

# **Software Design and Analysis (SE-2002)**

## **Assignment 2(DFD's)**

### **Software: AnkiDroid**

Group#10

Sana Idrees(23i-2039), Manahil(23i-3000),  
Maryam Fatima(23i-3007) and Ayesha Khan(23i-3037)  
BS-Software Engineering(4B)

**Submitted to:** Dr. Behjat Zuhaira

Client: Group # 1



## **Functional Decomposition Components:**

### **1.0 Core FlashCard Management**

- **Study Material Management**
  - Deck Development
  - Deck Updation
  - Deck Removal
  - Deck transfer and Exchange
  - Card Creation/Development
  - Card Updation
  - Card Deletion/Removal
  - Card Format Adjusting
- **Study Reinforcement Oversights Management**
  - Planned revision Sessions
  - Adaptive Learning Strategy
  - Response tracking
  - Performance Analysis

### **2.0 Learning Motivation System Management:**

- **Battle Mode Management:**
  1. Opponent finding
  2. Flashcard-based quizzes
  3. Performance tracking
  4. Recognition, Ranking, and badges
  5. Consistency Tracker
  6. Progress-based rewarding/Points calculation
  7. Progress/Milestone Syncing
  8. Personalized Challenge generation
- **Achievement Management:**
  1. Consistency Assessments
  2. Milestone recognition(Achievement Unlock)

### **3.0 Community Engagement and Collaboration Management:**

- **Group Study Management:**
  1. Shared Learning Sources and collaborative editing
  2. Group quizzes management
  3. Study Plan Alignment
- **Community Engagement Management:**
  1. Progress Sharing
  2. Discussion and Knowledge Exchange Management
  3. Q&A Facilitation
  4. Individual ranking management

5. Group-based ranking management

#### **4.0 Study recommendations generation and management:**

#### **5.0 Flashcards record handling:**

- **Flashcards Preservation and Recovery Management:**
  1. Physical Copy Management
  2. Restoration strategy
  3. Distributed Flashcard handling
  4. Conflict management and resolution
  5. Resource Alignment
- **Flashcards Statistics and Reporting Management:**
  1. Learning progress overview
  2. Competitive Performance analytics
  3. Group Study Analytics

**The part below is not included in Data Flow Diagrams because they are too generic and already known**

#### **User Management:**

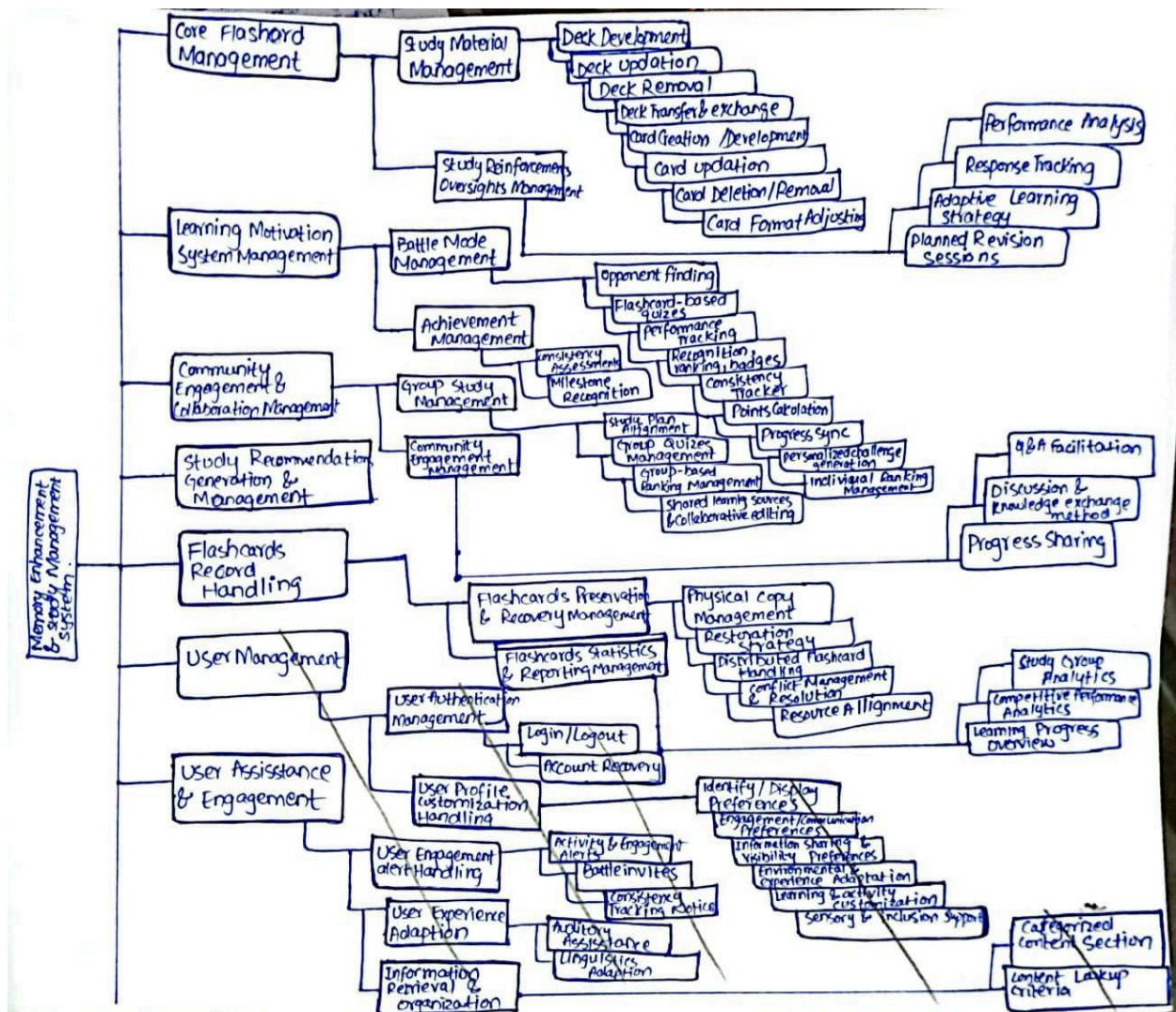
- **User Authentication Management:**
  1. Login/Logout
  2. Account recovery
- **User Profile Customization handling:**
  1. Identity and display preferences(Avatars and NickNames Setup)
  2. Engagement and communication preferences
  3. Information sharing and visibility preferences
  4. Environmental and experience adaption (change theme)
  5. Learning and activity customization
  6. Sensory and inclusion support (Adjust Audio & Visual Preferences)

