

# **Fit The Fat**

# **Online Gym**

**Prepared By :**

**Fatma Hassan**

**Maria Sameh**

**Ola Sherif**

**Ola Jafar**

# TABLE OF CONTENTS

- 01 PROJECT OVERVIEW
- 02 FEADIBILITY STUDY
- 03 USE CASE DIAGRAM
- 04 USE CASE SCENARIO
- 05 DATA FLOW DIAGRAM
- 06 ER DIAGRAM
- 07 DATA DICTIONARY
- 08 ACTIVITY DIAGRAM

# Project Overview

## Project overview:

The **Online Gym Platform** is a comprehensive digital solution designed to revolutionize how users engage with fitness, wellness, and health services. The platform combines **workout plans, doctor consultations, online shopping, and podcast streaming**, offering a centralized ecosystem for users to manage their physical and mental well-being from the comfort of their homes or on the go.

## Platform Objectives:

- 1. Provide an Accessible Fitness Solution**
- 2. Enable Personalized Diet and Health Plans**
- 3. Integrate an Online Fitness Store**  
Offer a seamless shopping experience for fitness-related products, including workout gear, nutritional supplements, and health tools—all accessible within the platform.
- 4. Support Health Tracking via Smart Devices** in real time.
- 5. Deliver Video and Podcast Content**
- 6. Ensure Secure and Seamless Payments**
- 7. Increase number of users and the revenue of app**

## Key Stakeholders:

- 1. End Users.**
- 2. Doctors and Nutritionists.**
- 3. Developers and IT Team.**
- 4. Business Owners / Project Sponsors.**
- 5. Content Creators.**
- 6. Customer Support Team.**
- 7. Payment and Security Providers.**
- 8. Health Integration Partners.**

# Project Overview

## Additional Considerations

- ✓ **Scalability:** The platform should support thousands of users with minimal latency.
- ✓ **Accessibility:** Must be optimized for both desktop and mobile devices, including users with disabilities.
- ✓ **Privacy & Compliance:** Adhere to data privacy laws such as GDPR for health-related data.
- ✓ **User Retention:** Incorporate elements, progress tracking, and personalized recommendations to keep users engaged.
- ✓ **Marketing Integration:** Compatibility with email marketing tools and social media for promotions and user engagement.

# Feasibility Study

## A. Technical Feasibility:

### 1) System Architecture Requirements

- **Main Components:**

1. **Application Servers:**

- Type: High-performance cloud-based application servers ( Google Compute Engine).
- Role: Handles backend logic, user requests, and video/audio streaming services.

2. **Database Servers:**

- Type: Relational (MySQL, sql)
- Role: Manages user data, medical records, transaction logs, workout histories.

3. **Cloud Storage:**

- Type: Google Cloud Storage / Azure Blob Storage.
- Role: Stores videos, images, documents (ediet plans), and media content.

4. **Client Devices:**

- Smartphones, Tablets, Laptops ( Android supported).
- Smart TVs (for video streaming).
- Smartwatches (for fitness tracking).

5. **Cameras:**

- Type: HD Webcams for live doctor consultations.

# Feasibility Study

## 6. Internet Connection:

- Minimum: 100 Mbps for server upload/download.
- User Side: 4G/5G mobile data and Wi-Fi compatibility.

## 7. Content Delivery Network (CDN):

- Services like Cloudflare for faster video content delivery.

## 2) System Performance

1. **Smooth User Authentication** using OAuth and multi-device support.
2. **Efficient Content Streaming** for workouts, podcasts, using adaptive bitrate streaming.
3. **Live Consultation** with doctors via secured video calls .
4. **Secure Payments** using encrypted channels and trusted gateways.
5. **Data Storage & Access** is optimized using caching and auto-scaling servers.
6. **Load Balancing** ensures even distribution of users across servers.

## 3) Advantages of the Application

1. **User-Friendly:** Intuitive UI/UX for all ages and tech skill levels.
2. **High Security:** Encrypted login and payment systems.
3. **Fast, Scalable & Reliable:** Performance optimized to support thousands of concurrent users.
4. **Holistic Health Platform:** Combines fitness, nutrition, and expert consultation.
5. **Smartwatch Integration** enhances user engagement and real-time health data access.

# Feasibility Study

## 4) Development Tools & Technologies

### 1. Cloud Infrastructure:

- Google Cloud, or Azure for app hosting and scalability.

### 2. Version Control:

- Git (via GitHub/GitLab).

### 3. API Testing:

- Postman, Swagger.

### 4. Frontend Technologies:

- Flutter (cross-platform), Kotlin (native Android), HTML/CSS

### 5. Backend Technologies:

- Node.js, Express.js, Python (for AI)

### 6. Database Systems:

- SQL Server, MySQL.

### 7. Wearable Integration:

- Apple HealthKit, Google Fit APIs.

### 8. Payment Integration:

- PayPal, Apple Pay, InstaPay

## 5) System Integration Objectives & Requirements

1. Real-time communication (WebSocket ) for chat & video calls.
2. Integrated Payment Gateways with fraud detection.
3. Event-driven Architecture for synchronizing user actions with backend processes.
4. Social Media Integration via OAuth (Google, Facebook, Instagram).

# Feasibility Study

## 6) Security Requirements

### 1. Data Encryption:

- SSL/TLS, AES-256 encryption for data at rest and transit.

### 2. Authentication:

- Multi-factor Authentication (MFA), OAuth 2.0.

### 3. Access Control:

- Role-based (admin, doctor, client).

### 4. Fraud Prevention:

- Payment verification, behavioral anomaly detection.

### 5. Incident Response:

- Automated alert systems, logs, backup and recovery protocols

## B. Operational feasibility

### 1) Content Delivery

- Hosting and streaming of pre-recorded and live workout sessions, ensuring high-quality audio and video performance.

### 2) Trainer Management

- Scheduling, and coordination of certified fitness trainers to deliver various types of workouts

### 3) User Management

- Handling user registration, subscription plans, profile management, progress tracking, and customer support.

### 4) Booking and Scheduling System

- Enabling users to book live sessions, receive reminders, and manage their workout calendar efficiently.

