College of engineering and computers
Department of computer science
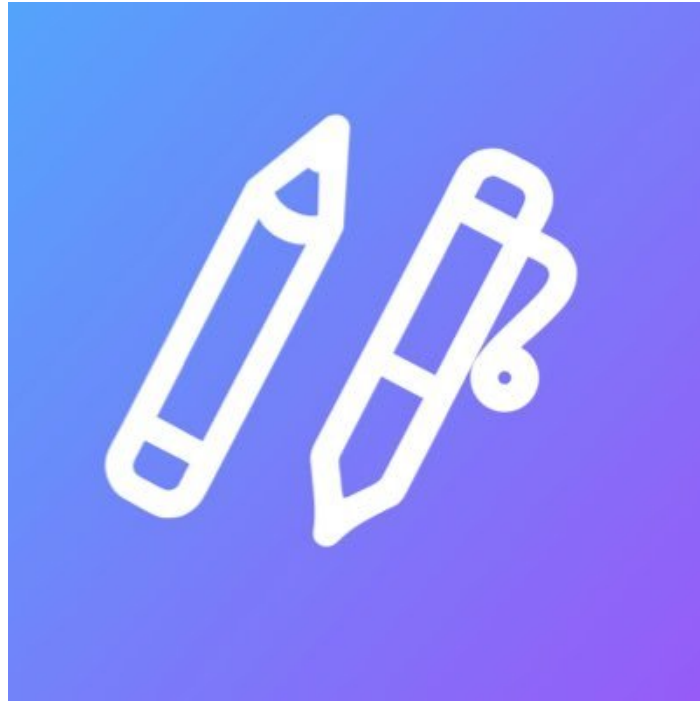

Figure 1: Enter Caption

Application: CollaNote

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NAME	IDstudent	TASK
Renad drweesh	444005701	Chapter 1: Similar Programs - Application Comparison with Other Programs Chapter 2: Introduction and Conclusion Chapter 3: Folder Selections Interface in CollaNote - Data Model-GitHub
Aryam Al-Nashiri	44411982	Chapter 1: Introduction - Objective Chapter 2: Requirements - General Survey Chapter 3: Introduction - Interface - Interface Breakdown – Conclusion-LaTeX

1 Abstract

The file discusses the development of the CollaNote app, which aims to provide a comprehensive environment for note-taking and organizing in a seamless and user-friendly way. The document covers various aspects including an introduction to educational applications, the app's objectives, and an analysis of its requirements and design. Chapter One: Introduction:This chapter addresses the importance of educational apps in the digital age and their use by various age groups and educational levels. CollaNote is designed to support multiple note-taking methods such as handwriting with Apple Pencil, voice recording, and importing and editing PDF files.App Comparison: Evernote: Supports note organization but has limitations in its free version. Notability: Offers voice recording while taking notes, but may be complex for some users. Zoho Notebook: A free and powerful app, but some advanced features can be difficult to use for some users.Chapter Two: Requirements Analysis This chapter discusses the functional requirements of CollaNote, such as handwriting support and PDF editing, along with synchronized audio recording. It also covers non-functional requirements like high performance, ease of use, privacy, and compatibility with iOS and Mac devices.Chapter Three: Design The design chapter explains the user interface, including the top toolbar and categorization icons. It also covers the "Public Room" interface that supports user collaboration. Additionally, it highlights the data model for organizing users, attachments, and notes.

chapter 1

Introduction

1 Introduction

Educational applications on mobile phones have become an essential tool in the modern digital age, providing a convenient and flexible way to lear anytime and anywhere. These applications cover a wide range of educational subjects, from languages to mathematics and science, and promote interactive and self-directed learning One of the most significant advantages of educational mobile applications is their provision of diverse educational content suitable for all ages and educational levels. Additionally, these applications employ technologies such as virtual and augmented reality to make learning more interactive and enjoyable. With the increasing use ofmobile phones in all aspects of life, educational mobile applications offer a convenient and effective way to learn, making them an indispensable tool for both students and teachers alike

1.1 Purpose

Collate is a versatile note-taking app designed to simplify note-taking and organization. It offers a comprehensive digital space for all your note-taking needs, whether you are a student, a professional, or simply someone who enjoys jotting down ideas. Its primary goal is to provide a powerful and all-in-one solution for note-taking and idea organization, with features that make it easy to interact with notes, draw, and annotate files.

