

# **SHIKOR AN ANDROID BASE MOBILE APPLICATION**

**BY**

**MD.JAHIDUL ISLAM**

**ID: 201-15-14033**

This Report Presented in Partial Fulfilment of the Requirements for the Degree of  
Bachelor of Science in Computer Science and Engineering.

Supervised By

**Fahad Faisal**

**Assistant Professor**

Department of CSE

Daffodil International University

Co-supervised By

**Johora Akter Polin**

Lecturer

Department of CSE

Daffodil International University



**DAFFODIL INTERNATIONAL UNIVERSITY**


**DHAKA, BANGLADESH**

**January 2023**


## **APPROVAL**

This Project titled “ **Shikor An Android Base Mobile Application** ”, submitted by MD.Jahidul Islam, ID No: 201-15-14033, to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 5th December 2021.


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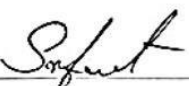
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**Md. Safaet Hossain**  
**Associate Professor & Head**  
Department of Computer Science and Engineering  
City University

**External Examiner**

## DECLARATION

We hereby declare that this project has been done by us under the supervision of Mr.Fahad Faisal, Assistant Professor, Department of CSE in Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

### Supervised By



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**Mr. Fahad Faisal**  
Assistant Professor  
Department of Computer Science and Engineering  
Daffodil International University

### Co-Supervised by:



---

**Ms. Johora Akter Polin**  
Lecturer  
Department of CSE  
Daffodil International University

### Submitted by:



---

**Md. Jahidul Islam**  
ID: 201-15-14033  
Department of Computer Science and Engineering  
Daffodil International University

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## **ABSTRACT**

We utilize applications every day for our daily lives. The best apps for making life easier are created by developers. I created the Android and iOS 2 operating system-compatible Shikhar apps on the Flutter platform. Mobile applications are playing an increasingly important role in our daily lives. The importance of mobile technologies has increased recently. Developers strive to create the greatest application possible that simplifies lives. Various kinds of application stores offer a wide variety of mobile applications. These apps allow us to learn every detail regarding coaching. The student may access all of their information, learn when to arrive for class, and the admin can examine the apps from here. With their email and password, the student can sign in. After login student can see the apps home page. This app offers the student a wide range of alternatives. The free video tutorial class is the first choice. General knowledge is the second choice. The first choice is to provide a link to a free video class for students. With the help of these applications, I can let students know what books they should read and buy, as well as how to prepare for exams and achieve excellent grades, as well as who among the previous batch of students is doing well in their classes and how to improve one's own situation.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

In general, I've been working on developing this app for a while. I started developing this app from a half-baked concept. Here, a teaching scenario, a user login, an admin, and several teachers will all be accessible through this app. Our app is currently in high demand due to the Corona crisis, therefore I'm developing a concept on top of it so that kids may use a variety of amenities from this location. To graduate, a final-year undergraduate must do scholarly research. Students run across issues with research registration right away. Finding a supervisor and choosing a topic are two things that most students struggle with. A student is typically unaware of the faculties that are available, their research interests, and the people who might be a suitable fit. Different faculties have interests in various fields of research. Students must approach professors one-on-one to learn about their areas of interest in research, their availability, or any other information, which takes time because professors are unable to respond to every student right away. This type of research-related information management system is not yet available at Daffodil International University.

### 1.2 Motivation

We largely received our motivation for this from a start-up company. I started my voyage during the height of the pandemic. I observed Student being impatient and bored as a result of spending a significant amount of time at home because to the Covid-19 epidemic. Students were frantic to experience something fresh. Students frequently forget their documents, but these applications can assist. Students can use these applications to learn how to study, which books to buy, how to read the class schedule when they log in, what subjects are offered in this coaching, how to study, and which books to use. They are aware of and can see these using applications.

## 1.2 Objectives

The primary goal of this project is to make it simple for students and administrators to understand the student's next plan, which is our major aim or objective.

1. Offering service details

2. video lesson class

Live Zoom 3. Class \s4.MCQ

5. Be aware of new book prices and retailers

(a) Easily organize a research team with other students.

(b) Check to see if there are any available supervisors; (c) Review the faculty's standards for research and their area of interest; and (d) Determine whether they satisfy their supervisor's requirements.

## 1.3 Expected Outcome

Users of this program can find their entire education plan. I am supporting our endeavor because it will be our future business startup and it will focus on our undergrad last. Additionally, I chose it primarily because of its enormous commercial value and learning potential, which fully supports this approach. If I can do my best by the grace of God, I hope to obtain these results prior to the deadline for our projected submission:

- The user interface will be friendly.
- System for selecting Smart Books.
- This app admin is simple to manage.
- This program makes it easy to create a video class for students on recoding.
- The Android application needs to function flawlessly and be bug-free.