# Feasibility Study

## 4) Technical Infrastructure

- Maintaining the application's backend systems, cloud services, databases, and APIs to ensure seamless operation and scalability.

## 5) Payment and Subscription Handling

- Managing secure payment processing for monthly and annual subscription plans through integrated payment gateways.

## 6) Marketing and Customer Engagement

- Running promotional campaigns, push notifications, and loyalty programs to retain users and attract new subscribers.

## C. Market Feasibility Study

### 1) Market Analysis

#### 1. Target Market

- Existing gym members seeking enhanced accessibility
- Young professionals (ages 18-35) with busy schedules preferring online fitness solutions
- Remote workers looking for virtual training options
- Fitness enthusiasts interested in personalized digital coaching

#### 2. Market Trends

- Rising demand for hybrid fitness models (in-person + online)
- Growth of mobile fitness apps and digital coaching
- Increasing use of AI and data analytics for personalized workouts
- Integration of wearables and IoT devices for performance tracking

# Feasibility Study

## 2) Competitive Analysis

### 1. Existing Competitors

- Local gyms with online systems or apps
- Large fitness platforms offering virtual training
- Subscription-based fitness apps ( Apple Fitness+)

### 2. Competitive Advantage

- Unique selling propositions: seamless integration between physical and online gym experience, exclusive digital content, interactive workout tracking
- Potential partnerships with fitness tech companies and wellness professionals

## 3) Online System Requirements

- Website and mobile app development
- Integration with wearable devices (e.g., Fitbit, Apple Watch)
- Secure payment processing and subscription options

## 4) Marketing and Sales Strategy

- Digital advertising and SEO optimization
- Social media campaigns and influencer collaborations
- Referral programs and member discounts for online services
- Corporate tie-ups for virtual wellness programs

## D. Financial Feasibility Study: cost in first year:

category	cost
App development	250000
Smartwatch integration	60,000
E-commerce startup	100000
Podcast production	30000
Marketing	35,000
Nutrition consultation	250000
Cloud server	50000
<b>total</b>	<b>775000</b>

## Revenue in the first year:

category	Num of users	Unit price	Total revenue
subscription	For 1000 user	100/month	1,200000
Online store	100order/month	Avg 300	360000
Podcast sponsor	1sponsors	15000/episode	180000
<b>Total revenue</b>			<b>1,740000</b>

# Feasibility Study

## Risks

### 1) Technical Risks

#### 1. System Downtime

- Unexpected crashes or server outages could disrupt the user experience

#### 2. Scalability Issues

- The platform may not efficiently handle the increase in user traffic, leading to performance bottlenecks.

#### 3. Security Vulnerabilities

- Risks related to data cyberattacks, or weak encryption may compromise user data and legal compliance.

### 2) Operational Risks

#### 1. Trainer Availability

- Dependence on freelance or part-time trainers may lead to inconsistent availability or last-minute cancellations..

#### 2. Customer Support Delays

- Inadequate response time to user inquiries and complaints may affect customer satisfaction and retention.

# Feasibility Study

## 3) Market Risks

### 1. Competitive Landscape

- Strong competition from established fitness platforms and apps may limit market share growth.

### 2. Regulatory Changes

- New data privacy or health-related regulations may require unplanned changes in app functionality or data management.

### 3. Legal and Compliance Risks

### 4. Intellectual Property Issues

- Risks associated with using unlicensed content (music or training materials) in workout sessions.

### 5. Trainer Certifications

- Legal liabilities may arise if unqualified trainers provide incorrect guidance leading to user injury.

