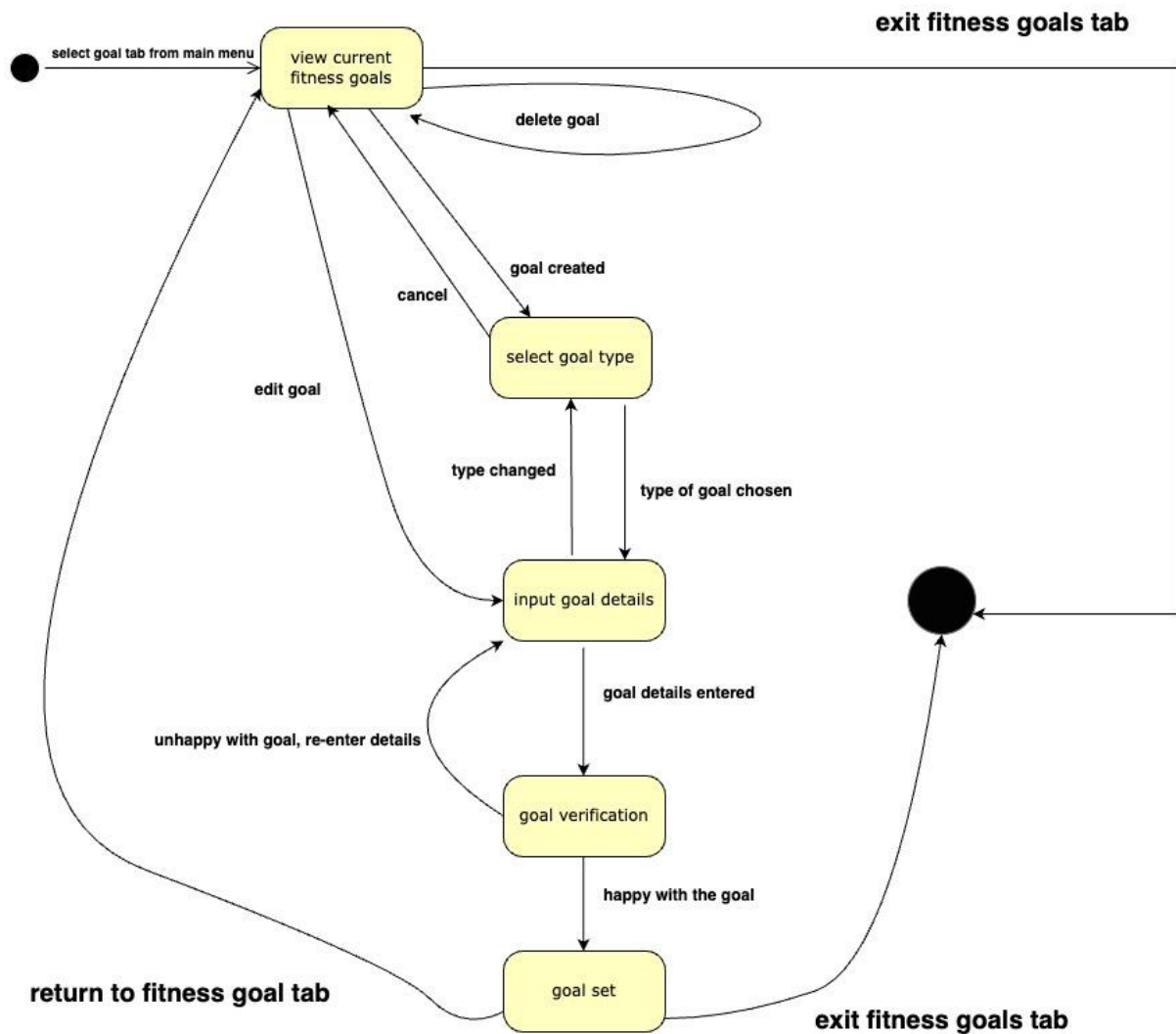
Edit Fitness Goal Sequence Diagram



This diagram depicts a sequence of events for a user to edit an existing fitness goal in the PHFT app.