## 1.5 Report Layout

Here on this project. I am trying to explain my full project report in five (5) layouts. For better understanding have discussed the full project in five layouts with clarity. Given below -:

**First Layout:** the first layout is about the introduction to a project, the motivation for the project, the object this project expected comeouts.in this layout I was trying to explain the overview of my application. I already explain the motivation behind the application.

**Second Layout:** I will explain the background of my project. How I get ideas for my project and what challenges I have faced when trying to implement them. I also explain related work for my application and comparative analysis for this application.

**Third Layout:** I have explained in this layout in detail the business processing model, requirements collection and analysis, use case modeling. logical data modeling, and design requirements.

**Fourth Layout:** I have explained in this layout in detail about the front-end design, backend design, interaction with the system, and user and implementation requirements.

**Fifth Layout:** The explained in this layout in detail about the implementation of the database, and testing implementations, and also give testing results and reports of my application.

**Six Layout:** I have a firebase, and I used some data from it in this app. There are many settings in this app, so I could use it for class tutorials when I needed it and quickly access fire base data. Users of this program can find their entire education plan. I am supporting our endeavor because it will be our future business startup and it will focus on our undergrad last. Additionally, I chose it primarily because of its enormous commercial value and learning potential, which fully supports this approach. In the unlikely event that I can do my best by God's grace, I anticipate that these results will be attained earlier than expected.

## CHAPTER 2

### Background Study

#### 2.1 Introduction

The number of daily education apps is growing. The importance of education apps in students' daily lives is increasing. Every day, many students use it. This program is necessary for solving educational puzzles. Nowadays, most students use smartphones, which makes instruction easier. They can learn about their upcoming tasks today at home thanks to their cellphones and these apps.

#### 2.1 Related Works

##### A.Shikhor

This program is uncomplicated. It's a similar service to how students receive books with the price listed in them. and the registration fee at one location. It displays many forms of category spending data on a graph. Users provided this application with feedback. It has been noted that the majority of people these days use Android-powered mobile, smartphone, and tablet devices. The Android operating system, which is currently being developed by Google, has grown to be one of the most widely used operating systems based on the Linux kernel.

##### Related Image:

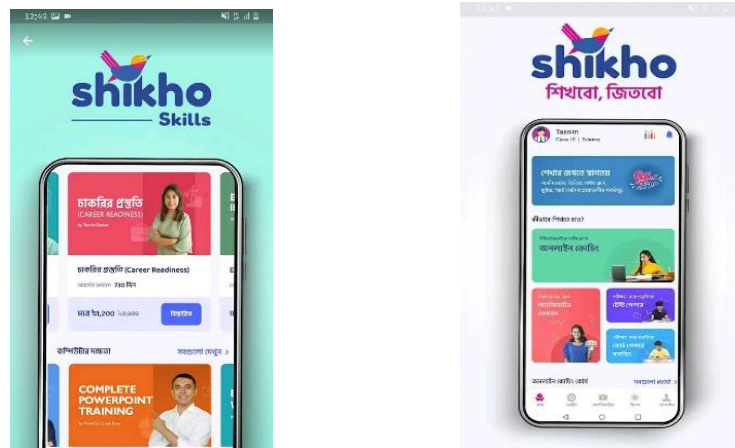


Figure 2.1: Shikho

## B.10 Minute School

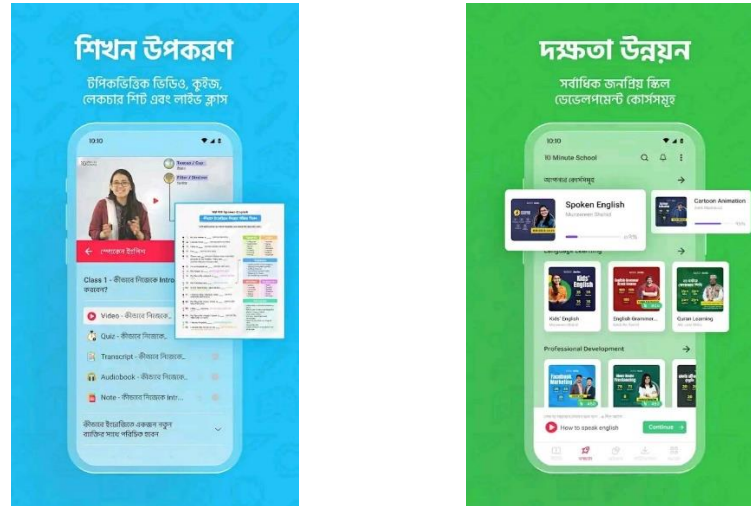


Figure 2.2: 10 Minute School

## 2.3 Comparative Studies

I discovered a few programs in various app shops that were focused on educational offerings. For various levels of education, these applications offer various services. Recommendations for education are provided by another application. These programs offer various places' prices for education services. However, those programs can offer reliable information regarding the educational services offered in Bangladesh. These programs have limits when it comes to giving users in Bangladesh reliable service information. Users can set a paper reminder if necessary and will receive notifications related to the education service.