### 6. Data Protection Compliance

- Failure to comply with data protection may lead to fines

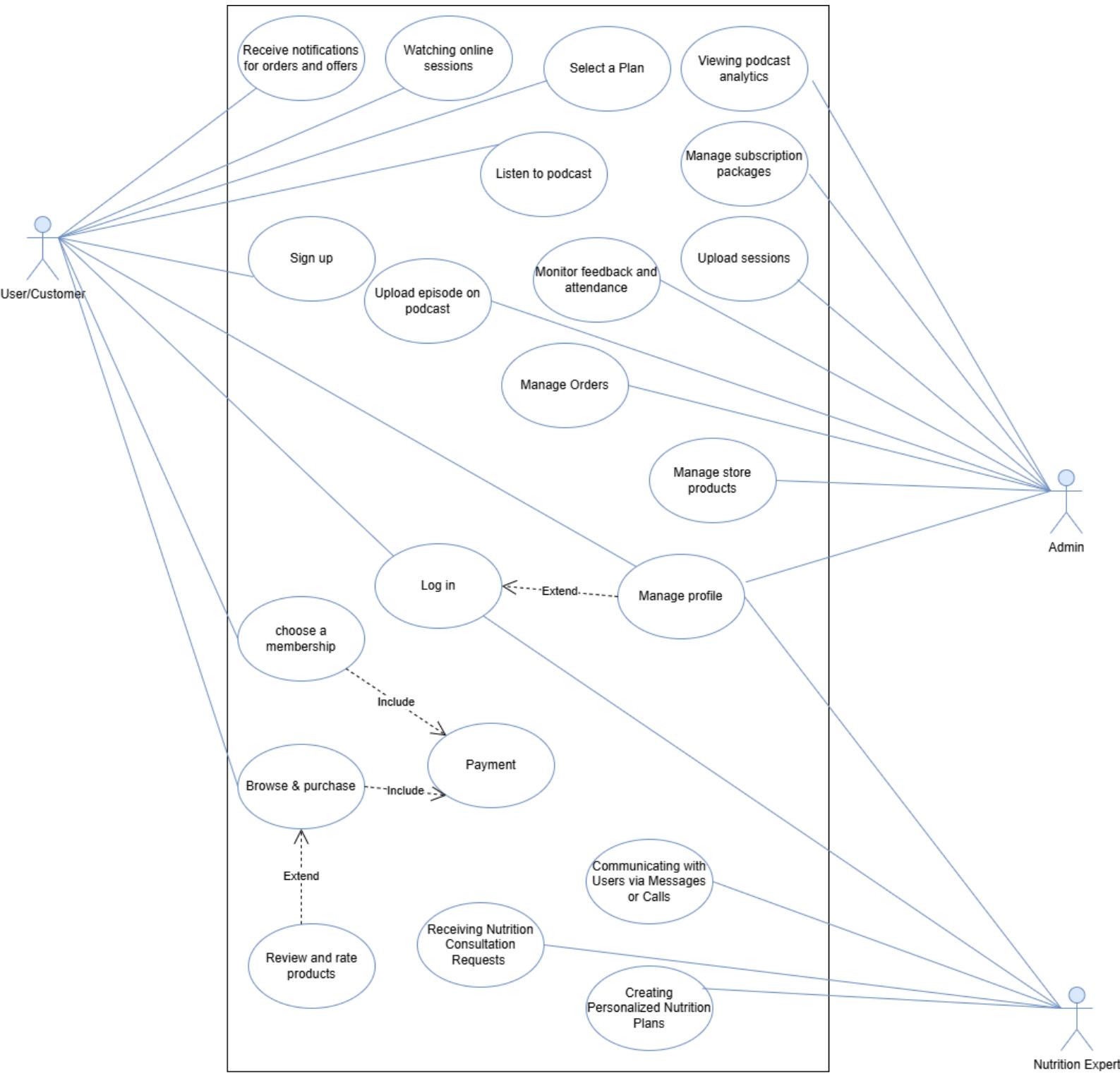
## 4) Financial Risks

### 1. Lower-than-expected user acquisition or retention.

### 2. Delays in subscription payments or failed transactions.

### 3. High competition affecting pricing strategies and profit margins.

# Use case diagram



# Use Case Scenario

## 1-Use Case Name: Manage Store Products

Use Case ID	UC-STORE-01
Actor(s)	Admin
Level	User Goal
Triggering Event	Admin decides to manage store items
Trigger Type	Manual
Priority	High
Risk	Medium
Description	The admin can add, update, or remove products from the store.
Preconditions	The admin must be logged in with appropriate permissions.
Basic Flow	<ol style="list-style-type: none"><li>1.The admin logs into the dashboard.</li><li>2.Navigates to the "Store Management" section.</li><li>3.Add a new product: Enters product details, uploads images, sets price, and stock availability.</li><li>4.Update an existing product or remove it and save the changes.</li></ol>
Alternative Flows	If an invalid product entry is detected (e.g., missing required fields), an error message appears. If the admin does not have the correct permissions, access is denied.
Postconditions	The product catalog is updated successfully.

# Use Case Scenario

## 2-Use Case Name: Upload Sessions and podcasts episodes

<b>Use Case ID</b>	US-EP-01
<b>Actor(s)</b>	Admin
<b>Level</b>	User Goal
<b>Trigging Event</b>	Admin decides to publish new content
<b>Trigger Type</b>	Manual
<b>Priority</b>	Medium
<b>Risk</b>	Low
<b>Description</b>	Allow admin to upload episode successfully.
<b>Preconditions</b>	Admin has authentication and is logged in.
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1.Admin logs into the system</li><li>2.Admin uploads the episodes</li><li>3.Admin applies all important details</li><li>4.The system sends the user a notification</li><li>5.The sessions appear to the user</li></ol>
<b>Alternative Flows</b>	If required fields are missing or invalid : the system shows an error message and prompts for correction. If the server fails during upload: the system notifies the admin and logs the issue.
<b>Postconditions</b>	The episode is uploaded successfully

# Use Case Scenario

## 3-Use Case Name: Manage Orders

<b>Use Case ID</b>	UC-STORE-02
<b>Actor(s)</b>	Admin
<b>Level</b>	User Goal
<b>Trigging Event</b>	User places an order
<b>Trigger Type</b>	External
<b>Priority</b>	High
<b>Risk</b>	High
<b>Description</b>	The admin can view and manage orders placed by users and updating their status.
<b>Preconditions</b>	The admin must be logged in with order management access.
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1.The admin logs into the dashboard.</li><li>2.Navigates to "Orders Management" section.</li><li>3.Views a list of placed orders.</li><li>4Updates the order status (e.g., Processing, Shipped, Completed).</li><li>5.The user is notified of the status change.</li></ol>
<b>Alternative Flows</b>	If the order cannot be processed due to stock issues, the admin can notify the user or cancel the order.
<b>Postconditions</b>	Orders are updated, and users receive notifications

# Use Case Scenario

## 4-Use Case Name: Viewing Podcast Analytics

Use Case ID	UC-EP-02
Actor(s)	Admin
Level	User Goal
Trigging Event	Admin checks podcast performance
Trigger Type	Manual
Priority	Medium
Risk	Low
Description	Allows the admin to track podcast performance and user preferences
Preconditions	The admin is logged in to the system with analytics access
Basic Flow	<ol style="list-style-type: none"><li>1.The admin logs into the Admin Dashboard</li><li>2.They navigate to Podcast Analytics</li><li>3.The system displays: Total plays per podcast, Average listening duration, Popular episodes</li><li>4.The admin selects a specific podcast to see detailed insights</li></ol>
Alternative Flows	If no analytics data is available: the system displays a message: "No data found for the selected period."
Postconditions	The admin views detailed insights about podcast performance

# Use Case Scenario

## 5-Use Case Name: Manage Subscription Packages

Use Case ID	UC-PACK-01
Actor(s)	Admin
Level	User Goal
Trigging Event	Admin decides to manage or update subscription offerings
Trigger Type	Manual
Priority	Medium
Risk	Medium
Description	Admin can add, edit, or remove subscription plans and pricing.
Preconditions	Admin is logged in with proper permissions.
Basic Flow	<ol style="list-style-type: none"><li>1.Admin accesses the “Subscription Management” section.</li><li>2.Chooses to Add a new plan (set name, duration, price, description).</li><li>3.Edit an existing plan (change price, duration, etc.).</li><li>4.Delete an outdated plan.</li><li>5.Saves changes.</li><li>6.System updates subscription offerings visible to users.</li></ol>
Alternative Flows	If required fields are missing, the system shows validation errors
Postconditions	Subscription packages are updated and reflected on the user interface.

