

# Sprint-wise Sequence Diagrams

[NextChapter]

# Sprint 1: Core Foundations

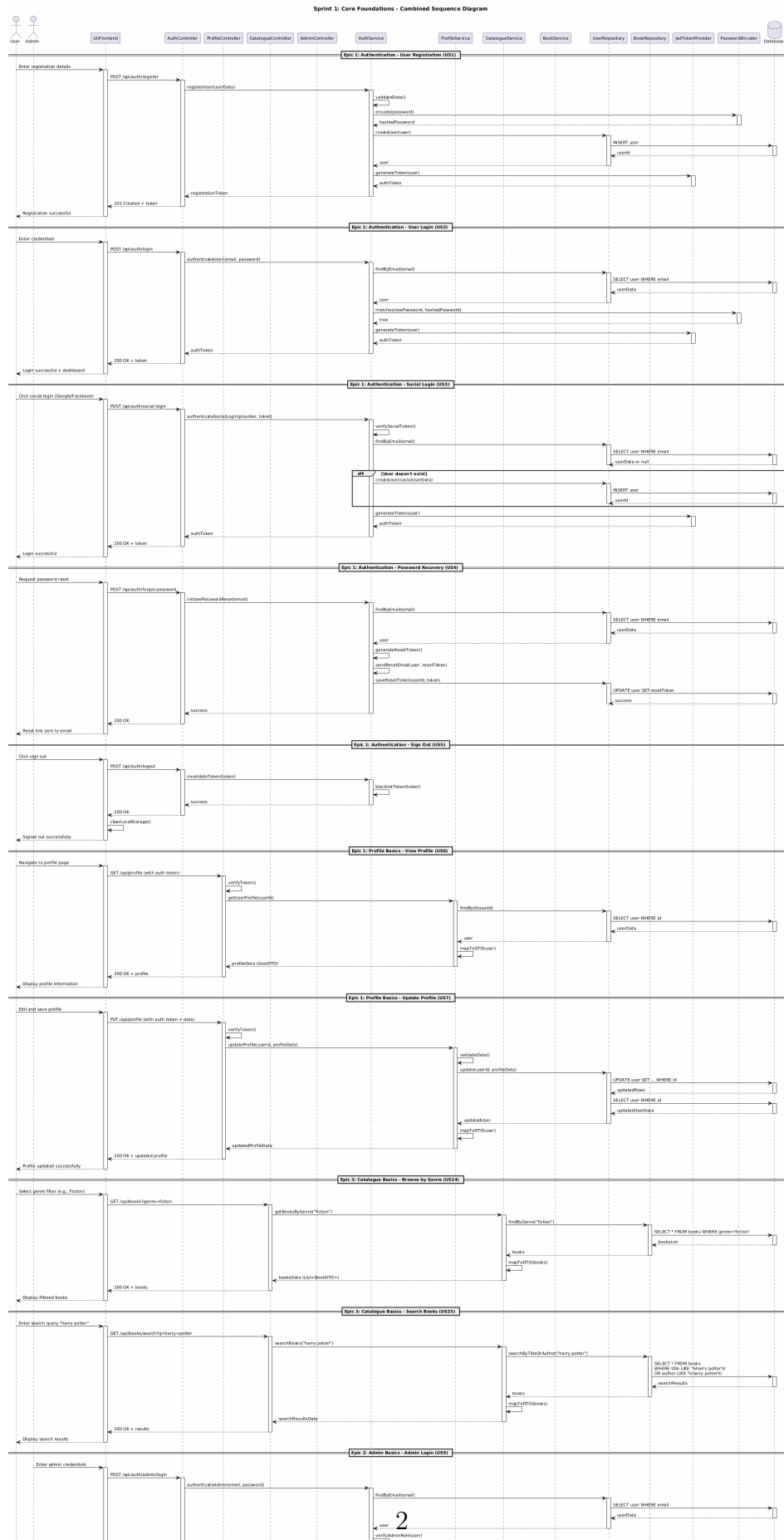


Figure 1: Core Foundations

# Sprint 2: Reading Essentials

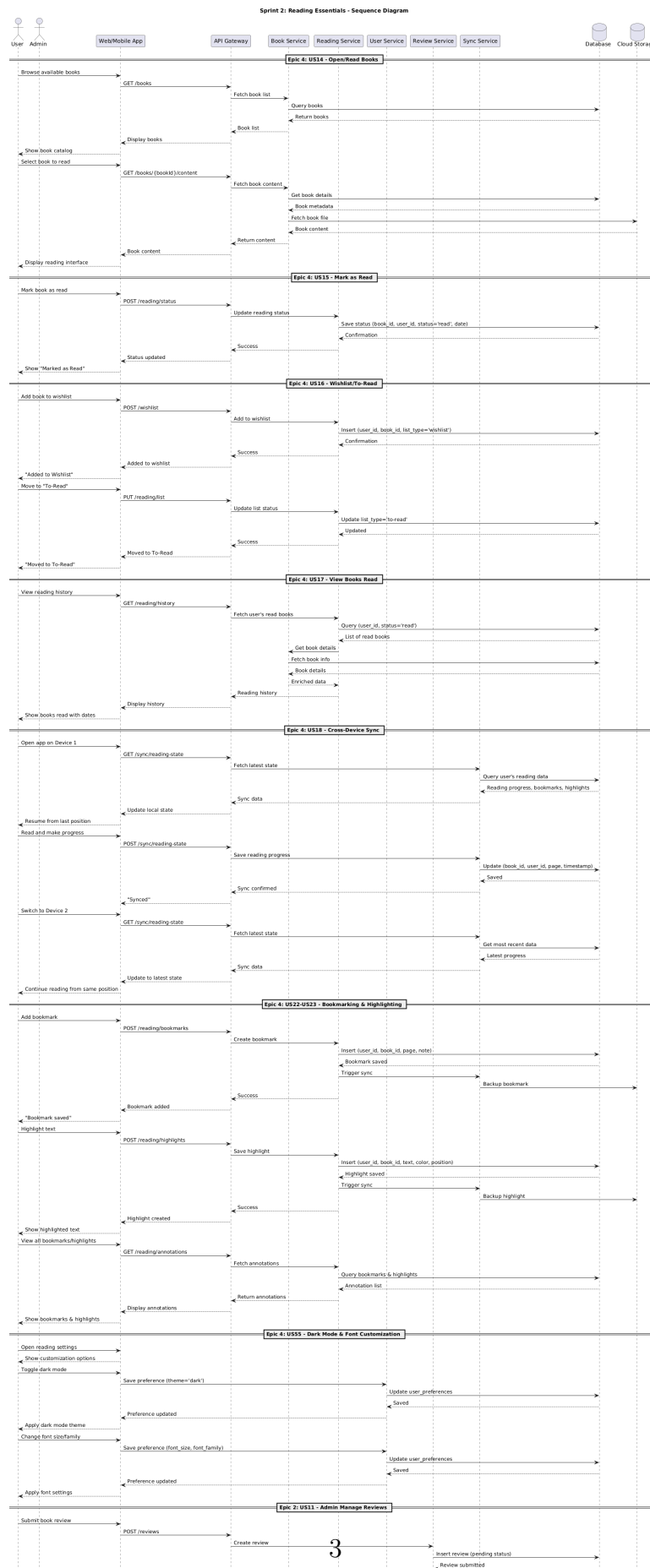


Figure 2: Reading Essentials

# Sprint 3: Community & Engagement

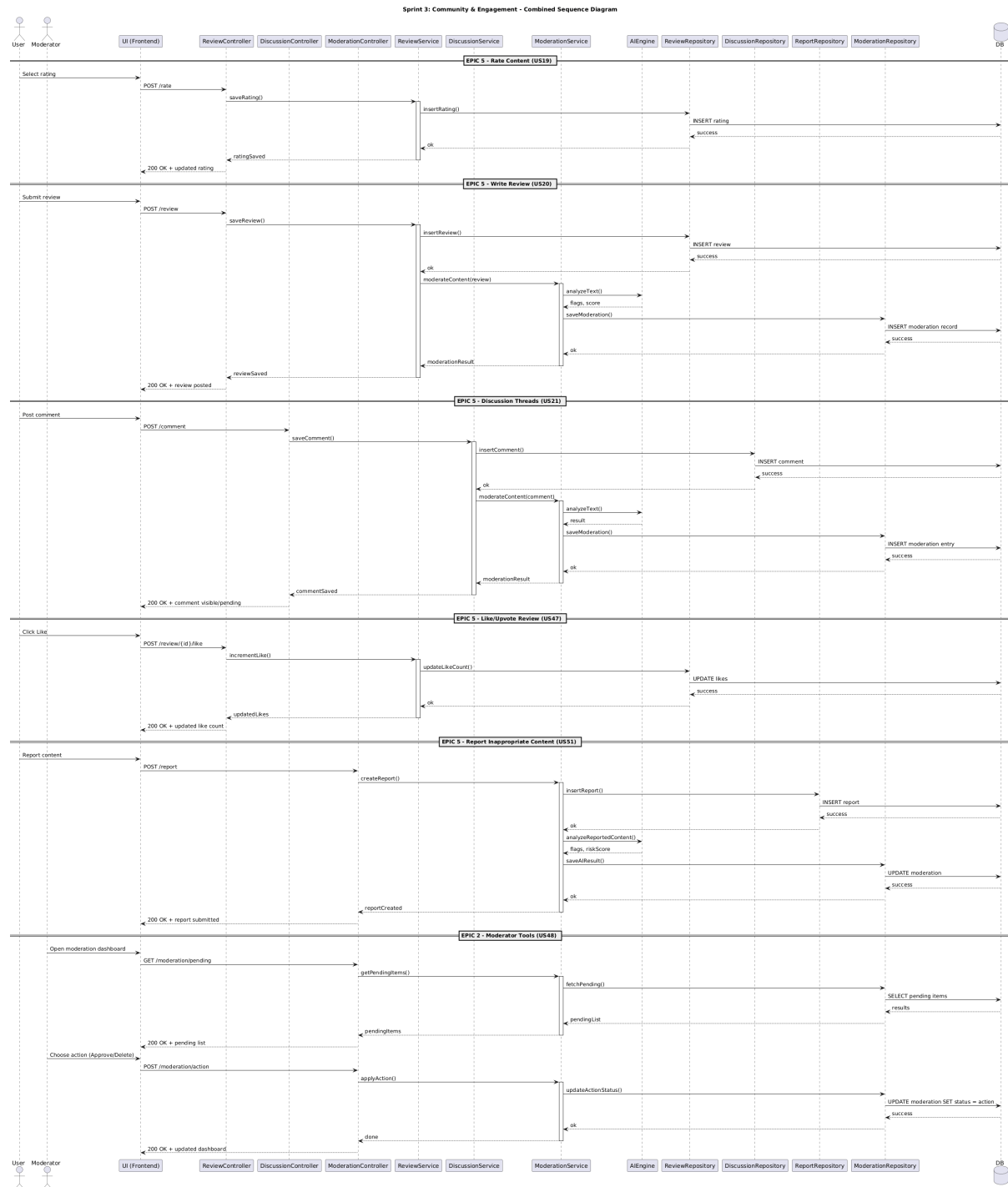