#### **User Assistance and Engagement:**

- **User Engagement alert handling:**
  1. Activity and Engagement Alerts (Review Reminder)
  2. Battle invites
  3. Consistency Tracking notice
- **User Experience Adaption**
  1. Auditory Assistance

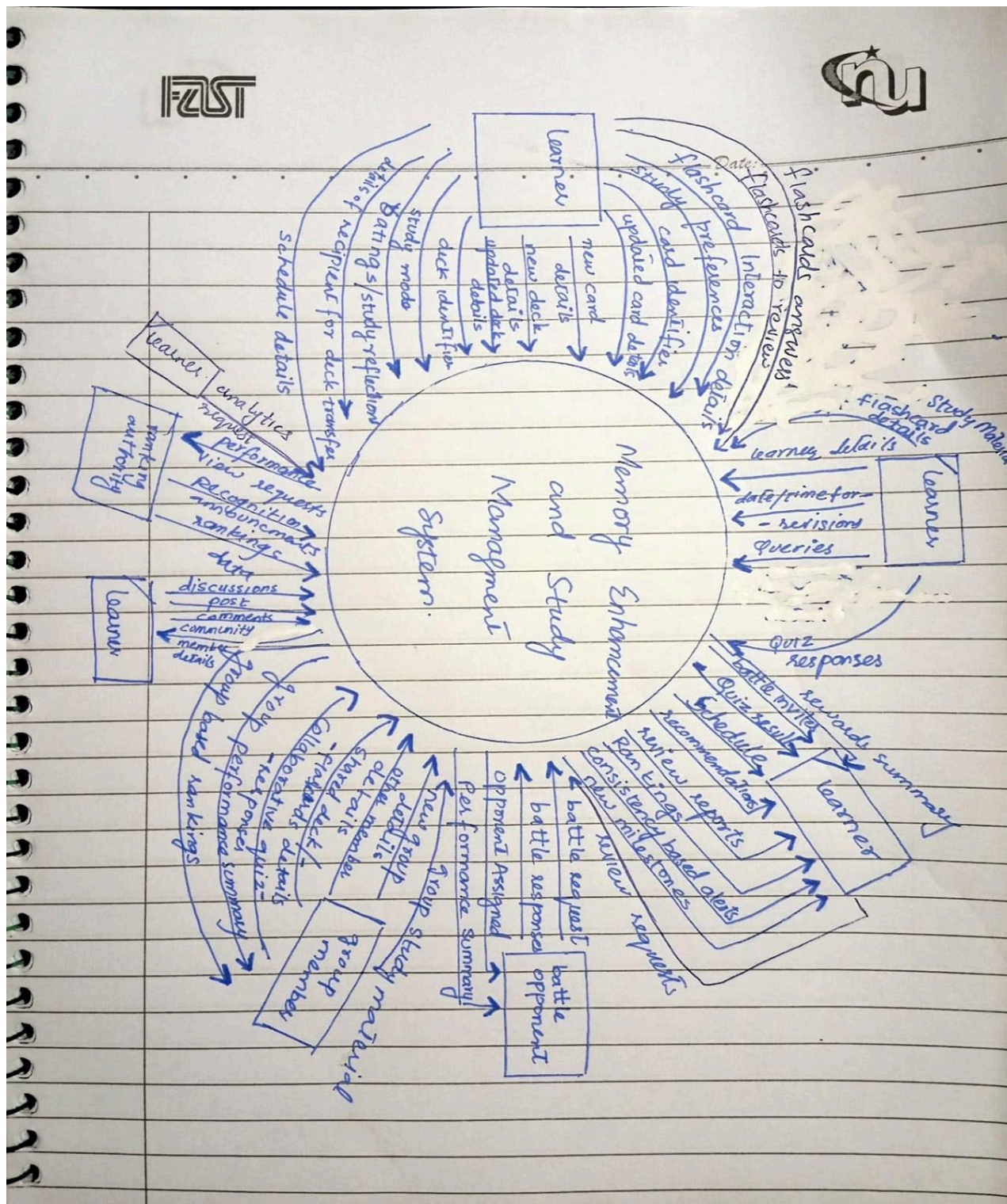
2. Linguistics Adaption
- **Information Retrieval and Organization:**
  1. Content Lookup Criteria (Flashcard search using keywords, Tags, etc.)
  2. Categorized Content Section (Deck Filtering by subject, topic, etc.)

