Flashcard Study App Project Report

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Abstract

The Flashcard Study App is a mobile application designed to help users organize and manage their study materials effectively. Developed using Java in Android Studio, the app allows users to create, insert, delete, and star flashcards for quick reference. An SMS notification feature reminds users of their study schedules, enhancing productivity. With a simple user interface and a robust SQLite database for data persistence, the app aims to make studying more accessible and efficient for students and professionals alike.

Introduction

Background

Flashcards have long been recognized as an effective tool for learning and memorization. However, traditional paper-based flashcards are cumbersome to manage and lack interactivity. This project aims to digitize the flashcard experience, providing users with a modern, mobile-friendly solution that combines convenience and functionality.

Objective

The objective of the Flashcard Study App is to simplify the process of creating and managing study materials, enabling users to study effectively anytime, anywhere. Key features include card management, starring important cards, and SMS notifications to ensure consistent learning habits.

Scope

The app is designed for individual users seeking a study aid. It supports local data storage via SQLite and a notification system via SMS. The app does not currently include features like cloud synchronization or multimedia integration.

4. System Design

Architecture

The app follows a client-side architecture, with all functionalities running locally on the device.

Modules

1. **Flashcard Management Module**: Allows users to create, insert, delete, and edit flashcards.
2. **Starring Module**: Enables users to star important cards for quick access.
3. **Notification Module**: Sends SMS reminders for study schedules.
4. **Database Module**: Stores flashcard data using SQLite for offline access.

Technologies Used

- **Programming Language**: Java
- **Development Environment**: Android Studio
- **Database**: SQLite
- **Additional APIs**: Android SMS Manager for notifications

Features

1. **Flashcard Creation**: Users can create flashcards with a title and content.
2. **Edit/Delete Functionality**: Cards can be updated or removed as needed.
3. **Starred Cards**: Important cards can be marked as starred for easy access.
4. **SMS Notifications**: Sends reminders to users about their study plans.
5. **Data Persistence**: Ensures all data is saved locally using SQLite.

Implementation Details

1. Flashcard Management

- Each flashcard consists of a title and description stored in an SQLite database.
- CRUD operations (Create, Read, Update, Delete) are implemented for seamless card management.

2. SMS Notification System

- Integrated using Android's SMS Manager API.
- The app schedules SMS notifications based on user preferences to remind them of study tasks.

3. Starring Functionality

- A "star" icon marks important flashcards.
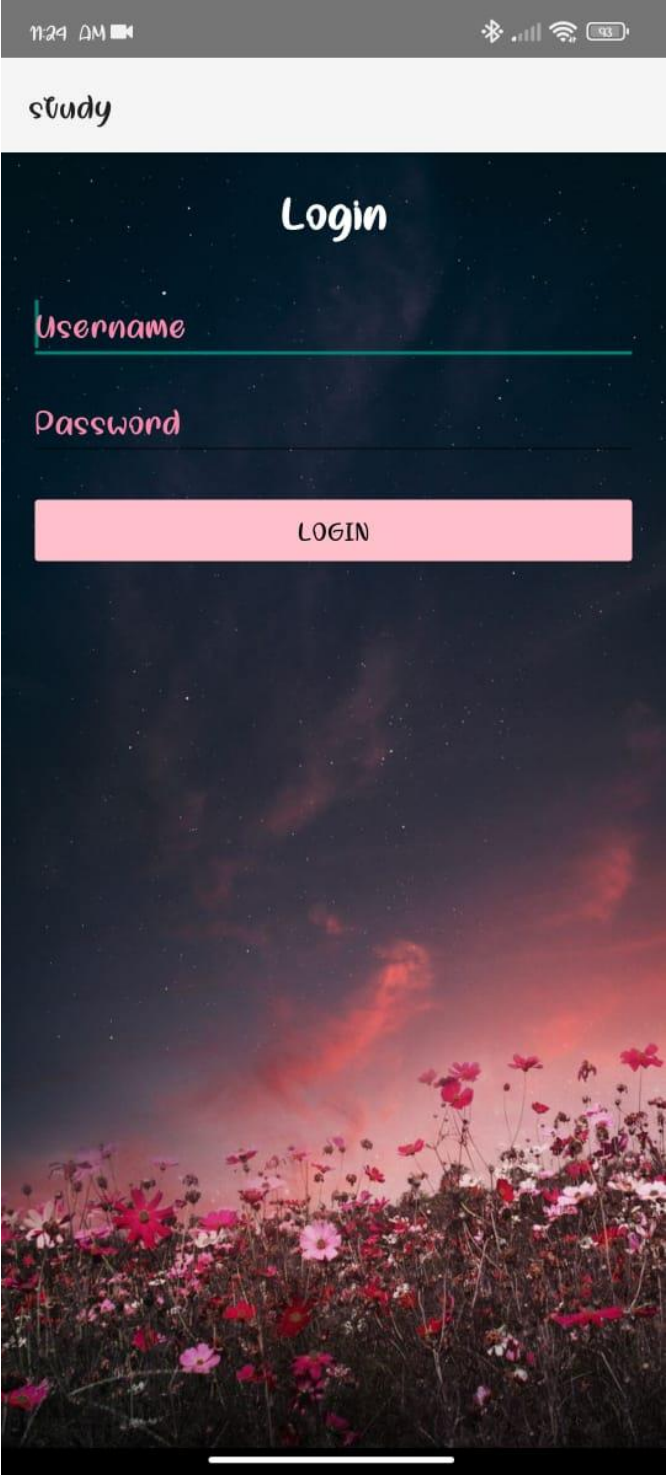- Starred cards are displayed in a separate section for quick review.