# Use Case Scenario

## 6-Use Case Name: Ask for personalized plans

Use Case ID	UC-PLAN-01
Actor(s)	User
Level	User Goal
Trigging Event	User selects "Nutrition Consultation" and submits the form
Trigger Type	External
Priority	High
Risk	Medium
Description	The user submits a nutrition consultation request to a nutrition expert through the app.
Preconditions	The user must have an active account in the app and a subscription plan that includes nutrition.
Basic Flow	<ol style="list-style-type: none"><li>1.The user navigates to the "Consultation" section.</li><li>2.Selects "Nutrition Consultation" from the available options.</li><li>3.Views their current health data (height, weight, goals).</li><li>4.Edits or confirms the displayed information.</li><li>5.Clicks "Submit Request" to send the consultation request.</li><li>6.Receives a confirmation message.</li></ol>
Alternative Flows	If required fields are missing, the system prompts error message. If the user's plan doesn't cover nutrition consultation, the system displays: "Upgrade your plan to access this feature." If submission fails, the user sees: "Request failed. Try again later."
Postconditions	The request is queued for the nutrition expert and the user can track its status.

# Use Case Scenario

## 7-Use Case Name: Browse & Purchase products

Use Case ID	UC-STORE-03	
Actor(s)	User	
Level	User Goal	
Trigger event	User adds a product to the cart and proceeds to checkout	
Trigger type	External	
priorty	High	
risk	Medium	
Description	The user browses the online store, purchases fitness-related products, and receives them.	
Preconditions	User is logged in. The product is available in stock.	
Basic Flow	1.User opens the “Store” section. 3.Views product details. 5.Proceeds to checkout. 6.Confirms payment details and submits order. 7.System processes the purchase.	2.Filters or searches for products. 4.Adds desired product to cart.
Alternative Flows	Out of stock: User is notified. Payment failure: User retries or changes payment method.	
Postconditions	Purchase is recorded. Order confirmation is sent to the user.	

# Use Case Scenario

## 8-Use Case Name: Listen to podcast

Use Case ID	UC-EP-03
Actor(s)	User
Level	User Goal
Trigging Event	User receives a notification or manually opens the podcast page
Trigger Type	External
Priority	Medium
risk	Low
Description	Allows users to discover, play, and manage podcast episodes through the platform.
Preconditions	The user has an account The podcast feature is enabled
Basic Flow	1.The system sends the user a notification about the new episode 2.The user navigates to the podcast page 3.The system shows the user the episodes to watch 4.The user can add the episode to favorites
Alternative Flows	Offline Listening: The user downloads the episode for offline playback (requires storage permissions). Subscription Required: If the episode is premium, the system prompts the user to subscribe before playback.
Postconditions	The user watches the episode successfully

# Use Case Scenario

## 9-Use Case Name: Review & Rate Products

Use Case ID	UC-RATE-01
Actor(s)	User
level	User Goal
Trigger event	User selects "Write a Review" on a purchased product
Trigger type	External
priority	Medium
risk	Low
Description	The user can provide feedback and ratings for purchased products.
Preconditions	The user must have purchased the product.
Basic Flow	<ol style="list-style-type: none"><li>1.The user visits the product page.</li><li>2.Selects "Write a Review".</li><li>3.Rates the product (1-5 stars).</li><li>4.Adds an optional text review.</li><li>5.Submits the review, making it visible to other users.</li></ol>
Alternative Flows	If the user has not purchased the product, the review option is disabled.
Postconditions	The review appears on the product page.

# Use Case Scenario

## 10-Use Case Name: Watching Online Sessions

Use Case ID	UC-EP-04
Actor(s)	User
level	User Goal
Trigger event	User logs in and navigates to the Fitness Sessions section
Trigger type	External
priority	high
risk	Medium
Description	Allows users to browse, watch, and interact with available online sessions, while tracking their progress and submitting feedback.
Preconditions	User has an account on the app Sessions are available
Basic Flow	<ol style="list-style-type: none"><li>1.User logs into account</li><li>2.Navigates to the Fitness Sessions section</li><li>3.User browses the new session</li><li>4.The user watches the session and leaves any questions</li><li>5.The system shows the user their progress</li><li>6.Session attendance is logged</li><li>7.Feedback is submitted</li></ol>
Alternative Flows	Session Unavailable: If no sessions are available, the system displays: "No sessions found. Check back later." Incomplete Progress: If the user exits mid-session, progress is saved for resumption.
Postconditions	Session attendance is recorded. User progress is updated. Feedback (if submitted) is visible to admins and other users.

# Use Case Scenario

## 11-Use Case Name: Manage Profile

<b>Use Case ID</b>	UC-PF-01
<b>Actor(s)</b>	User, Nutrition Expert
<b>Level</b>	User Goal
<b>Triggering Event</b>	User selects "Profile Settings"
<b>Trigger type</b>	External
<b>Priority</b>	Medium
<b>Risk</b>	Low
<b>Description</b>	The user can update their profile information and preferences.
<b>Preconditions</b>	User is logged in.
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1.User navigates to “Profile Settings”.</li><li>2. Edits personal details (name, age, goals, contact info, etc.).</li><li>3. Clicks “Save”.</li><li>4. System updates the profile.</li></ol>
<b>Alternative Flows</b>	Invalid input: System displays errors and prompts corrections.
<b>Postconditions</b>	User profile is updated in the system.

# Use Case Scenario

## 12-Use Case Name: Payment

Use Case ID	UC-EP-05
Actor(s)	User, payment gateway
Level	User Goal
Triggering Event	User selects a subscription plan or item and initiates the payment process.
Trigger type	External
Priority	High
Risk	Medium to High (Risks include failed payments, data breaches, incorrect access provisioning, or fraudulent transactions.)
Description	Enables the user to make a secure payment to activate a subscription or service.
Preconditions	The user is logged into the system, selected a subscription plan or item to purchase and the payment gateway is available and working.
Basic Flow	<ol style="list-style-type: none"><li>1.The user selects the "<b>Make Payment</b>" option.</li><li>2.The system shows a summary of the selected plan or item with total price.</li><li>3.The user selects a payment method (e.g., credit card, PayPal, Apple Pay).</li><li>4.The user enters payment details and confirms the transaction.</li><li>5.The payment gateway processes the payment.</li><li>6.The system receives confirmation of success.</li><li>7.The user gets a confirmation message, and access to the selected service is granted.</li></ol>
Alternative Flows	If the payment is rejected: The system displays an error message and the user is asked to retry or choose a different payment method. If the user cancels the payment while on the payment gateway: The system returns to the previous screen without completing the payment.
Postconditions	The user's payment is recorded in the system. Access to the purchased subscription or service is activated. A receipt or confirmation message is sent to the user.