## Functional Decomposition Tree Diagram:



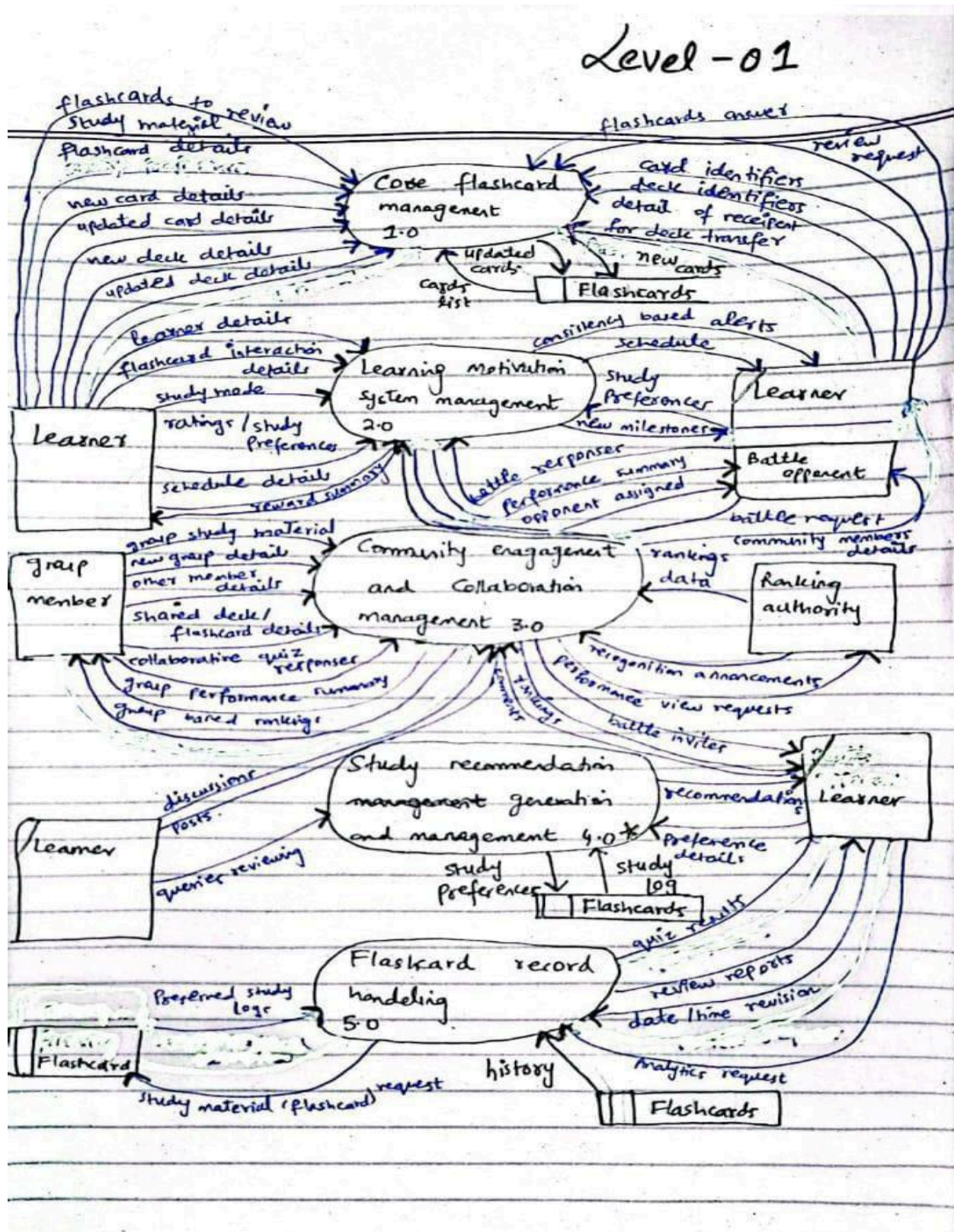