State Diagrams

Goal Setting State Diagram

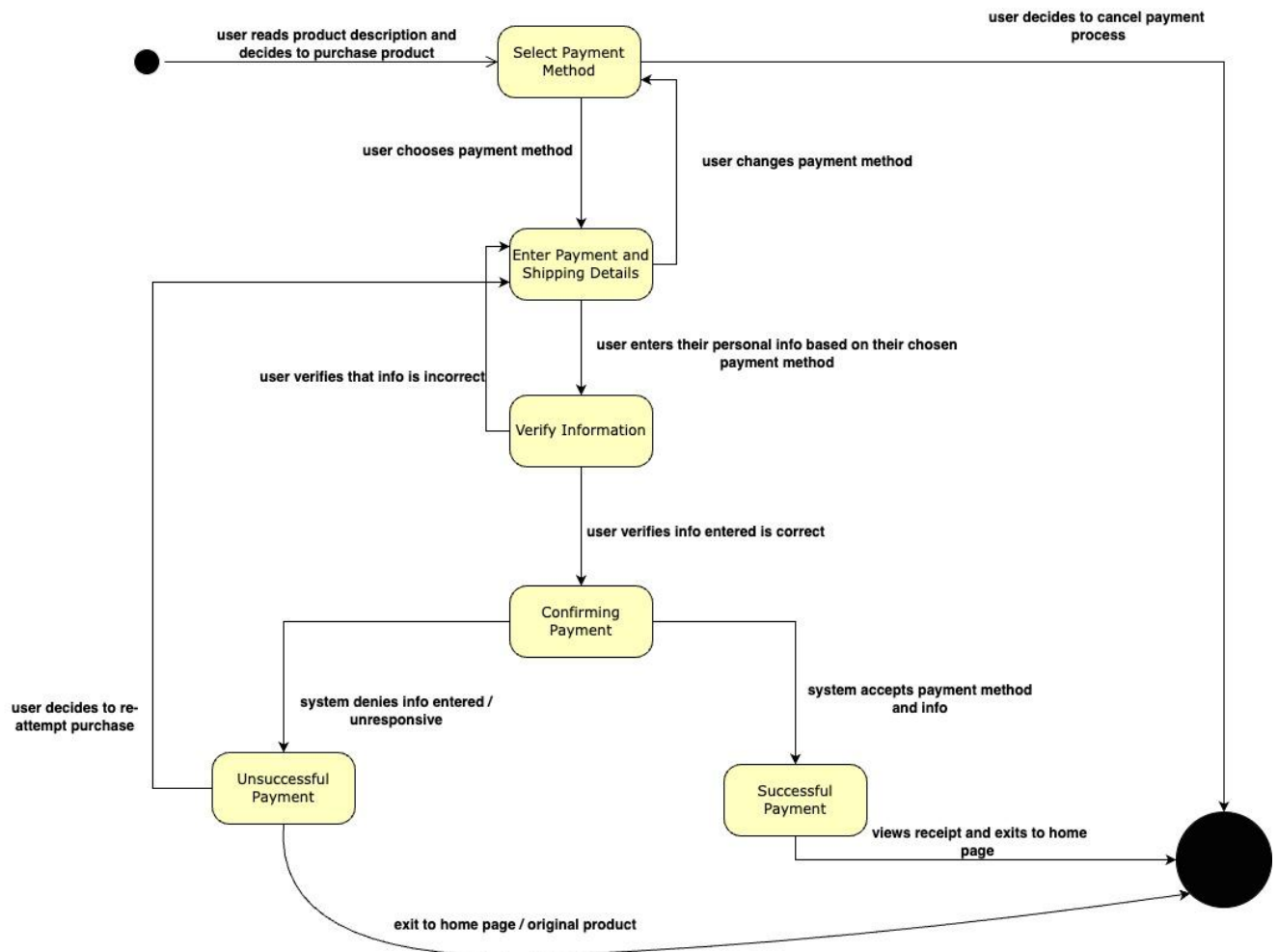


The diagram illustrates the different states a user may go through while setting a personal fitness goal in the PHFT app.

- States are represented by the nodes of the diagram.
- Events are represented by the arcs of the diagram and are bolded.
- Idle state represented by black circles.

Th

Payment Integration State Diagram



The diagram illustrates the different states the system may go through when a user interacts with the payment integration features of the PHFT app.