1.2 Ressarching Existing Programs

Learning applications have become a powerful tool in modern education, offering a wide range of solutions that facilitate access to knowledge and skill development across various fields. With the widespread use of technology and smartphones, these applications have become a flexible and interactive means of learning, whether it is academic, professional, or personal.

Applications	Advantages	Disadvantages
Evernote	Allows you to organize notes into scrapbooks,	The free version is limited in terms of the number of devices and features, so you may need to subscribe to the paid version to access additional features.
Notability	t provides the ability to record audio while taking notes, a useful feature for students in lectures or meetings.	Although it supports handwriting, searching through handwritten text is not always as accurate as with regular typed text.
Zoho Noteboo	The app offers powerful features at no cost, making it an attractive option for users.	Some users may find certain features a bit advanced or complicated to use.
Apple Note	Free and Pre-installed Comes with all Apple devices without the need to download or purchase	Limited Organization Organizational options aren't as robust as folders or advanced tags available in other apps

Table 1: Comparison Table

1.3 Comparison of CollaNote with Existing Programs:

- User-friendly interface: The app features an intuitive user interface that makes it easy to use even for beginners, without the need for prior experience with advanced note-taking applications.

- Audio Notes Support: The app allows you to record audio while taking notes, which is a very useful feature for students who want to record lectures and listen to them later along with their notes.

- PDF Comment Support: The app lets you import and comment on PDF files, making it a great tool for reviewing, taking notes on e-books, or editing academic documents.

- Flexible handwriting and drawing: CollaNote supports handwriting and drawing well, which is ideal if you prefer writing with a stylus like an Apple Pencil. You can easily add illustrations or take notes in your own handwriting. In short, if you are looking for a comprehensive, free app to support your note-taking and collaboration needs, CollaNote might be a good option for you.

1.4 Conclusion

collaNote is an excellent choice for note-taking due to its unique blend of advanced features and flexibility, all offered for free. Whether you were a student, a professional, or someone who wants to organize their thoughts in creative and flexible ways, CollaNote provides the tools you need. With its support for handwritten notes, PDF annotation,

real-time collaboration, and voice note recording, the app proves to be a strong competitor to well-known paid apps. If you're looking for an app that balances simplicity and functionality, collaNote is worth trying.

chapter 2

ANALYSIS

1   INTRODUCTION

CollaNote is a note-taking tool that offers a comprehensive experience, combining handwriting support, document importing, and synchronized audio recording, making it suitable for students and professionals. The app relies on functional requirements such as handwriting support, PDF editing, and real-time collaboration. Additionally, non-functional requirements include smooth performance, scalability, and security to ensure a high-quality user experience.

1.1   Functional Requirements

- Handwriting Support Supports writing with the Apple Pencil, offering more than 25 types of pens and brushes, along with a handwriting stabilizer for smoother and more accurate writing

- PDF Import and Editing Allows users to import, annotate, and edit PDF files, with options to export the annotated files. It also supports importing *PPT* and *DOC* files

- Synchronized Audio Recording Users can record audio while taking notes, with real-time synchronization between the audio and the handwritten notes, making reviewing easier

- Real-time Collaboration The app supports real-time collaboration, allowing unlimited participants to work together through a "Public Room" feature

- Note Organization The app provides password protection to insure the security and privacy of sensitive notes

- Security and Privacy The app provides password protection to insure the security and privacy of sensitive notes

1.2   Non-Functional Requirements

- Performance The app must operate smoothly without delays in responsiveness while writing or taking notes with the Apple Pencil, with low latency to ensure a natural, paper-like writing experience It must handle large files (such as PDFs) efficiently without the file size negatively impacting the app's performance

- Usability The app should be user-friendly, with a simple and intuitive user interface that allows users to easily access various features, including seamless navigation between notes and notebooks It should provide extensive customization options for users, such as modifying writing tools, background colors, and page designs

- Scalability The app should support the storage of an unlimited number of notes and documents without affecting its performance or loading speed

- Compatibility The app must be compatible with the latest versions of iOS and iPadOS, as well as support for Mac devices with Apple M1 chips or newer It should work seamlessly with various generations of the Apple Pencil to ensure excellent responsiveness for handwriting