## 2.4 Scope of the Problem

This is an application for school. I encountered a number of issues while submitting this application, and they are listed below.

Large size: In order to give the application a pleasant and cool design, some image files and animation have been added, which has increased the application's size. another factor contributing the characteristics of the program that are useless to its progress. Older smartphone models may

or may not be able to run the program due to the increase in size in many cases. To save photos and animation files, I changed superfluous features and used backend storage. It aids me in minimizing application size Time management: It takes too long for the application to load. Finding a mechanic might frequently take a long time. because the Firebase is where the information about education is sourced.

## **2.5 Challenges**

The building of mobile apps with Flutter is substantially more difficult. starting out. Overall, the construction of the entire project was quite difficult. Because I had very little job knowledge and experience, I was having a lot of issues. This app needs to be built gradually by picking up new skills. I spent a lot of time creating the student interface because it's crucial to create an app. Account authentication for app users. Many businesses are now seeing the value of having a well-developed app. The need for mobile app development services and mobile application development companies is growing as a result. Numerous smartphone app development companies promise to provide excellent services after recognizing this demand. However, Pendentive, a renowned US mobile app development business, provides extremely powerful apps at reasonable prices. Mobile app development, like any software development activities, is not without its problems and difficulties. In light of this, it is crucial for developers to understand what works and what doesn't in the expanding ecosystem of applications. This blog will assist you in comprehending the main difficulties and obstacles experienced by developers.

# CHAPTER 3

## Requirement Specification

### 3.1 Business Process Model

Business process modeling, often known as BMP, is a contemporary concept and approach that offers management an easy way to comprehend and maximize the effectiveness of connected operations in the provision of a good or service.

BPM Diagram is shown below.

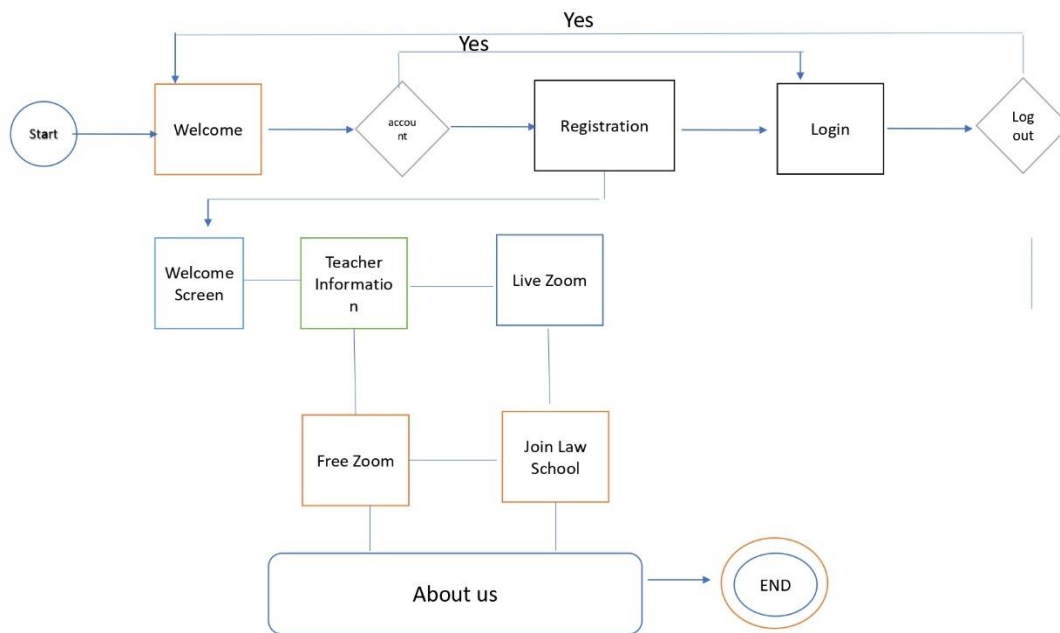


figure 3.1 Business Process model for Shikhar Apps

Student's

1. signup & login
2. Student can Bye book
3. view home page
4. Get Data
5. View Student info

Teacher's

1. signup & login
2. create Account



3. view students' proposals
4. Delete data
5. Bye book

### 3.2 Requirements Gathering and Analysis

I spent a lot of time researching and analyzing the Education Shikhar apps. Similar applications must be examined to determine what services they can and cannot offer. The successful development of this application was made possible by extensive research and information about the services users require and how they like to obtain them. The numerous elements needed to create a mobile application are listed below:

- You must download this mobile application from the app store in order to use it.
- To download the application and use all of its functions, an Internet connection is necessary.
- Because this application isn't very big, it doesn't require a lot of internal space.