Testing and Validation

The app was tested on multiple devices running Android to ensure compatibility and functionality. Key tests included:

- Adding, editing, and deleting flashcards.
- Starring and filtering important cards.
- Sending SMS notifications to specified phone numbers.

Detailed design
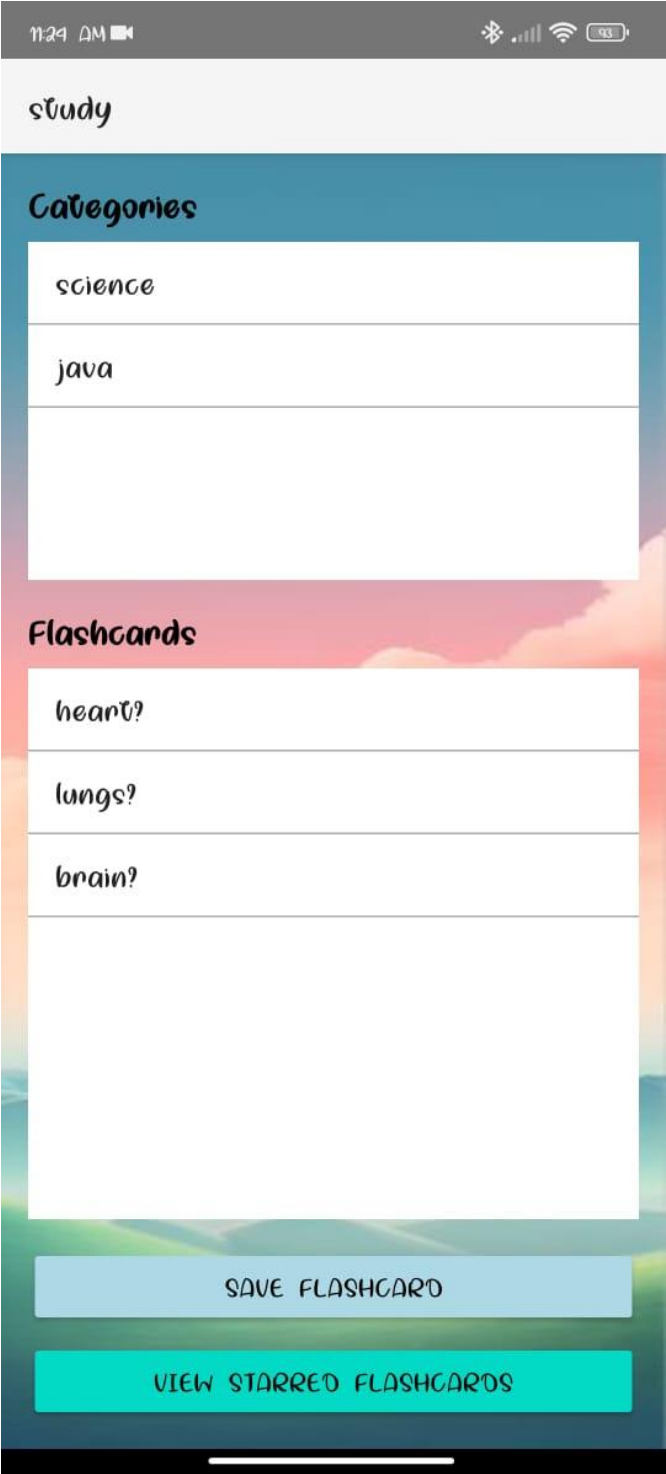
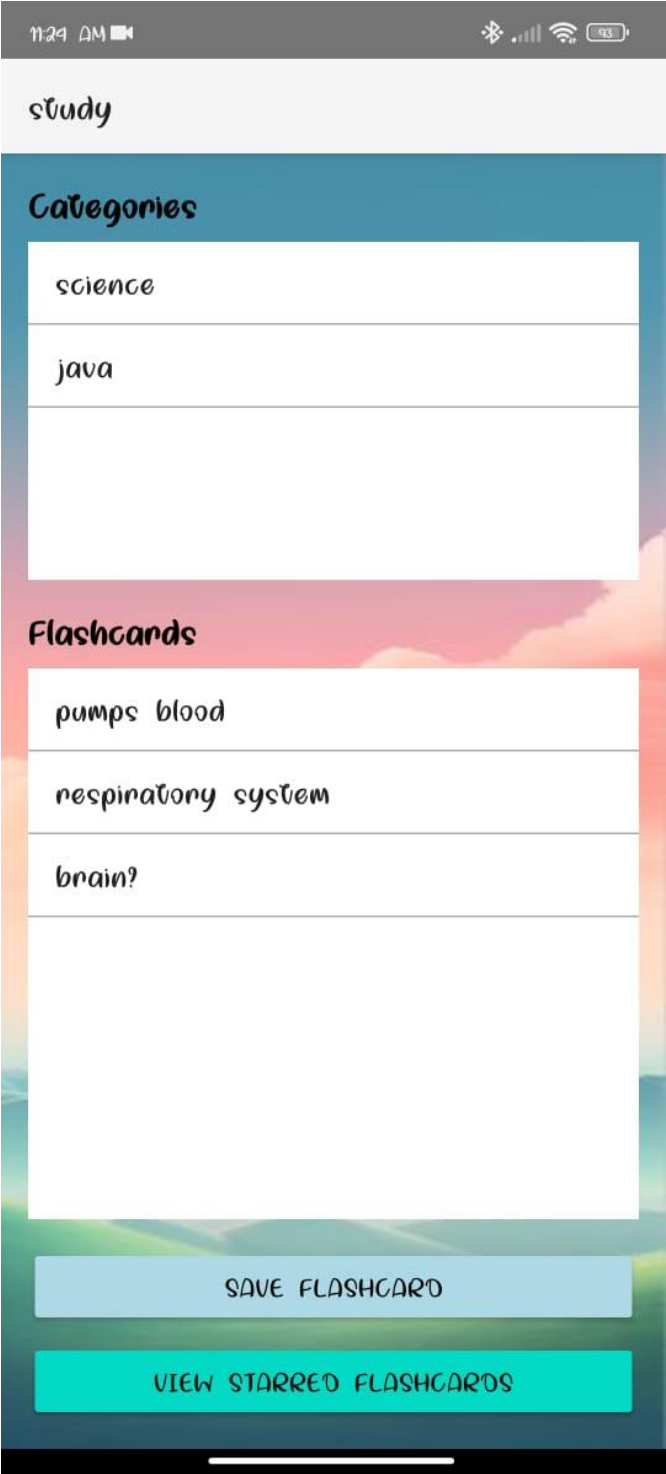## *Login page of the Study App*

Animation for loading!!!