# Use Case Scenario

## 13-Use Case Name: : Sign Up

<b>Use Case ID</b>	<b>UC-SIGN-01</b>
<b>Actor(s)</b>	User, Nutrition Expert
<b>Level</b>	User Goal
<b>Triggering Event</b>	User chooses to create a new account.
<b>Trigger type</b>	External
<b>Priority</b>	High
<b>Risk</b>	Medium (Risks include invalid data input, identity verification failure for experts, and user abandonment.)
<b>Description</b>	User make an account on the app
<b>Preconditions</b>	User doesn't have an account User has reached the sign-up page
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1.User puts their information in a form including: (name, age, gender, photo, height, email, password, hint for password, phone number)</li><li>2.If the user is a doctor, it will require their ID, role, license</li><li>3.The system will make sure the information is valid</li><li>4.System will lead the user to their profile</li></ol>
<b>Alternative Flows</b>	If the user has an account, they will be taken directly to the main page If any of the input is not valid, a warning will be sent to the user
<b>Postconditions</b>	User has created an account

# Use Case Scenario

## 14-Use Case Name: Log In

<b>Use Case ID</b>	<b>UC-SIGN-02</b>
<b>Actor(s)</b>	User, Nutrition Expert, Admin
<b>Level</b>	User Goal
<b>Triggering Event</b>	User opens the app and selects the login option.
<b>Trigger type</b>	External
<b>Priority</b>	High
<b>Risk</b>	Medium (Incorrect login attempts, account lockouts, and unauthorized access are potential risks.)
<b>Description</b>	Allows an existing user to access their account
<b>Preconditions</b>	The actor is already registered. Correct username and password are available.
<b>Basic Flow</b>	1.The user sees the login form 2.User enters the account's email and password 3.The system verifies the info if it exists in the database
<b>Alternative Flows</b>	Invalid credentials: System shows error and requests re-entry. If the user doesn't have an account, the system will lead them to the sign-up page. If the user forgot the password, the hint will appear If the user does not confirm email, access is restricted
<b>Postconditions</b>	The user successfully logs in and has access to their profile

# Use Case Scenario

## 15-Use Case Name: Choose a Membership

<b>Use Case ID</b>	UC-PACK-02
<b>Actor(s)</b>	User
<b>Level</b>	User Goal
<b>Triggering Event</b>	User decides to subscribe to a service.
<b>Trigger type</b>	External
<b>Priority</b>	High
<b>Risk</b>	Medium (Payment may not be completed; risk of selecting duplicate subscriptions.)
<b>Description</b>	A user subscribes to a gym or online service and completes the payment online.
<b>Preconditions</b>	The user is registered in the system. Subscription packages are available.
<b>Basic Flow</b>	1.The user logs into the app or website. 2.Navigates to the "Subscriptions" section. 3.Selects a package (e.g., Gym Membership or Online Nutrition Plan). 4.Chooses the duration (Monthly, 3-Months, Annual). 5.The system redirects the user to the payment gateway.
<b>Alternative Flows</b>	User selects a plan they already have (active): The system shows a message: "You already have an active membership." No changes are made. User selects a plan but loses connection or closes browser: System may auto-save the selection as a draft (optional). No subscription is finalized until the user confirms.
<b>Postconditions</b>	A subscription is created and marked as "pending" or "awaiting payment". No payment has been processed yet.

# Use Case Scenario

## 16-Use Case Name: Monitor Feedback and Attendance

Use Case ID	UC-RATE-02
Actor(s)	Admin
Level	Summary
Triggering Event	Admin accesses the monitoring or analytics dashboard.
Trigger type	Internal
Priority	Medium
Risk	Low (Low likelihood of failure; main risk is missing or inaccurate data.)
Description	Allows an existing user to access their account
Preconditions	Admin has authentication The episodes are uploaded
Basic Flow	Sees the views and feedback Tracks the user's progress
Alternative Flows	No Feedback: If no feedback exists, the system displays: "No feedback available for this episode." Filter Data: The admin filters feedback by date/session type for targeted analysis.
Postconditions	Admin tracks progress successfully

# Use Case Scenario

## 17-Use Case Name: Receiving Nutrition Consultation Requests

<b>Use Case ID</b>	UC-QUEST-01
<b>Actor(s)</b>	Nutrition Expert
<b>Level</b>	User Goal
<b>Triggering Event</b>	User submits consultation request
<b>Trigger type</b>	External
<b>Priority</b>	High
<b>Risk</b>	Medium – depends on data completeness and expert availability
<b>Description</b>	The nutrition expert can receive consultation requests from users.
<b>Preconditions</b>	The user must have an active subscription that includes nutrition consultation. The nutrition expert must be registered in the system with the appropriate permissions.
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1.The user submits a nutrition consultation request through the app.</li><li>2.The nutrition expert receives a notification about the new request.</li><li>3.The expert reviews the user's details (height, weight, goals, etc.).</li><li>4.A consultation appointment is scheduled, or a questionnaire is sent to gather more details.</li></ol>
<b>Alternative Flows</b>	If the user's information is incomplete, a notification prompts them to provide the missing details. If no nutrition experts are available, the user is placed on a waiting list.
<b>Postconditions</b>	The request is saved in the system and becomes visible for follow-up.