## Context Level DFD:





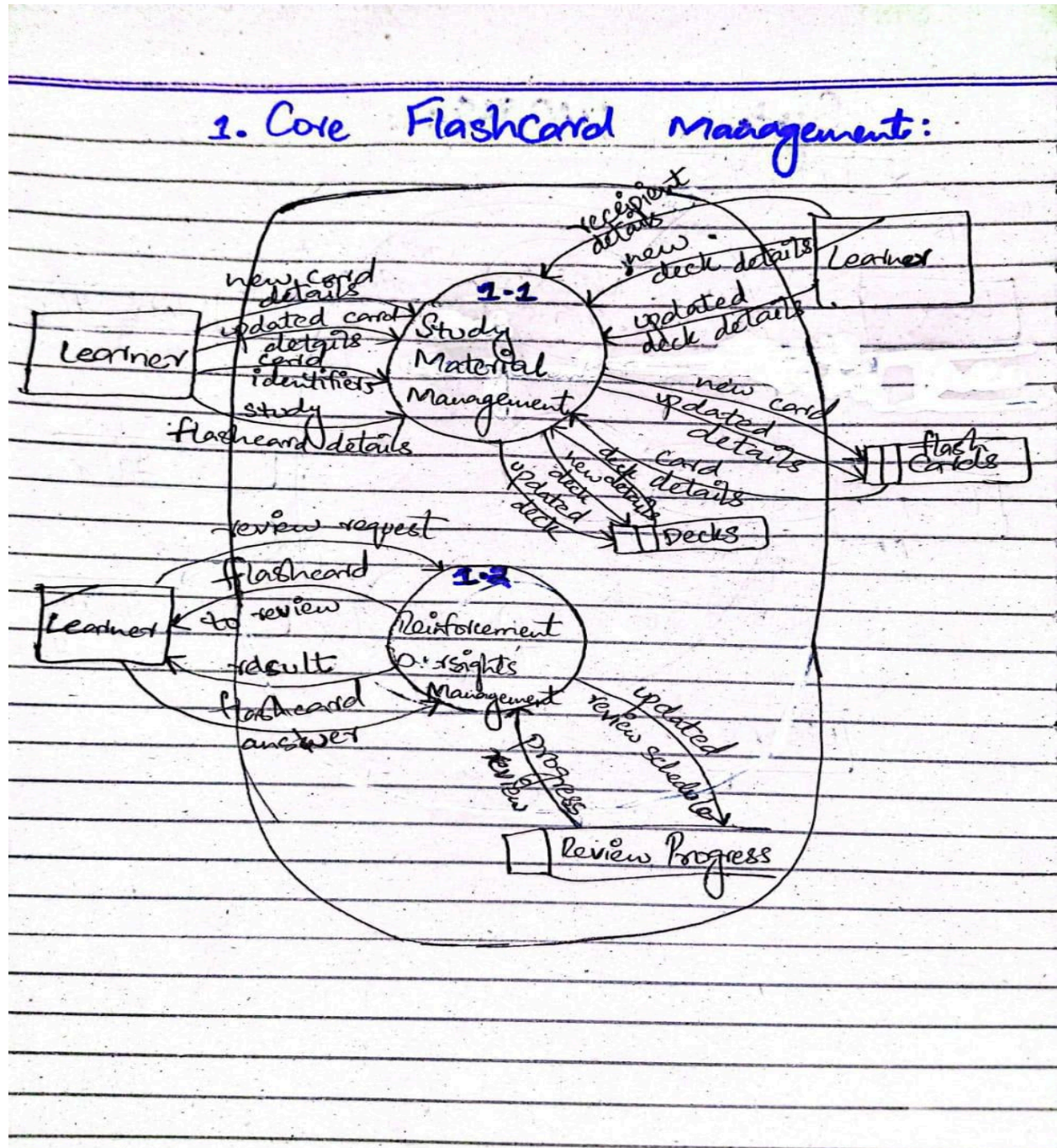
## Level 1:





