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Momentum - Technical Documentation

Photo Chain Social App - Technical Decisions & Approaches

Executive Summary

This document outlines the key technical decisions and approaches taken in the development of Momentum, a photo chain social app targeting 1M Daily Active Users (DAU). Our focus on user engagement, performance, and scalability shaped these decisions.

1. Product Vision & Core Concept

Key Decisions

- **Core Mechanic:** Photo chains with 24-hour time limit
  - Creates urgency and regular engagement
  - Builds on proven streak mechanics
  - Encourages daily active usage
- **Target Audience:** Young adults (18-35)
  - Higher engagement with photo-sharing apps
  - Strong viral growth potential
  - Tech-savvy demographic

2. Technical Architecture

Android Development Decisions

- **Single Activity Architecture**
  - Better navigation control
  - Improved fragment management
  - More efficient memory usage

- **MVVM Architecture Pattern**
  - Clear separation of concerns
  - Better testability
  - Lifecycle awareness

Key Libraries & Technologies

```
// Core Android Components – Compose – Compose Navigation – ViewModel – Room
Database // Image Handling – Coil // Network – Retrofit – OkHttp – Firebase
services
```

3. UI/UX Design Decisions

Design System

- **Material Design 3**
  - Modern, familiar interface
  - Consistent with Android guidelines
  - Built-in dark mode support

4. Feature Implementation Priorities

Phase 1 (MVP)

1. User Authentication
2. Photo Selection
3. Chain Creation
4. Basic Social Features
5. Push Notifications

Phase 2(To be done)

1. Enhanced Photo Features
2. Advanced Social Features
3. Engagement Mechanics
4. Analytics Integration

7. Success Metrics

Key Performance Indicators

- Daily Active Users (DAU)
- Chain completion rate
- User retention
- Viral coefficient
- Time in app

Technical Metrics

- App performance
- Crash-free sessions
- API response times
- Upload success rate