11:29 AM

study

Welcome to StudyApp!

CREATE NEW FLASHCARD

VIEW FLASHCARDS

STARRED FLASHCARDS

Categories: 2
Flashcards: 5

Viewing the Flashcards!!!

study

Categories

science

java

Flashcards

heart?

lungs?

brain?

SAVE FLASHCARD

VIEW STARRED FLASHCARDS

Click on question to see the answers!!!

study

Categories

science

java

Flashcards

pumps blood

respiratory system

brain?

SAVE FLASHCARD

VIEW STARRED FLASHCARDS

Creating the Flashcards!!!
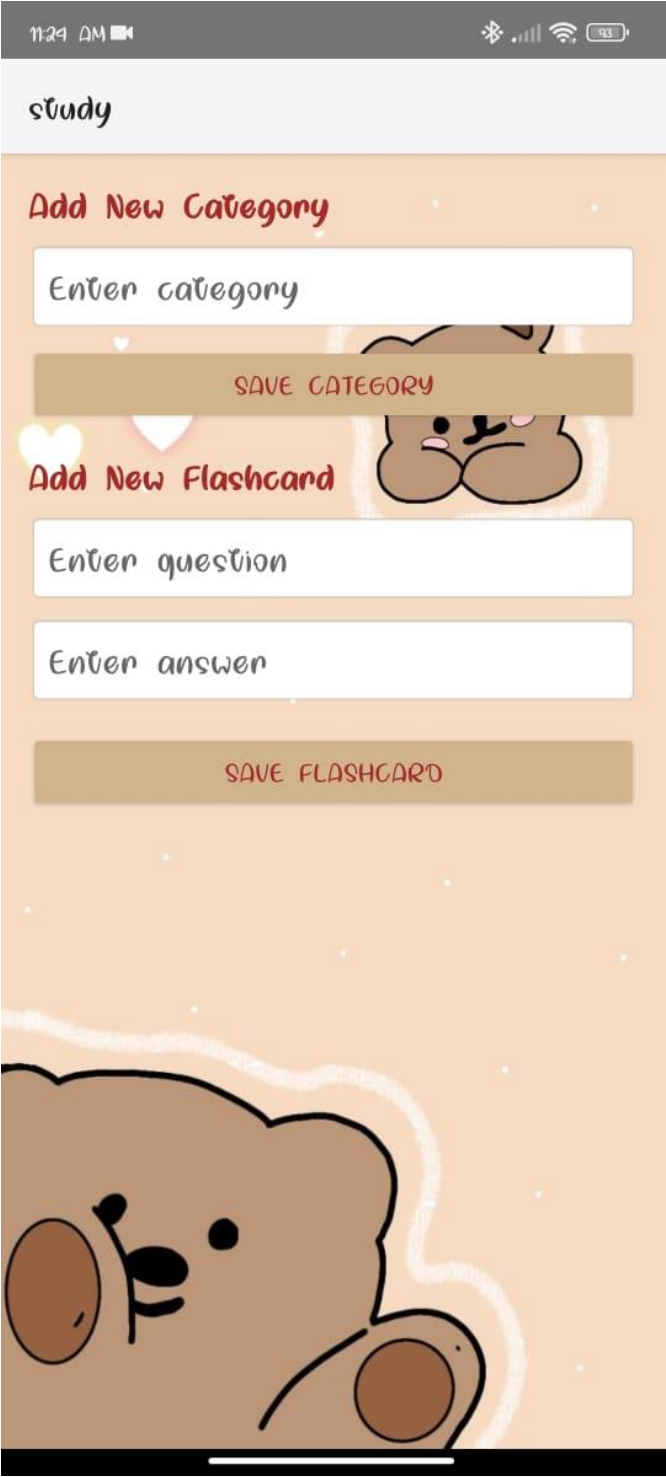
Long Press on the Flashcards to delete!!!

