

COLLEGE COMPANION APP

A MINI PROJECT REPORT

Submitted by

VIGNESH RAJ T **211419205178**

VISHNUPRASAD V **211419205184**

SIDDHARTH K **211419205156**

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

PANIMALAR ENGINEERING COLLEGE, POONAMALLEE

ANNA UNIVERSITY : CHENNAI 600 025

JUNE 2022

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report “**COLLEGE COMPANION APP**” is the bonafide work of **VIGNESH RAJ.T(211419205178)** , **VISHNUPRASAD.V(211419205184)** **SIDDHARTH.K(211419205156)** “ who carried out the project under my supervision.

SIGNATURE

Dr. M. Helda Mercy M.E., Ph.D.,

HEAD OF THE DEPARTMENT

Department of Information Technology
Panimalar Engineering College
Poonamallee, Chennai - 600 123

SIGNATURE

Mr. V.KANDASAMY M.E.,

ASSISTANT PROFESSOR

Department of Information Technology
Panimalar Engineering College
Poonamallee, Chennai - 600 123

Submitted for the project and viva-voce examination held on _____

SIGNATURE

INTERNAL EXAMINER

SIGNATURE

EXTERNAL EXAMINER

DECLARATION

We hereby declare that the project report entitled "**COLLEGE COMPANION APP**" which is being submitted in partial fulfilment of the requirement of the course leading to the award of the 'Bachelor Of Technology in Information Technology ' in **Panimalar Engineering College, Affiliated to Anna University- Chennai** is the result of the project carried out by me under the guidance and supervision of **Mr.V.KANDASAMY M.E., Assistant Professor in the Department of Information Technology.** I further declared that I or any other person has not previously submitted this mini project report to any other institution/university for any other degree/ diploma or any other person.

(VIGNESH RAJ.T)

(VISHNUPRASAD.V)

(SIDDHARTH.K)

Date:

Place: Chennai

It is certified that this project has been prepared and submitted under my guidance.

Date: **Mrs.V. KANDASAMY M.E.,**

Place: Chennai (Assistant Professor / IT)

ACKNOWLEDGEMENT

A project of this magnitude and nature requires kind co-operation and support from many, for successful completion . We wish to express our sincere thanks to all those who were involved in the completion of this project.

Our sincere thanks to **Our Beloved Secretary and Correspondent, Dr. P. CHINNADURAI, M.A., Ph.D.,** for his sincere endeavor in educating us in his premier institution.

We would like to express our deep gratitude to **Our Dynamic Directors , Mrs. C. VIJAYA RAJESHWARI and DR. C. SAKTHI KUMAR, M.E., M.B.A .,Ph.D and DR. SARANYASREE SAKTHIKUMAR., B.E., M.B.A., Ph.D.,** for providing us with the necessary facilities for completion of this project.

We also express our appreciation and gratefulness to **Our Principal Dr. K. MANI, M.E., Ph.D.,** who helped us in the completion of the project. We wish to convey our thanks and gratitude to our head of the department, **Dr. M. HELDA MERCY, M.E., Ph.D.,** Department of Information Technology, for her support and by providing us ample time to complete our project.

We express our indebtedness and gratitude to our staff in charge, **Mr. V. KANDASAMY M.E.,** Assistant Professor Department of Information Technology for his guidance throughout the course of our project. Last, we thank our parents and friends for providing their extensive moral support and encouragement during the course of the project.

ABSTRACT

The aim of the app is to guide the students and keep them updated about what's happening in the classIn this app, the student can get the announcement regarding any examinations, holidays, etc..Also the student can get the notes of their respective subjects.Newly join students feel difficulty to find their way to their classes, laboratory etc., in their department block.Also the previous day absentees don't know what happened in the class or laboratory etc.Hence this project is developed to know about colleges informations through phone. It is highly efficient and necessary for students.No cost required. Helpful for students for knowing the college informations simultaneously. This application is mainly used for the students from saving timing complexity.Hence this application is used for gather new information about class for students and highlight the direction to the each students . In this app ,we have developed only one department information for students, by developing all department information this app is helpful for all students studing in that college.