# Use Case Scenario

## 18-Use Case Name: Creating Personalized Nutrition Plans

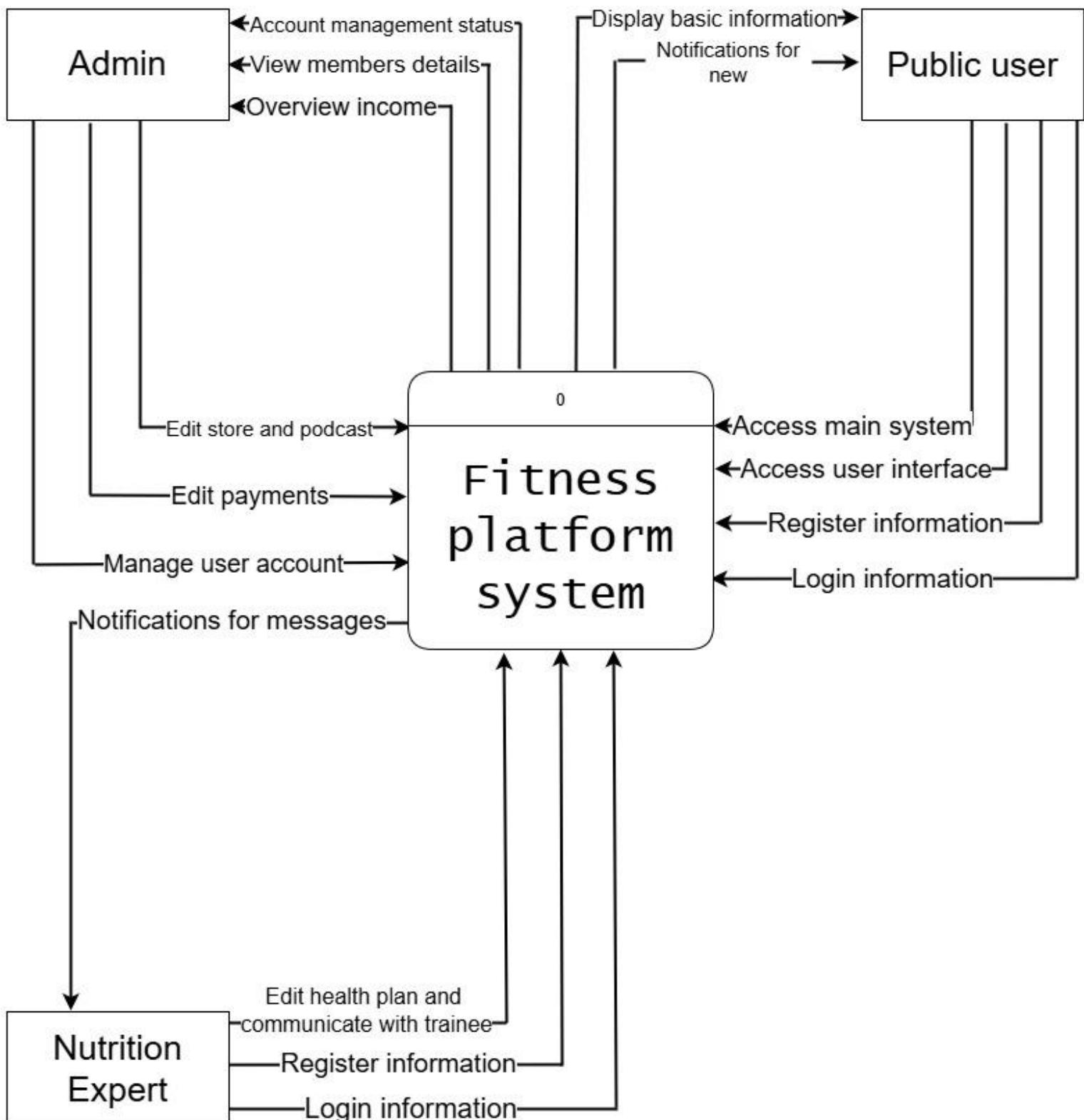
<b>Use Case ID</b>	UC-PLAN-02
<b>Actor(s)</b>	Nutrition Expert
<b>Level</b>	Sub-function
<b>Triggering Event</b>	Expert selects a user requiring a plan
<b>Trigger type</b>	Internal
<b>Priority</b>	Medium
<b>Risk</b>	Low – depends on data accuracy
<b>Description</b>	The nutrition expert can create customized meal plans based on the user's needs.
<b>Preconditions</b>	The user must have an active subscription.
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1.The nutrition expert accesses the dashboard.</li><li>2.Selects a user who needs a new meal plan.</li><li>3.Analyzes the user's data (age, weight, height, activity level, goals).</li><li>4Creates a customized meal plan, including meals and dietary recommendations.</li><li>5.Saves the plan and sends a notification to the user.</li></ol>
<b>Alternative Flows</b>	If the user's data is insufficient, an additional questionnaire is sent.
<b>Postconditions</b>	The meal plan is linked to the user's profile and accessible at any time.