### 3.4 Logical Data Model

These applications logical data model is given below:

Registration/Login
Firs name
Last name
Email
Password

Request
Service
Price
Page
Zoom

### 3.5 Design Requirements

A significant portion of an application is its design requirements. No one wants to use an application if the design is not effective and user-friendly. This program has been made to be user-friendly. There are no intricate characteristics retained here. The user will have no trouble figuring out which buttons to hit to advance to the next phase.

#### **. User design requirement:**

- Able to register.
- Able to log in.
- Able to select services
- Exit application.
- Able to contact users

Both administrators and students can log in. If an app asks for personal information up front without any sort of immediate reward, this user will uninstall it (ordering a car service or food delivery, for example). Applications that ask users to register at the beginning of the encounter, or those whose value proposition is ambiguous, in particular have a greater challenge. If a user's registration is required, only ask for it. Offering guest checkout at the point of conversion is one frequent method this notion is put into practice. When attempting to register for an account by hitting the "sign in" button, which subsequently asks them for a password, many users end up taking the incorrect action.

## CHAPTER 4

### Design Specification

#### 4.1 Font -End Design

Font and end design I use dart language. I design this application through flutter, I give some picture of my apps:

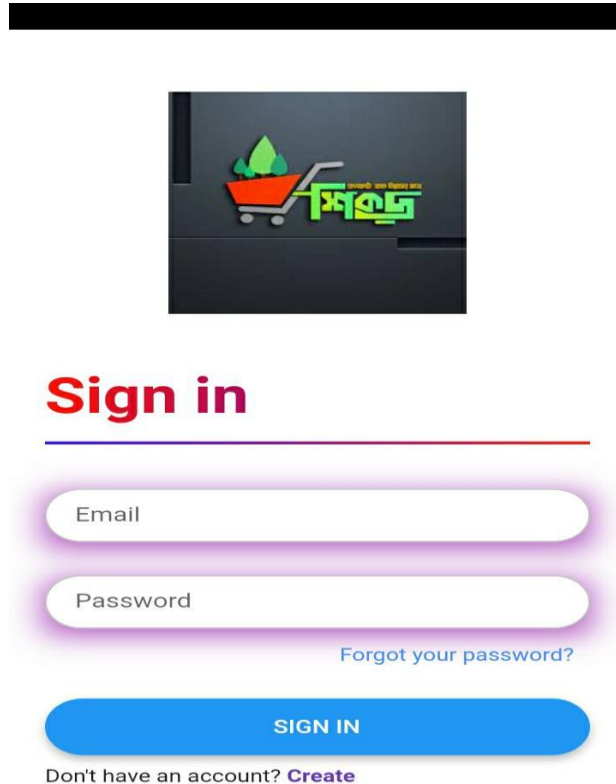


Figure 4.1: Font Design

This screen is the opening screen. Here below two options are available one is for admin and the other is for sysadmin and student can be login this app with this email and password, after login he will get request screen an open app. admin and user get wrong password did not open this apps.