LIST OF FIGURES

FIGURE NO	DESCRIPTION	PAGE NO
1.	The Architecture diagram for College companion app	24
2.	The figure of Hard disk	30
3.	The figure of Microsoft windows 10	31
4.	The figure of Ram	32
5.	The figure of Android studio	33
6.	The figure of Firebase	34
7.	The figure of Figma	35
8.	The figure of Home page	60
9.	The figure of Icons page	61
10.	The figure of Login page	62
11.	The figure of Notes page	63
12.	The figure of Block layout page	64

LIST OF ABBREVIATIONS

- ANDROID- An open source platform designed for mobile devices.
- OS- Operating system ,system used for controlling devices.
- Android SDK- Developing kit for android platform.
- JRE- Java Runtime Environment
- IDE tools- Integrated development environment.
- XML-Extensible Markup language .
- GUI-Graphical user interface
- ADT- Android development tool

TABLE OF CONTENTS

CHAPTER NO	TITLE	PAGE NO
	ABSTRACT	5
	LIST OF FIGURES	6
	LIST OF ABBREVIATIONS	7
1.	INTRODUCTION	12
	1.1 OVERVIEW OF THE PROJECT	13
	1.2 NEED FOR THE PROJECT	14
	1.3 OBJECTIVE OF THE PROJECT	15
2.	LITERATURE SURVEY	16
	2.1 EDUCATIONAL APP FOR STUDENTS ACEDAMIC PERFORMANCE	17
	2.2 AN ANDROID BASED MOBILE FRAMEWORK FOR STUDENT ALERT NOTIFICATION.	18
	2.3 ANDROID BASED STUDENT REMAINDER SYSTEM.	19
	2.4 FIREBASE IN ANDROID APP DEVELOPMENT – A STUDY	20

3.	SYSTEM ANALYSIS AND DESIGN	21
	3.1 SYSTEM ANALYSIS	22
	3.2 ARCHITECTURE DIAGRAM	24
	3.3 ARCHITECTUREDIAGRAM DESCRIPTION	
	3.3.1 HOME PAGE	25
	3.3.2 LOGIN PAGE	25
	3.3.3 ICON PAGE	25
	3.3.4 GPA CALCULATOR	26
	3.3.5 CLASS NOTES AND EXAM	26
	RESULTS.	
	3.3.6 BLOCK LAYOUT PAGE.	26
4	REQUIREMENTS AND ITS SPECIFICATION	27
	4.1 HARDWARE REQUIREMENTS	23
	4.1.1 HARD DISK	24
	4.1.2 MICROSOFT WINDOWS 7/8/10	25
	4.1.3 RAM	26
	4.2 SOFTWARE REQUIREMENTS	27
	4.2.1 ANDROID STUDIO	28
	4.2.2 FIGMA ILLUSTRATOR	29
	4.2.3 FIREBASE	30

5	IMPLEMENTATION	31
	5.1 FLOW CHART	32
	5.2 MODULES	33
	5.3 WORKING	34
6	TESTING AND MAINTENANCE	35
	6.1 UNIT TESTING	36
	6.2 WHITE BOX TESTING	36
	6.3 BLACK BOX TESTING	36
	6.4 INTEGRATION TESTING	37
	6.5 SYSTEM TESTING	37
	6.6 ACCEPTANCE TESTING	37
	6.7 FUNCTIONAL TESTING	38
7	CONCLUSION AND FUTURE WORK	43
	7.1 CONCLUSION	44
	7.2 FUTURE WORK	44
8	REFERENCES	45
	APPENDIX A	47
	APPENDIX B	58

CHAPTER – 1

INTRODUCTON

1.1 OVERVIEW OF THE PROJECT:

Smart phones users have increased after jio launched in india. With Increase in users of smartphones there comes the demand for mobileApplication for android should be unique and understandable by users. There will be no loss in android app development in the coming years. Android is an open-source software stack that includes the operating systems. Today people prefer to get data in their mobile

.

In today's world, mobile apps render a good platform for banking, education, reading etc. Designing and developing of new mobile apps for specific tasks would further make services more user friendly. Nowadays Mobile apps most widely used for education and reading. Mobile apps allow users to have easy, functional access to information, services that they need in real-time and are optimized for hands on interaction.