# Use Case Scenario

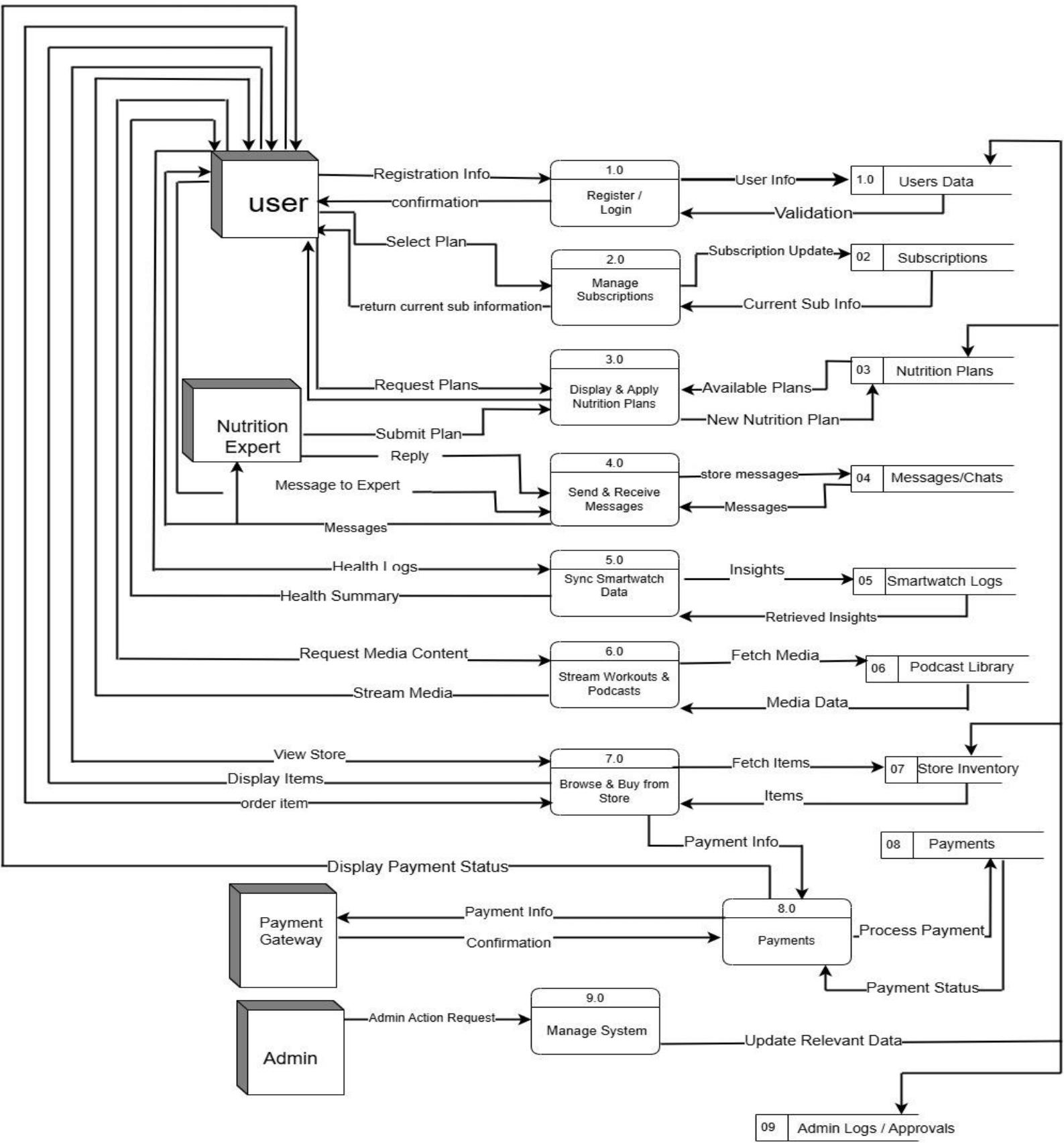
## 19-Use Case Name: Communicating with Users via Messages or Calls

Use Case ID	UC-CO-01
Actor(s)	Nutrition Expert
Level	Sub-function
Trigger event	Expert initiates communication
Trigger type	Internal
Priority	Medium
Risk	Medium – depends on tech reliability and user availability
Description	The nutrition expert can send messages or make calls to users for follow-ups.
Preconditions	The nutrition expert must have permission to access chat and call features.
Basic Flow	<ol style="list-style-type: none"><li>1.The nutrition expert accesses the messaging section in the app.</li><li>2.Selects a user to follow up with.</li><li>3.Sends a text message or initiates a voice/video call.</li><li>4.The user receives a notification and can respond or accept the call.</li></ol>
Alternative Flows	User Unavailable: If the user doesn't respond, the system schedules an automated reminder message for later. Call Decline: If the call is declined, the expert can leave a voicemail or switch to text. Technical Failure: If the call/message fails, the system logs the error and notifies both parties.
Postconditions	Messages/call logs are saved in the conversation history. User's response status is updated in the expert's dashboard.