Figure 3: Community & Engagement

# Sprint 4: Personalization & AI

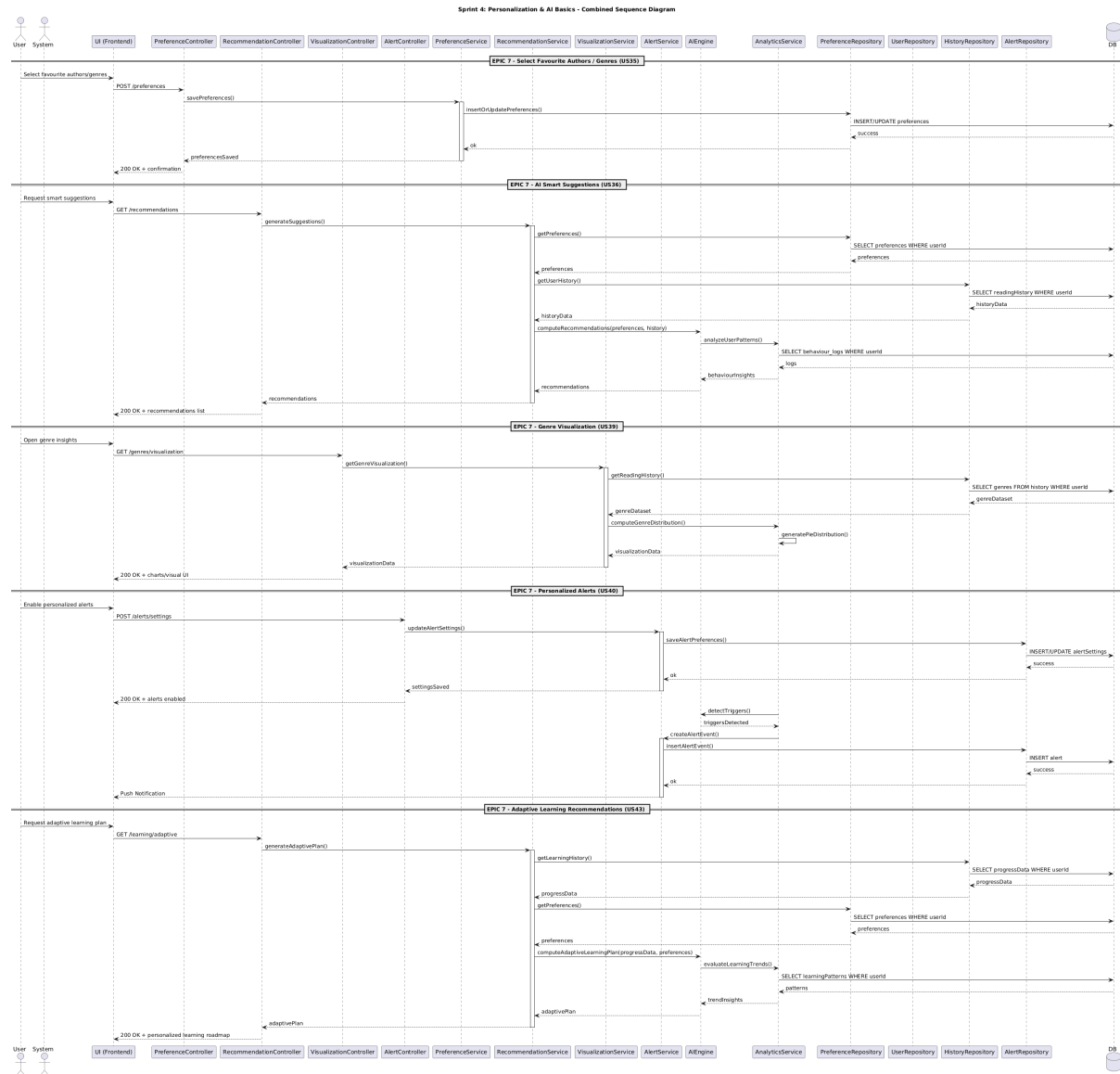


Figure 4: Personalization & AI

# Sprint 5: Advanced Reading & Retention

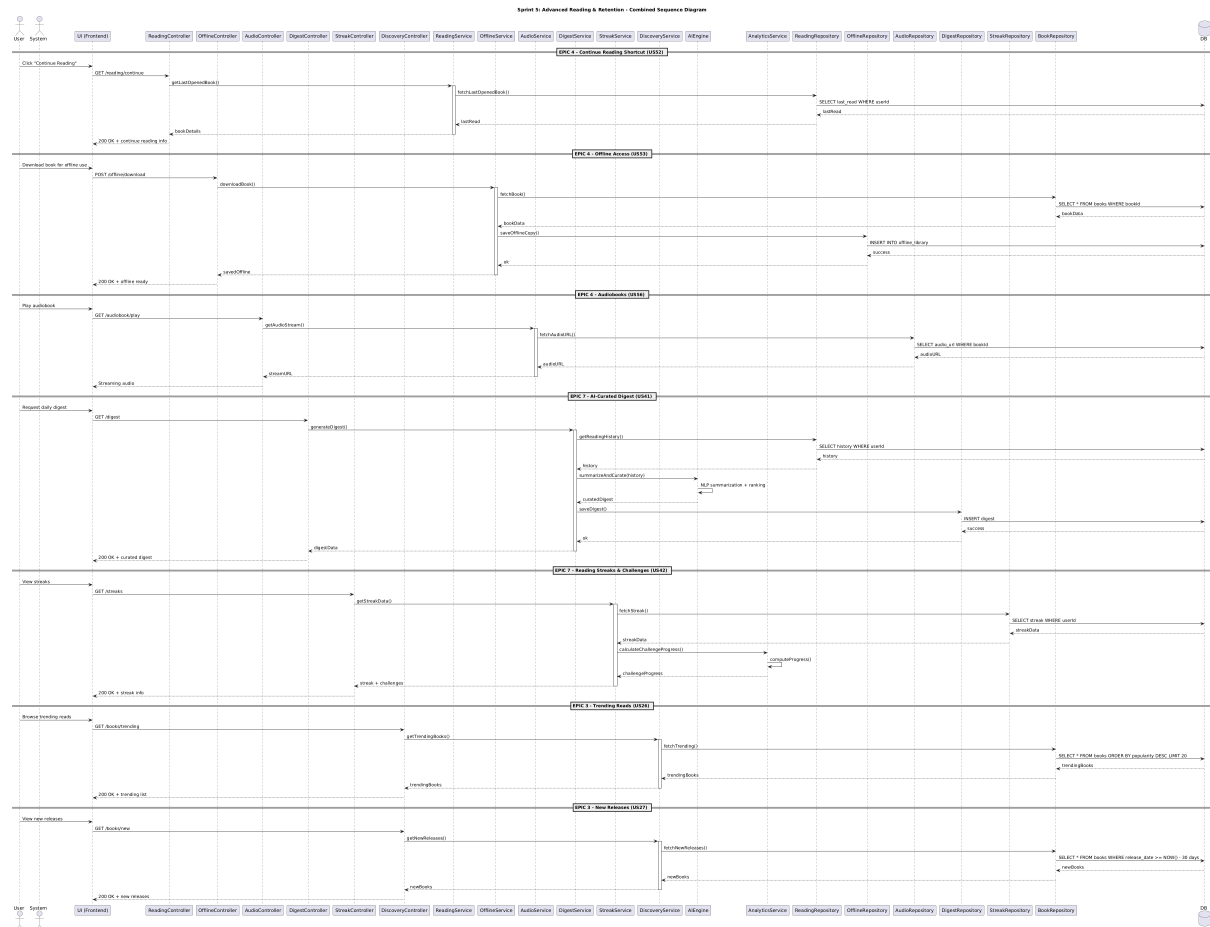


Figure 5: Advanced Reading & Retention

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sequenceDiagram
    actor User
    actor Admin
    participant PaymentGateway
    participant EPC as EPC 1: Register
    participant SubscriptionController
    participant PaymentController
    participant OrderController
    participant AdminSubscriptionController
    participant AdminPaymentController
    participant AdminOrderController
    participant AdminDiscountController
    participant SubscriptionService
    participant PaymentService
    participant OrderService
    participant AdminSubscriptionService
    participant AdminPaymentService
    participant AdminOrderService
    participant AdminDiscountService
    participant AnalyticsService
    participant SubscriptionRepository
    participant PaymentRepository
    participant OrderRepository
    participant AdminSubscriptionRepository
    participant AdminPaymentRepository
    participant AdminOrderRepository
    participant AdminDiscountRepository
    participant UserRepository