- Security The app should provide robust security features such as encryption and password protection to ensure users' privacy and protect sensitive information

- Accessibility The app should support accessibility features for users with special needs, including voice command support or the ability to adjust text size and color contrast for improved readability

1.3 CONCLUSIONIN

conclusion, CollaNote relies on functional requirements such as handwriting support, document editing, and real-time collaboration, making it an effective note-taking tool. Additionally, non-functional requirements like smooth performance, security, and scalability ensure a comprehensive user experience that efficiently meets users' needs.

chapter 2

Design

1 Introduction

It is a versatile application designed to make taking notes and organizing your thoughts easy. This application allows you to write notes by hand, take audio notes, highlight important parts in PDF files, and collaborate with others on the same notes.
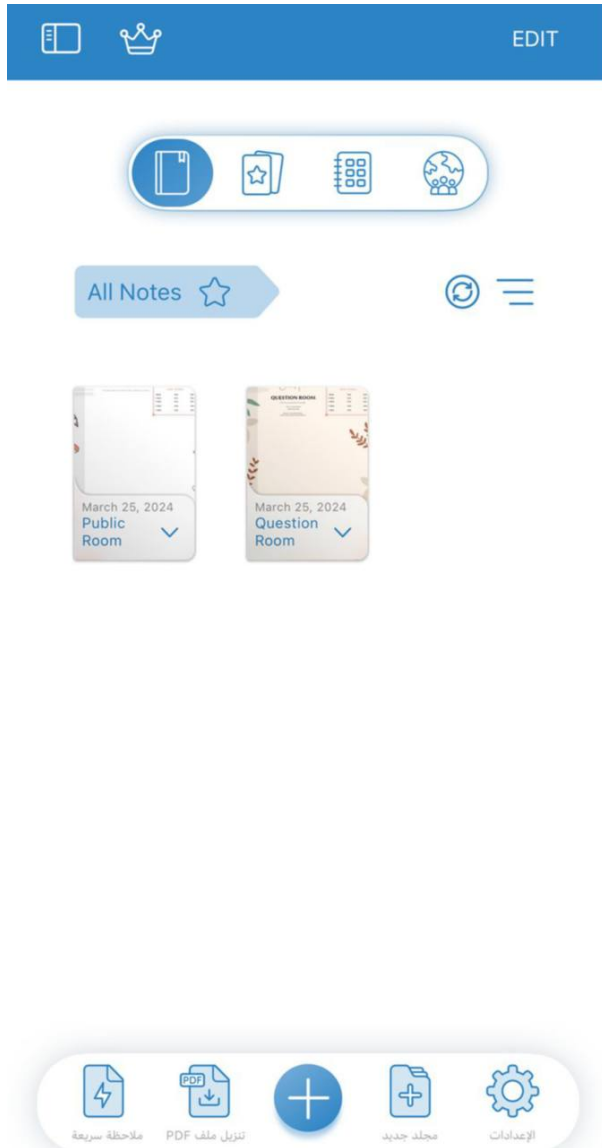
1.1 Interfaces

Figure 2:

1.2 Interface Breakdown:

This interface contains several categories:

1.3 Top Toolbar:

Contains navigation icons for moving between files. The crown icon indicates premium features that are available upon payment. The edit button allows users to modify existing files.

1.4 Center Navigation Bar:

Contains a set of icons used to categorize and organize notes based on their type. Book icon: Displays all notes. Star icon: Displays your favorite notes. Additional

icons within the "All Notes" button display all available and favorite notes. Bottom Toolbar:

1.5   Contains various icons:

Quick Note: For creating a quick note. Download PDF for downloading notes in PDF format. "+" Button in the center for adding a new note or folder. Settings: For adjusting application and user settings.
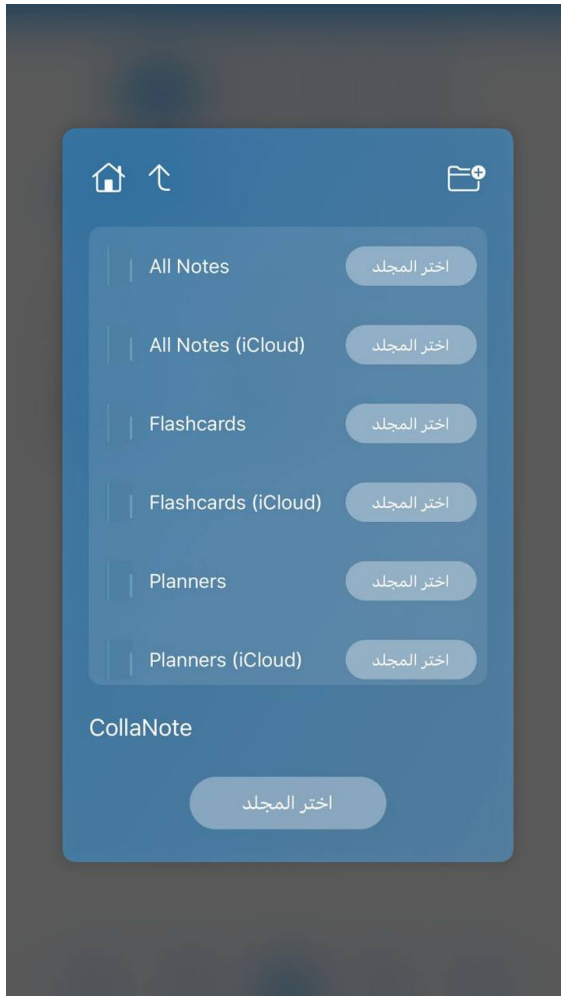
1.6 Folder Selection Interface in collaNote

This interface within the collaNote app allows users to select a specific folder for organizing their notes.

1.7 Top Toolbar:

Back arrow: Used to navigate back to the previous screen. Folder icon with a plus sign: Enables users to create a new folder. Folder List: All Notes (iCloud): This folder contains all notes stored in iCloud. Flashcards (iCloud): Specifically designed for storing flashcards for educational purposes. Planners (iCloud) are used for saving work-related plans or study schedules
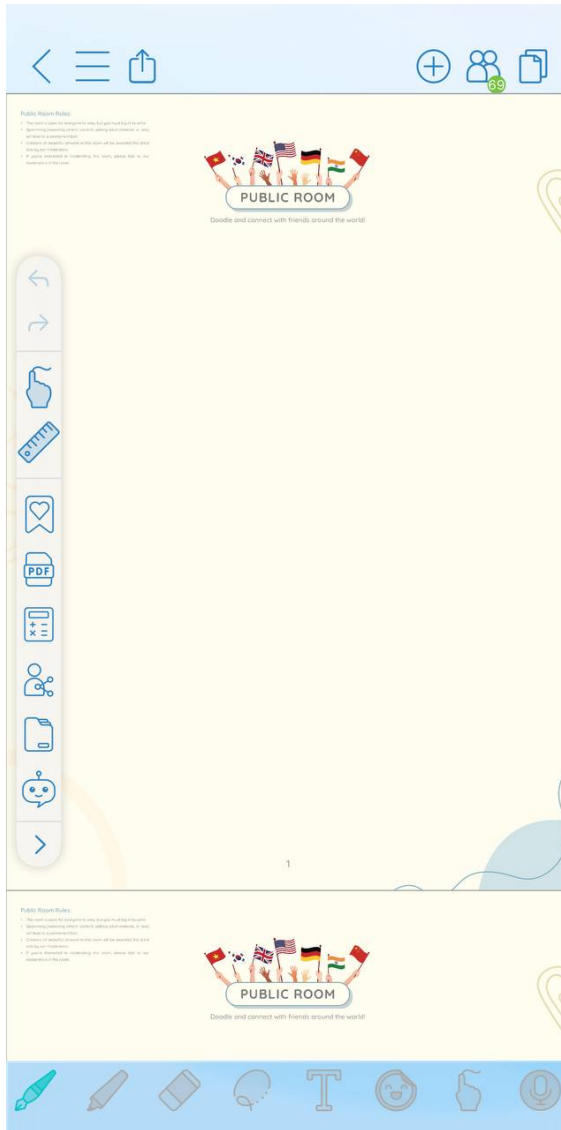
1.8 Public Room

This interface is the "Public Room" interface, designed as a collaborative space where users can interact through note-taking, drawing, and comments.