study	**study**
Categories	**Categories**
science	science
java	java
compiler	
Flashcards	**Flashcards**
what is a compiler?	
SAVE FLASHCARD	SAVE FLASHCARD
VIEW STARRED FLASHCARDS	VIEW STARRED FLASHCARDS
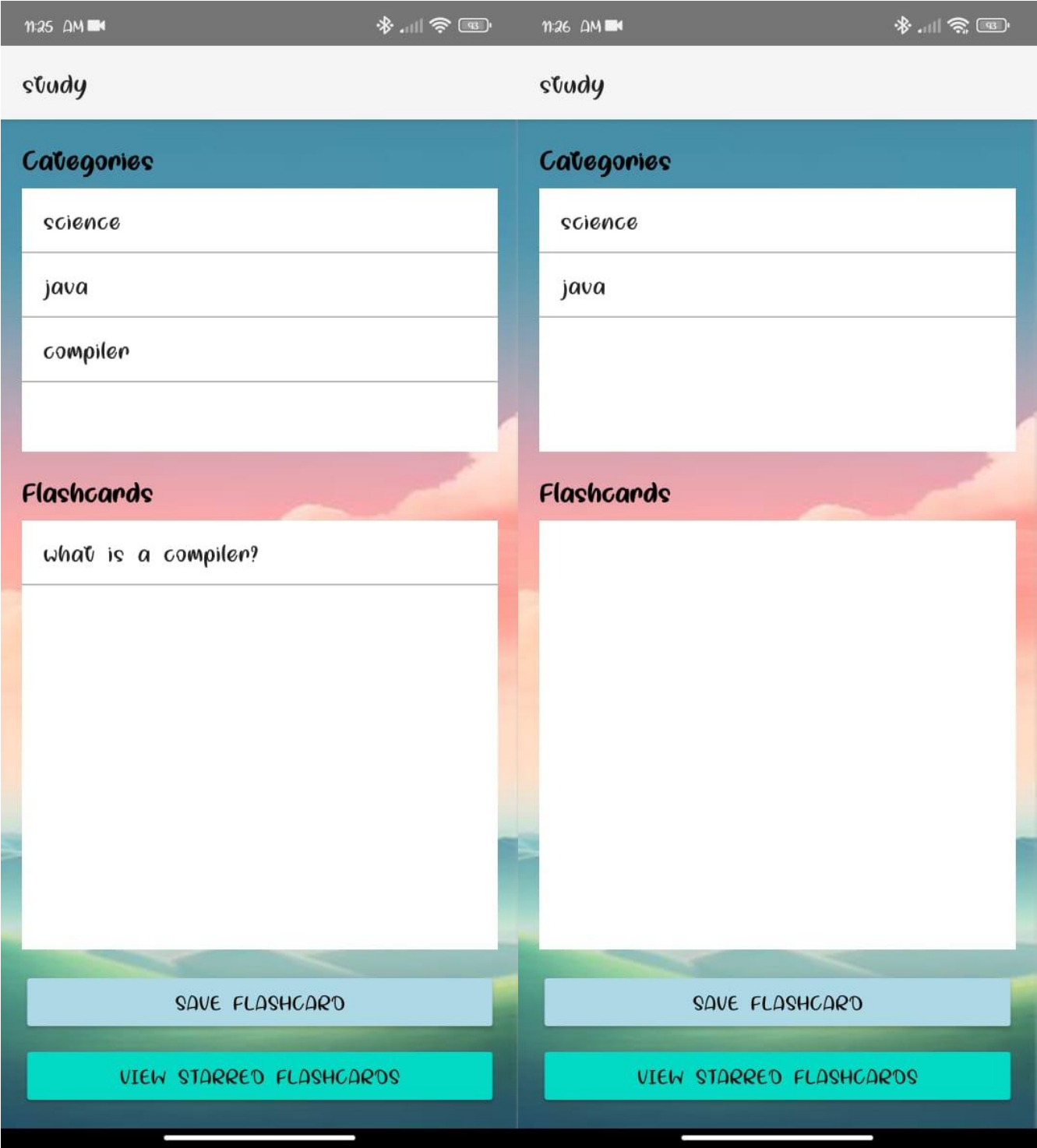
To Star Flashcards & To view starred Flashcards!!!