    Note over User, Admin, PaymentGateway: Check subscription plan
    User->>PaymentGateway: POST /subscribe
    PaymentGateway->>SubscriptionController: subscribe(plan)
    SubscriptionController->>SubscriptionService: createSubscription(plan)
    SubscriptionService->>SubscriptionRepository: save
    SubscriptionRepository-->>SubscriptionService: subscription created
    SubscriptionService-->>PaymentGateway: HTTP 201 = subscription created

    Note over Admin, PaymentGateway: Enter payment details
    Admin->>PaymentGateway: POST /payments/checkout
    PaymentGateway->>PaymentController: processPayment()
    PaymentController->>PaymentService: createPayment()
    PaymentService->>PaymentRepository: save
    PaymentRepository-->>PaymentService: payment created
    PaymentService-->>PaymentGateway: HTTP 201 = payment created

    Note over Admin, PaymentGateway: View payment details
    Admin->>PaymentGateway: GET /payments/details
    PaymentGateway->>PaymentController: getPaymentDetails()
    PaymentController->>PaymentService: getPaymentDetails()
    PaymentService->>PaymentRepository: SELECT * FROM payments WHERE id=?
    PaymentRepository-->>PaymentService: details
    PaymentService-->>PaymentGateway: HTTP 200 = details

    Note over Admin, PaymentGateway: Open order history
    Admin->>PaymentGateway: GET /order/history
    PaymentGateway->>OrderController: getOrdersHistory()
    OrderController->>OrderService: getOrders()
    OrderService->>OrderRepository: SELECT * FROM orders WHERE user=?
    OrderRepository-->>OrderService: orders
    OrderService-->>OrderController: orders
    OrderController-->>PaymentGateway: HTTP 200 = order list

    Note over Admin, PaymentGateway: Activate free trial
    Admin->>PaymentGateway: POST /subscriptions
    PaymentGateway->>SubscriptionController: activate(tag)
    SubscriptionController->>SubscriptionService: activateFreeTrial()
    SubscriptionService->>SubscriptionRepository: save
    SubscriptionRepository-->>SubscriptionService: HTTP 201 = trial activated
    SubscriptionService-->>PaymentGateway: HTTP 201 = trial activated

    Note over Admin, PaymentGateway: View all subscriptions
    Admin->>PaymentGateway: GET /subscriptions
    PaymentGateway->>SubscriptionController: getAllSubscriptions()
    SubscriptionController->>SubscriptionService: getAllSubscriptions()
    SubscriptionService->>SubscriptionRepository: SELECT * FROM subscription
    SubscriptionRepository-->>SubscriptionService: subscriptions
    SubscriptionService-->>PaymentGateway: HTTP 200 = subscription table

    Note over Admin, PaymentGateway: View payments
    Admin->>PaymentGateway: GET /subscriptions
    PaymentGateway->>SubscriptionController: getPayments()
    SubscriptionController->>SubscriptionService: getPayments()
    SubscriptionService->>PaymentRepository: SELECT * FROM payments
    PaymentRepository-->>SubscriptionService: payments
    SubscriptionService-->>PaymentGateway: HTTP 200 = payments list

    Note over Admin, PaymentGateway: Track user orders
    Admin->>PaymentGateway: GET /subscriptions
    PaymentGateway->>SubscriptionController: getOrders()
    SubscriptionController->>SubscriptionService: getOrders()
    SubscriptionService->>OrderRepository: SELECT * FROM orders
    OrderRepository-->>SubscriptionService: orders
    SubscriptionService-->>PaymentGateway: HTTP 200 = orders

    Note over Admin, PaymentGateway: View retention dashboard
    Admin->>PaymentGateway: GET /subscriptions
    PaymentGateway->>SubscriptionController: createRetentionDashboard()
    SubscriptionController->>AnalyticsService: createRetentionDashboard()
    AnalyticsService->>AnalyticsRepository: SELECT active_users, churn_rate, revenue
    AnalyticsRepository-->>AnalyticsService: retentionData
    AnalyticsService-->>PaymentGateway: HTTP 200 = retention dashboard
  
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[illegible]

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