1.9 Side Toolbar

- Hand Icon: Used for interaction or selecting items on the screen. - Ruler Icon: For measuring or drawing precise lines on notes. - Favorite Icon: Allows adding notes or drawings to favorites. - PDF Icon: Converts notes or drawings into a PDF file. - Calculator Icon: Provides a tool for calculating equations within the app. - Share Icon (connected users): Used to share notes or see the users interacting in the room. - Folder Icon: May allow access to stored folders or files.

1.10 Bottom Toolbar

Pen Tool: For freehand drawing or writing. - Eraser Tool: to erase mistakes or unwanted edits. - Shape Tool: Used for drawing predefined geometric shapes. - Text Tool ("T"): Adds written text within the note. - Emoji Icon to add emojis or fun elements. -Pointer Tool: To highlight specific parts of the note or important points.

2 Data Model

The data model in the CollaNote application is one of the key foundations for organizing and managing the data entered by users. The model defines how information is stored and how it interacts within the application.

2.1 USER

USERName	lDNumber	Email	Password
Aryam	3374	Aryam3@gmail .com	AS23GH76
Renad	3367	Rena12e@gmai l.com	renad2004
remas	3378	Rimasqw@gma il.com	$Rim09_a$
Nada	9983	Nadb32@gmail .com	sqlk992

2.2 Password

Contains the passwords of the users, which must consist of a diverse combination of numbers, uppercase, and lowercase letters.

2.3 Email

Displays the email address of each user, which serves as the primary means of communication or registration in CollaNote

2.4 IDNumber

Contains the ID number of each user, a unique number that identifies each user in the system

2.5 USERName

Displays the username chosen by the user during registration Each user has their own set of data consisting of these columns, and this data is used for authentication and login purposes in the system

3   Attachments

File name	File number	File format	File type
Ass1	0110	pdf	image
Ass1	0010	Word	text
Ass1	1110	pdf	video

the table contains a table showing the details of attachments in CollaNote. The table includes the following columns:

3.1   File name:

Displays the name of each attached file. For example, Ass1, Ass2, and Ass3.

3.2   File number:

Contains unique numbers for each file, which are numerical codes that uniquely identify the file.

3.3   File format:

Shows the format type of each file, such as PDF or Word.

3.4   File type:

Indicates the type of content in the file, such as image, text, or video.The table helps track the attached files with information such as names, formats, and types to facilitate file management in CollaNote.

4   Note

Note name	Note title
OS lect1	Process Communication
OS lect2	Deadlocks
OS lect3	CPU Scheduling

The displayed table is a simple one that includes notes about lectures related to the operating System It consists of two columns:

4.1   Note name:

Shows the names of the lectures or notes related to specific topics in the Operating System. In this example:

- OS lect1
- OS lect2
- OS lect3

4.2   Note title:

Displays the main topics or subjects covered in each note. In this example:

- OS lect1 discusses "Process Communication."
- OS lect2 discusses "Deadlocks."
- OS lect3 discusses "CPU Scheduling."

Thus, the table helps organize various notes or lectures related to different Operating System topics.

5   CONCLUSION

Data models and user interfaces play a vital role in the success of the CollaNote application. By designing the data models accurately, the application can effectively organize and store information, allowing for quick and easy access when needed. The interfaces play an important role in providing a simple and attractive user experience to facilitate interaction with the data, whether when creating, editing, or sharing notes with the team. CollaNote serves as an outstanding example of how educational apps on smartphones have evolved, offering effective solutions for note organization. By examining the app's core components, including data models and user interfaces, it becomes clear that CollaNote has been meticulously designed to cater to a diverse range of users, such as students and professionals who rely on note-taking as a part of their daily lives. One of CollaNote's distinguishing features is its support for multiple note-taking systems, including handwriting with an Apple Pencil, simultaneous audio recording with writing, and importing and editing PDFs. These features make CollaNote an excellent choice for students who need to record lectures and for professionals seeking advanced ways to organize thoughts and documents. In terms of performance and functional requirements, the app has focused on optimizing the experience of writing smoothly with Apple Pencil and supporting large-sized files such as PDFs without compromising overall app performance. Ultimately, CollaNote should always be your first choice. article

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