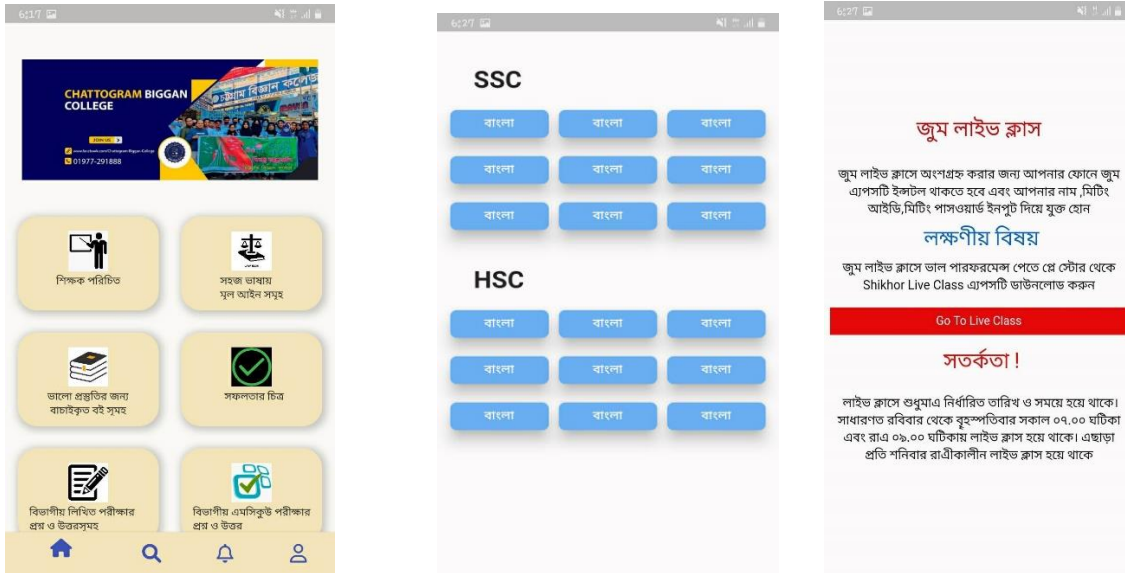


Figure 4.2: Font Design

The subject screen and The live screen After entering in with their valid email address and password, the user will access the selected screen and view this apps page. They can choose from two book lists in the first screen. When they select Papers, they will be taken to the Live screen. They can also choose the document's registration and expiration dates. The user navigates to a different page if he clicks on the other container.

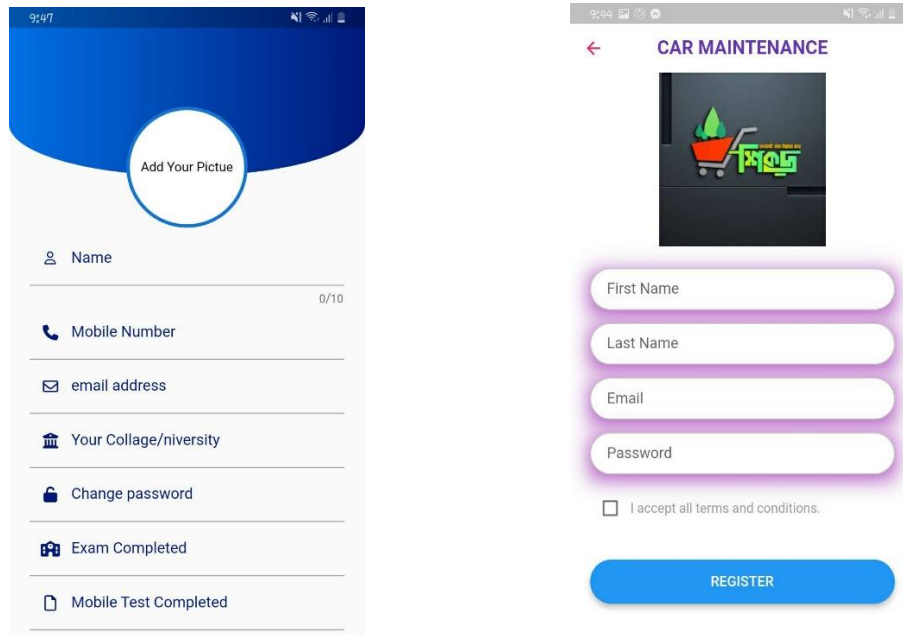


Figure 4.3: Font Design

## 4.2 Back – end Design

For the back-end design of this application, I'm utilizing Firebase. Since Fire Base is a real-time data base, any modification to an application will directly affect it. There is no need to update the application for change. In order to design the back end, I'm utilizing Firebase. We'll need to use Firebase's Admin SDK to enable authenticated users to access the database. We will be able to access an API through this framework in order to validate authenticated users and pass requests to our database. We'll use Firebase's Realtime feature to save user data.