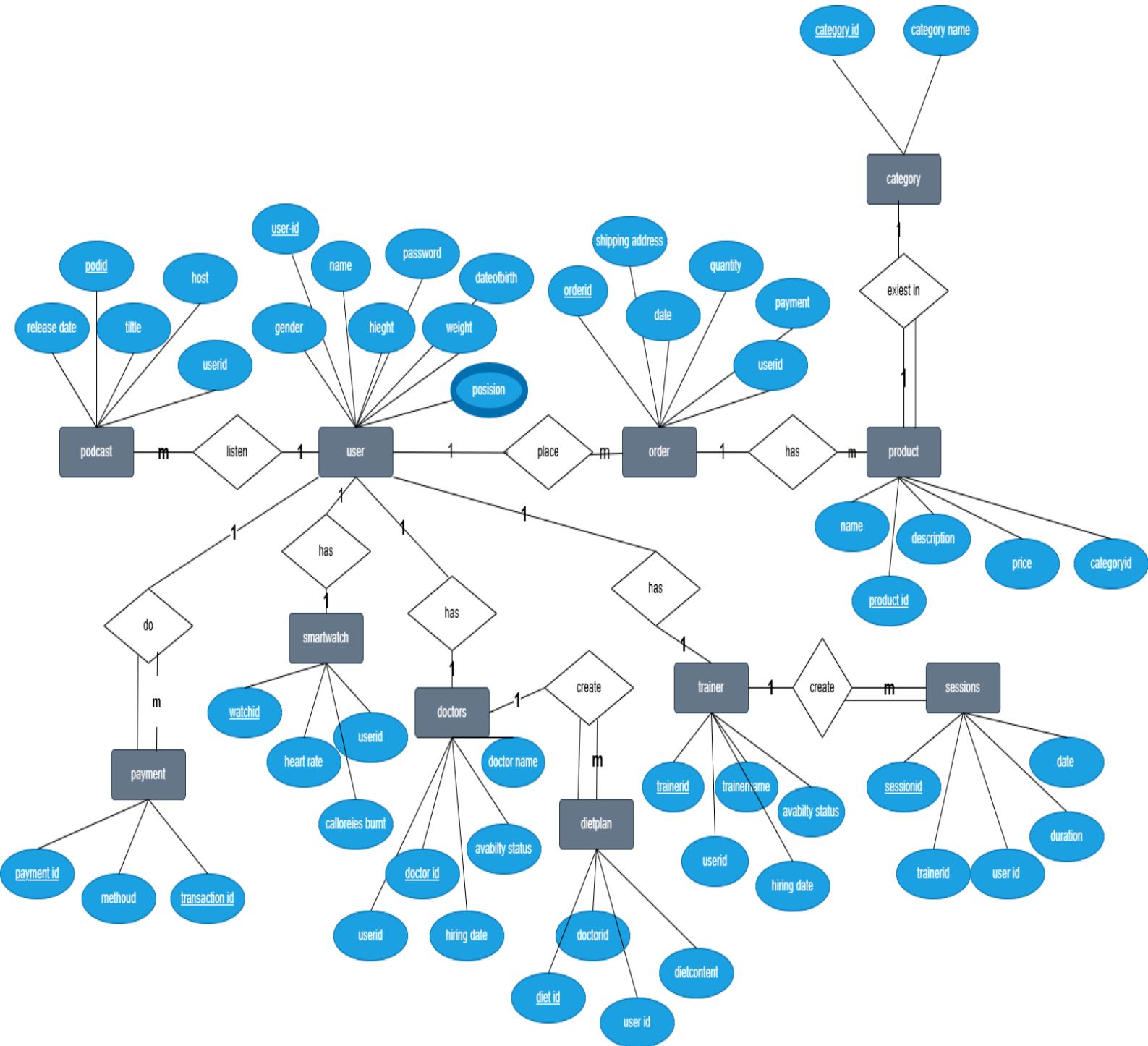
# Data flow level 0



# Data flow level 1



# ER Diagram



# Data Dictionary

## Category

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
category ID	VARCHAR	50	NO	YES	NO	-	Category ID
Category name	VARCHAR	100	NO	NO	NO	-	Name of the category

## Smartwatch

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
watch ID	VARCHAR	50	NO	YES	NO	-	Smart watch ID
Heart rate	int	5	YES	NO	NO	-	Heart rate of user
user ID	VARCHAR	50	NO	NO	YES	-	Linked trainer ID
Calories burnt	int	50	NO	NO	YES	-	Calories burnt

## Payment

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
Payment id	VARCHAR	50	NO	YES	NO	-	Payment id
Transaction id	VARCHAR	50	NO	YES	NO	-	Transaction id
method	varchar	50	NO	NO	NO	-	Bank account or payment app
User id	varchar	50	NO	NO	YES	-	User id

# Data Dictionary

## Order

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
Order ID	VARCHAR	50	NO	YES	NO	-	Unique order ID
Payment	TEXT	-	YES	NO	NO	NULL	Payment method
User ID	VARCHAR	50	NO	NO	YES	-	Reference to user
Quantity	INT	-	NO	NO	NO	1	Quantity ordered
Date	DATE	-	YES	NO	NO	CURRENT DATE	Order date
Shipping Address	TEXT	-	YES	NO	NO	NULL	Shipping address

## Sessions

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
Session ID	VARCHAR	50	NO	YES	NO	-	Unique session ID
Duration	TIME	-	YES	NO	NO	NULL	Session duration
Trainer ID	VARCHAR	50	NO	NO	YES	-	Linked trainer ID
User ID	VARCHAR	50	NO	NO	YES	-	Users who listened
Date	DATE	-	NO	NO	NO	CURRENT DATE	Order date

# Data Dictionary

## Podcast

Name	Data Type	Length	NULL	Primary Key	Foreign Key	Default Value	Description
PODCAST ID	VARCHAR	50	NO	YES	NO	-	PODCAST ID
TITLE	VARCHAR	100	NO	NO	NO	-	doctor's name
User ID	VARCHAR	50	NO	NO	YES	-	Linked user
release date	DATE	-	NO	NO	NO	CURRENT DATE	Release of episode
host	VARCHAR	50	NO	NO	NO	-	Host of podcast

## Product

Name	Data Type	Length	NULL	Primary Key	Foreign Key	Default Value	Description
product ID	VARCHAR	50	NO	YES	NO	-	product ID
description	VARCHAR	100	NO	NO	NO	-	Description of product
Category ID	VARCHAR	50	NO	NO	YES	-	Category of product
price	decimal	8,2	NO	NO	NO	-	Price of product

# Data Dictionary

## Trainers

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
Trainer ID	VARCHAR	50	NO	YES	NO	-	Trainer ID
Trainer Name	VARCHAR	100	NO	NO	NO	-	Trainer's name
User ID	VARCHAR	50	NO	NO	YES	-	Linked user
Date	DATE	-	YES	NO	NO	CURRENT DATE	Hiring date
status	BOOLEAN	-	NO	NO	NO	TRUE	Availability status

## doctors

Name	Data Type	Length	NULL	Primary Key	Foreign Key	Default Value	Description
DOCTOR ID	VARCHAR	50	NO	YES	NO	-	DOCTOR ID
DOCTOR Name	VARCHAR	100	NO	NO	NO	-	doctor's name
User ID	VARCHAR	50	NO	NO	YES	-	Linked user
Hire date	DATE	-	NO	NO	NO	CURRENT DATE	Hiring date
status	BOOLEAN	-	NO	NO	NO	TRUE	Availability status

# Data Dictionary

## DIET PLAN

Name	Data Type	Length	Null	Primary Key	Foreign Key	Default Value	Description
Dietplan id	VARCHAR	50	NO	YES	NO	-	Diet plan ID
Doctor id	VARCHAR	100	NO	NO	yes	-	Doctor's id
User ID	VARCHAR	50	NO	NO	YES	-	Linked user
content	text	-	NO	NO	NO	-	Content of diet

## user

Name	Data Type	Length	NULL	Primary Key	Foreign Key	Default Value	Description
USER ID	VARCHAR	50	NO	YES	NO	-	USER ID
Name	VARCHAR	100	NO	NO	NO	-	user's name
PASSWOD	VARCHAR	20	NO	NO		-	Password user
Date of birth	DATE	-	YES	NO	NO	-	birthdate
gender	VARCHAR	10	YES	NO	NO	-	User's gender
height	decimal	3,2	YES	NO	NO	-	User height
weight	decimal	2,2	YES	NO	NO	-	User weight
Position	varchar	50	NO	NO	NO	-	Rule of the user