Item 1 Sub Item 1	Sample Question
Item 2 Sub Item 2	
Item 3 Sub Item 3	
Item 4 Sub Item 4	
Item 5 Sub Item 5	
Item 6 Sub Item 6	
Item 7 Sub Item 7	
Item 8 Sub Item 8	
Item 9 Sub Item 9	
Item 10 Sub Item 10	
Item 11 Sub Item 11	

Item 1 Sub Item 1	Sample Question
Item 2 Sub Item 2	
Item 3 Sub Item 3	

SMS Notification for Flashcard creation and deletions!!!
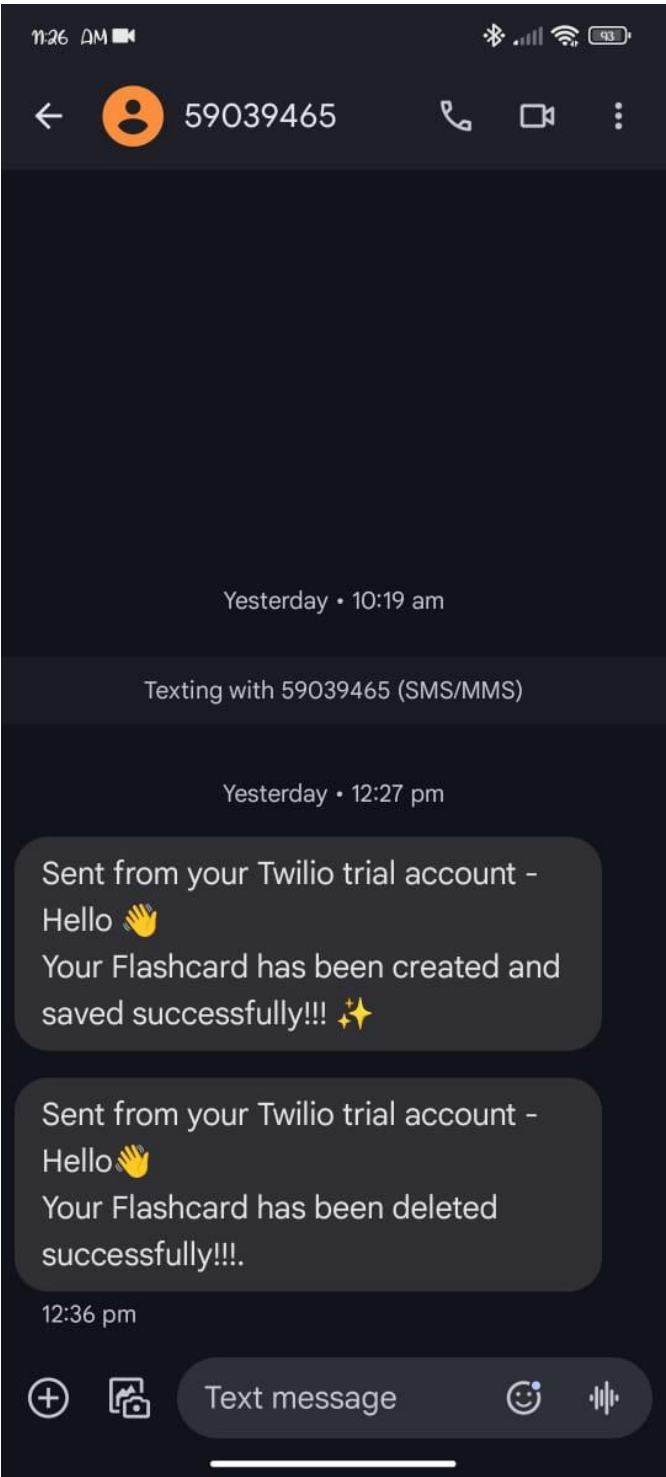
Conclusion and Future Scope

The Flashcard Study App successfully provides an efficient and user-friendly solution for organizing study materials. Future enhancements could include:

- Cloud synchronization to enable cross-device access.
- Multimedia flashcards with images and audio.
- Custom notification settings for more personalized reminders.