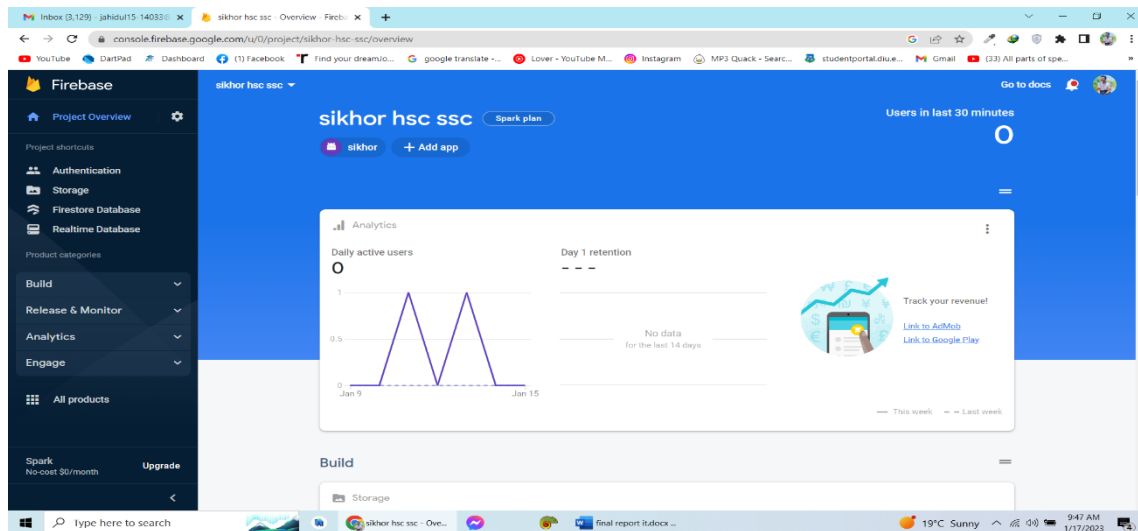


Figure 4.4 Firebase

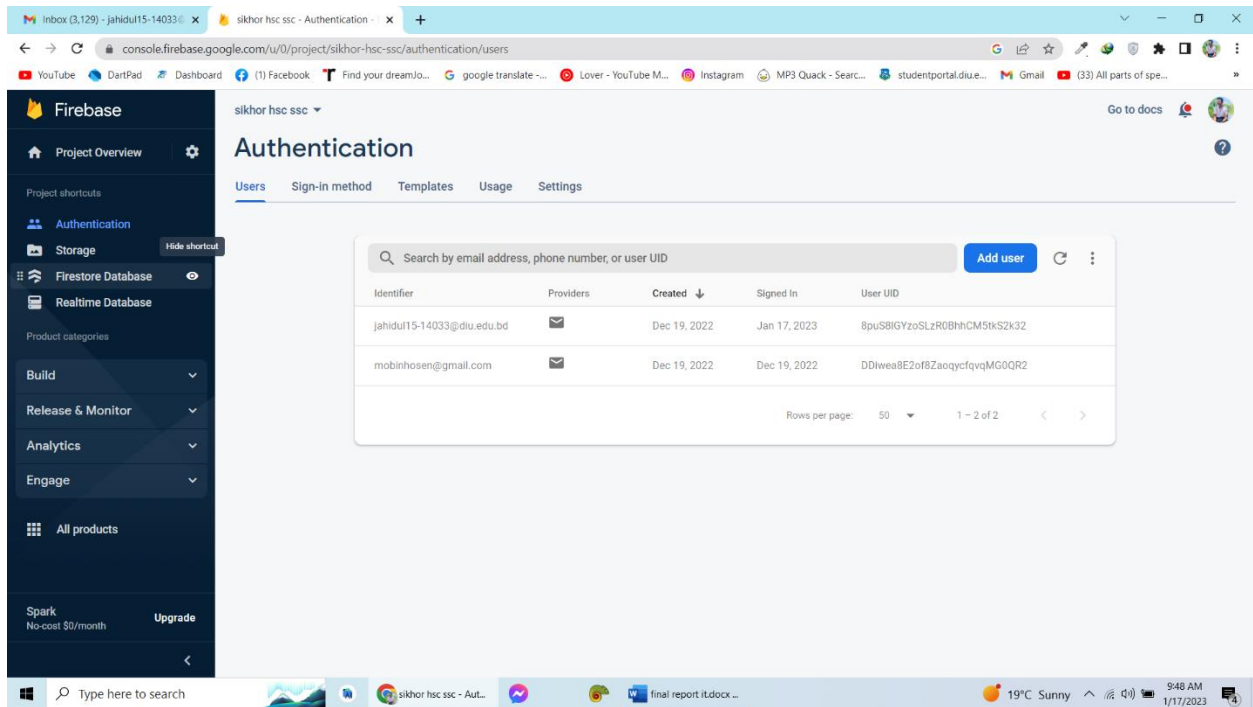


Figure 4.5 Firebase

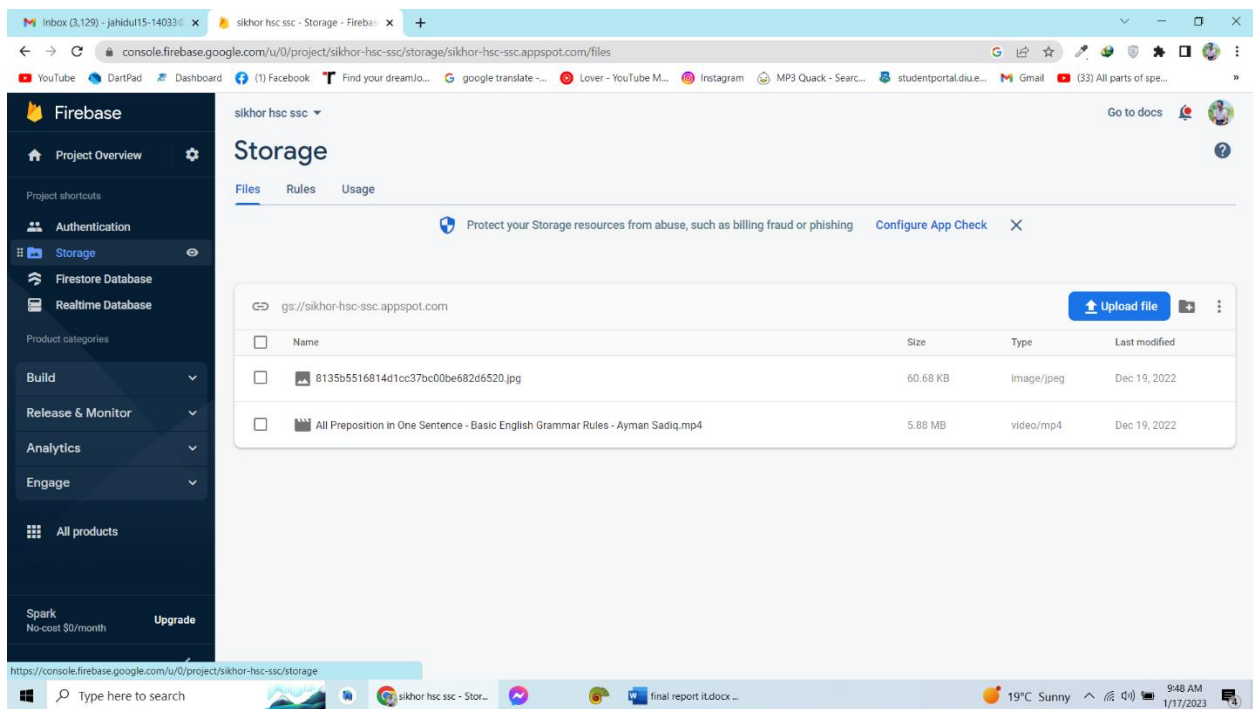


Figure 4.6 Firebase

### **4.3 Design and UX**

Every program must have a great user experience. Since you cannot access Firebase data if the UX design is poor, it is crucial for all apps. I've had this app set to the white theme. I created this app with a lot of color. I'm utilizing the list theme because it's so well-liked in the market.

### **4.4 Implementation Requirements**

Below are the tools I used for the implementation:

1. Flutter SDK
2. Android Studio
3. Programming Language: Dart,
4. Firebase Real-time Database for storing data.

### **Hardware Requirements**

1. operating system Windows 10 , Ram:12GB Samsung j4 for view.

### **Back – end Design**

For the back-end design of this application, I'm utilizing Firebase. Since Fire Base is a real-time data base, any modification to an application will directly affect it. There is no need to update the application for change. In order to design the back end, I'm utilizing Firebase. We'll need to use Firebase's Admin SDK to enable authenticated users to access the database. We will be able to access an API through this framework in order to validate authenticated users and pass requests to our database. We'll use Firebase's Realtime to save user data.

## **CHAPTER 5**

### **Implementation And Testing**

#### **5.1 Implementation of database**

I use Firebase, a well-known website. For real-time databases, this website is quite well-liked. Because using Firebase makes obtaining data so simple, I do so. This website houses the photos of all user and significant document files. The database's organizational structure is in JSON.

#### **5.2 Implementation of Font to end**

For front-end development and design using Flutter, I used the Dart programming language. Many designs had to be imported from libraries and had to be incremented by default. Numerous buttons must be employed in terms of design, and they are exquisitely made. Designing the front end is crucial for mobile applications. The mobile screen size is small, so the front design of the application needs to be adjusted. The mechanic can be called away by pressing the call icon button. In order for the user to quickly understand and communicate the data, the data is input to the user through a text file.

#### **5.3 Testing Implementation**

Following the implementation of an application, testing is crucial. It is impossible to pinpoint the application's problems without testing. Software testing uses three different methodologies. black hat analysis testing with gray and white hats.