## Level 2:

### 1.0 Core Flashcard Management



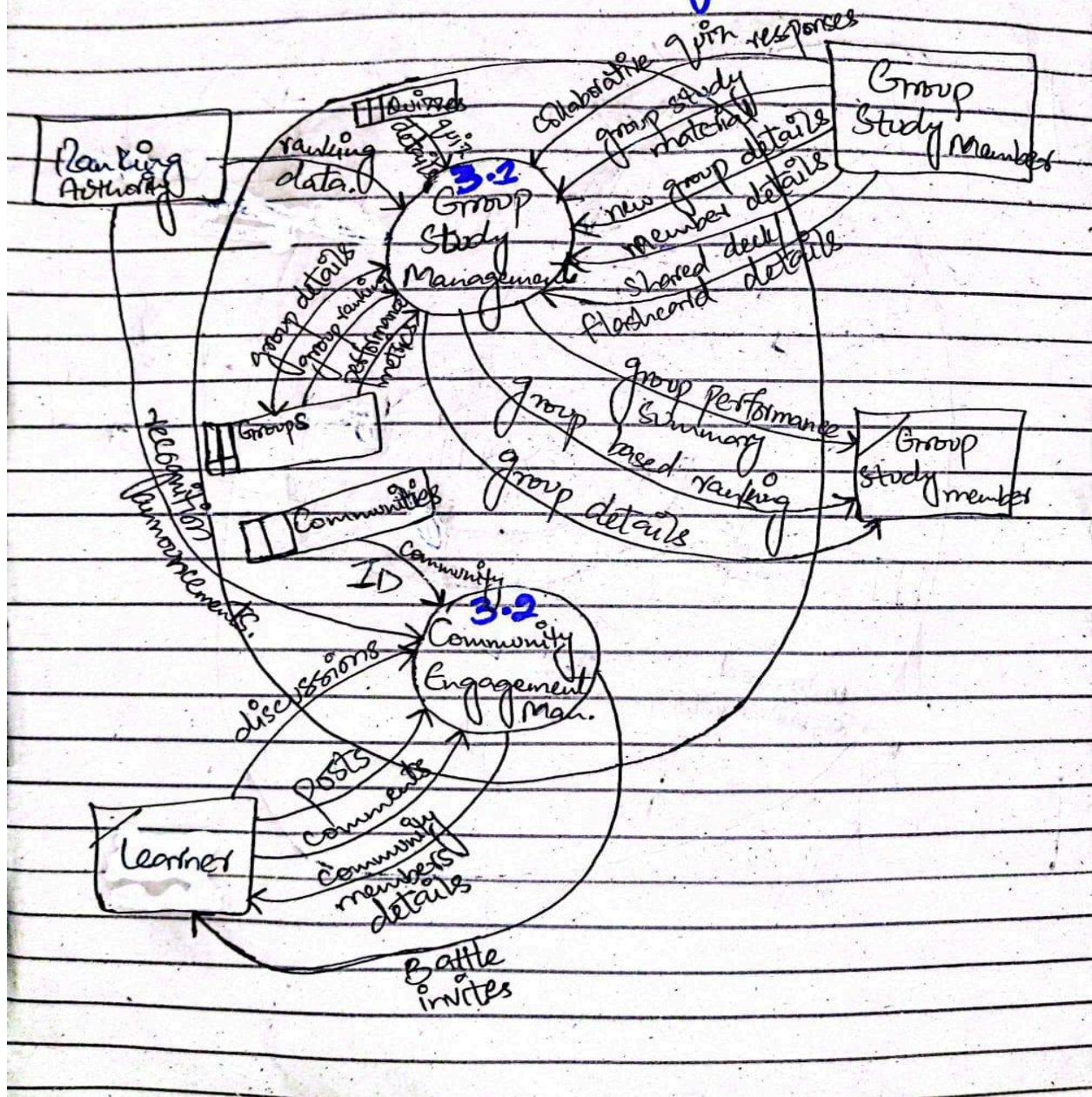


### **3.0 Community Engagement and Collaboration Management**





### 3.0 Community Engagement and Collaboration Management



#### 5.0 Flashcard Record Handling



## 5.0 Flashcard Record Handling