- States are represented by the nodes of the diagram.
- Events are represented by the arcs of the diagram and are bolded.
- Idle state represented by black circles.

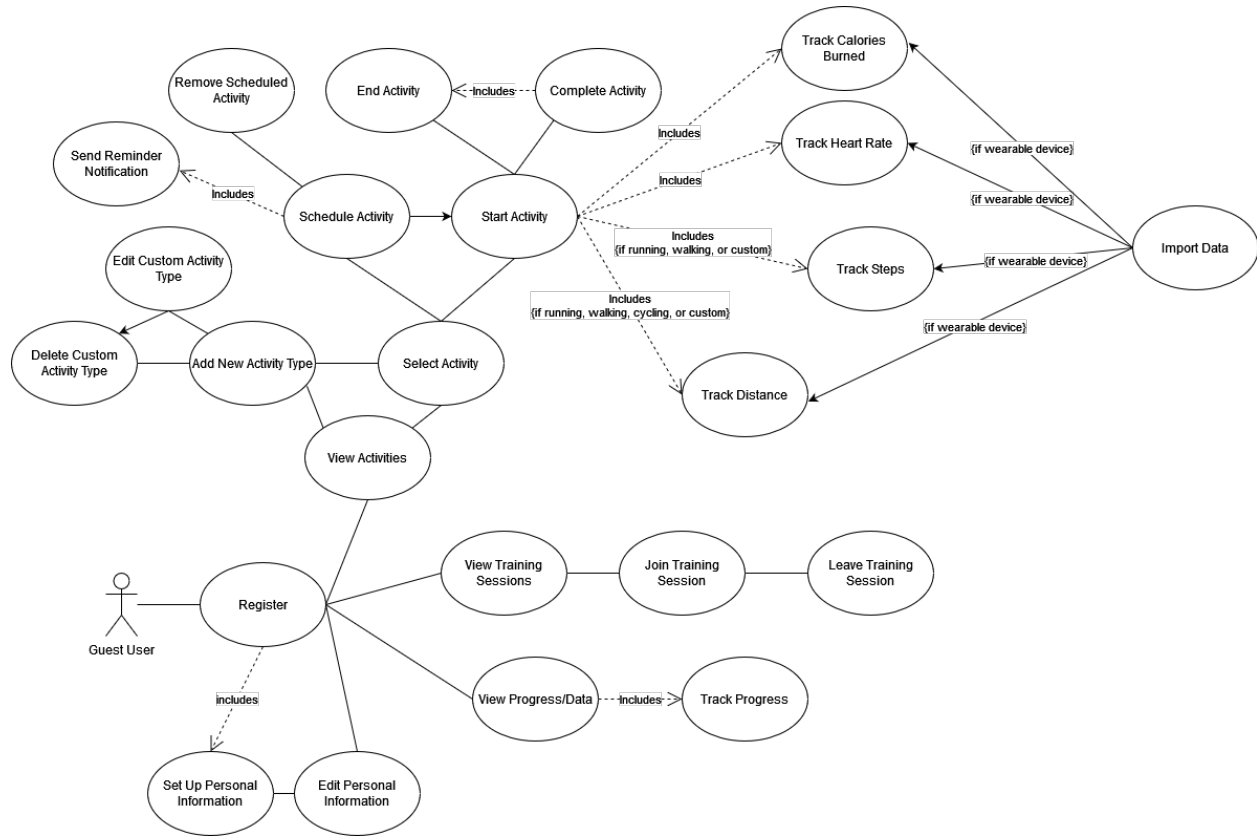
Use Case Diagrams

Role of General User in PHFT App



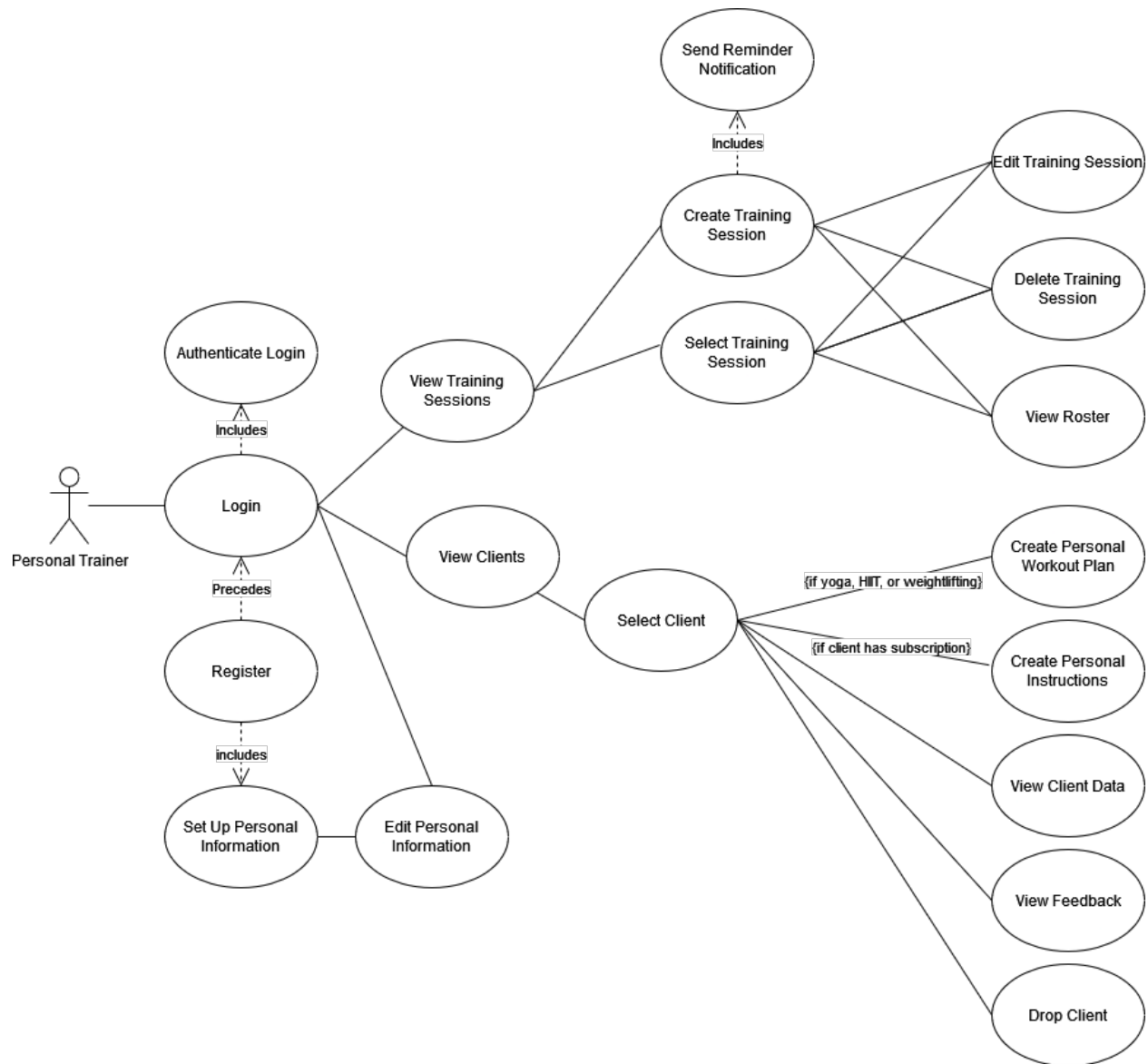
This diagram is a use case diagram from the role perspective of a general user of the PHFT application. With a general user as the actor, it displays all the possible tasks a user can perform and associations between certain tasks and the user. After login, main interactions between different parts of the application consist of viewing, buying, and/or sharing.

Role of Guest User in PHFT App



This use case diagram represents the actions that a user of the PHFT app can perform from the role perspective of a guest user. It demonstrates the comparatively smaller scope of actions a guest user can perform when compared to a general user, shown in the previous diagram. The tasks are only related to registration, activities, training sessions, and fitness data.

Role of Personal Trainer in PHFT App



The above diagram is a type of use case diagram from the perspective of a personal trainer. The tasks and sequences of tasks a personal trainer user can accomplish in the PHFT application are shown, which consist of the login system, client dealings, and training session management.