**Table 5.3 Test cases project**

no	test	input	Expected outcome	output	Result
0	Install the application	Android 6,7	successful	successful	passed
1	email	Go email	successful	successful	passed
2	Password	Input password	successful	successful	passed
3	Registration	User info	successful	successful	passed

### **5.4 Testing Result and Reports**

The tests run on this application were successful. In every instance, the input and output were flawless, and every case was fine. I'm overjoyed that the application passed every test. The pupil is now good to utilize the application. Now, both students and administrators may quickly install, launch, and use the application's functionalities.

**Language:** flutter

**Database:** Firebase

The Firebase Realtime Database is a cloud-hosted NoSQL database that lets you store and sync data between your users in real-time.

**Tools:** Android Studio

The official Integrated Development Environment (IDE) for creating Android apps is called Android Studio, and it is based on IntelliJ IDEA. The capabilities offered by Android Studio go above and beyond IntelliJ's robust code editor and development tools to increase your efficiency when creating Android apps. I have developed this mobile app in native android, so the only limitation I have, users from other platforms such as iOS are unable to use the app and its features that I'm providing. To implement the RIMS in various platforms, there will be iOS and web versions of the app in near future. So that users can access other platforms and get our services.

## **CHAPTER 6**

### **Conclusion and Future scope**

#### **6.1 Discussion and Conclusion**

The development of the application is finished entirely. This application is accessible to all users. I'll make a lot of effort to make these apps simple to use. This pastis system can play many different functions for pupils and allows them to simply access anything. This management is hoped to prove beneficial in the future. Many social changes brought about by digital management would save time and encourage punctuality in the next generation. With variable metal gate thickness, modulation depth. Appropriate and effective device for long-distance opto-electronic communication has been suggested following analysis.

#### **6.2 Scope for Further Developments**

In the future, improvements to the application will be made. What further could be introduced in the future is as follows:

- 1.Live zoom calls, first
2. As needed, further services will be introduced.
3. From here, users can purchase any book.
4. One app provides information to all students.
5. It's simple
- 6.it's fine

When required, additional services will be offered. In this study project, the total construction length was varied in order to examine the impact of a project's short development period on its profitability. It has been found that even while investing more money to speed up development, the project's overall profitability increases dramatically. The many risk categories experienced in both Projects were examined from the viewpoints of several important players. Infrastructure BOT projects in North America, Asia, and India were examined based on the review of the literature. Political, financial, and market risk were found to be the most significant project risks. Promoters

BOT might utilize a decision model that was created to choose the best financial tactics. Given that mobile apps are becoming more and more popular, it is crucial to do study on their creation. Utilizing Lehman's rules of software evolution, it has been possible to study the evolution of typical, substantial software systems (also known as desktop apps). Can Lehman's principles of software evolution, however, be applied to mobile apps, particularly given that developing mobile apps presents different challenges than developing desktop apps? In this essay, we examine three of Lehman's laws and how they apply to mobile applications. Finally, we compare the desktop and mobile apps and find that both follow the same trends for the law of continuing change. The laws of rising complexity and deteriorating quality, however, show divergent trends in the desktop and mobile versions. There are numerous problematic programs that I create after having encountered numerous issues. I first check to see whether I can add a payment mat once I finish my apps, and it was quite simple to do. The most significant issue with these programs is the version issue.

## REFERENCES

- [1] <https://play.google.com/store/apps/details?id=com.a10minuteschool.tenminuteschool&hl=en&gl=US> 03 May Last Accessed on 03 December, 2021
- [2] <https://console.firebase.google.com/u/0/project/shikhor-646fb/overview> Last Accessed on 03 December, 2021
- [3] <https://play.google.com/store/apps/details?id=tech.shikho.android&hl=en&gl=US&pli=1>
- [4] <https://pub.dev/> Last Accessed on 03 December, 2022
- [5] <https://developer.android.com/studio> Last Accessed on 03 December, 2022
- [6] “Meet android studio,” <https://developer.android.com/studio/intro>, accessed: 2022-10-08.  
<https://console.firebase.google.com/u/0/project/sikhor-hsc-ssc/overview>, accessed: 2022-10-08.
- [7] <https://console.firebase.google.com/u/0/project/sikhor-hsc-ssc/firestore/data/~2Finfo~2Ffuy0ptuhnmF6gCKKqDs>, 2022-10-08
- [8] <https://console.firebase.google.com/u/0/project/sikhor-hsc-ssc/database/sikhor-hsc-ssc-default-rtdb/data>, 2022-10-07
- [9] [https://pub.dev/packages/flutter\\_bkash](https://pub.dev/packages/flutter_bkash), 2022-07-10
- [10] <https://console.firebase.google.com/u/0/project/sikhor-hsc-ssc/authentication/users>

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