This technology is getting advanced day by day and mobile is one of the Most important part of this technology. where were talking about mobile ,Nowadays android take up the largest part of the market which means android operating system about mobiles are used these days .we are doing a mobile application project to guide the students and keep them Updated about what's happening in the class .

1.2 NEED OF THE PROJECT:

Nowadays, Educational mobile Apps directly target the psychology of the students which helps students to understand and grab the information from a different perspective. The aim of the app is to guide the students and keep them updated about what's happening in the class. Students can now dedicate more time to read up and understand their subjects better. In this app, the student can get the announcement regarding any examinations, holidays, etc. Also, the student can get the notes of their respective subjects.

Students can receive notices about upcoming exam result, and other events. Also, the student can get the notes of their respective subjects. Also, the previous day absentees don't know what happened in the class or laboratory etc. Newly join students feel difficulty to find their way to their classes, laboratory etc., in their department block. It is like an instructor app for the students for viewing the layout of their department, downloading notes, seeing results etc.

1.3 OBJECTIVE OF THE PROJECT:

The goals of this project are to develop application which will team up android developers and users. The application must have simple interface ,server connectivity, group all applications into categories ,inform any group of users about certain events etc. This application is mainly useful for education purpose only.

The main objective of this app is to guide the students and keep them updated about what's happening in the class. Student can get the announcement regarding any examinations, holidays, etc. Students can receive notices about upcoming exam result, and other events. Also, the student can get the notes of their respective subjects. Also, the previous day absentees don't know what happened in the class or laboratory etc. Newly join students feel difficulty to find their way to their classes, laboratory etc., in their department block. It is like an instructor app for the students for viewing the layout of their department, downloading notes, seeing results etc.

CHAPTER – 2

LITERATURE SURVEY

2.1 Educational app for Students academic Performance.

Author : Jasmine Erika A. Ababa, Cyrel Sean M. Joven, Jermaine B. Santiago,

Year :2016

The main data gathering tools used in the study was a survey questionnaire under descriptive-correlational quantitative method and on identifying the academic performances of senior high students using educational application and respondents were selected using a Total Population Sampling. The collected data were investigated and managed statistically through the use of descriptive statistics and Likert scale. As the surveyed data was gathered, results revealed that EA significantly improved the academic performance of the students, mainly the course subjects. EA is an effective support in doing school works and activities.

This actively illustrates that EA have a significant correlation to the academic profile of students. However, results may prove the effectiveness of using EA but it is still lacking for some features. So we have created an app for students educational purpose only

2.2 An Android Based Mobile Framework for Student Alert Notification

Author: Winfred Adjardjah Geor

Year: 2016

Alert Notification as a Service (ANS). The Traditional approach takes much time for services. ANS relieves the user of these burdens. Google Cloud Messaging (GCM): An Evaluation. GCM is good fit for application where the broadcasting concept is used. The proposed system is based on Google Cloud Messaging (GCM) and push notification. There have been applications which focus on android apps. But this system focuses on both Android users as well as non-android users.

This application mainly for the college to resolve the issues regarding missing out an important means and updates the website and does not give alert for important messages. This becomes a time-consuming process to open and check notification. This system checks all this. In the survey we found that there are E-Notice boards but they have many drawbacks such as user need to visit their site again and again to see notices, no notification is provided and it has no alarm system.

2.3 Android Based Student Reminder System

Authors: S.Bhavani , Y.Sanjay

Year: 2017

In the previous system the student has to view the information in the hard file or the web site. If his attendance fall less than the specified attendance threshold, he couldn't know it until the counselor or teacher informs him or his parent. The student to renewal the book needs to remember or to check the book for renewal date.

In this paper, they propose an android based mobile application which is useful to the students and their parents. They can know attendance status and can get alert for renewal of the book taken in the library. The student and his parent can also know the recent updates in the college and also can browse directly to the important links of the college.

Several applications have been developed to monitor the attendance. A.J. Kadam, Aradhana Singh, Komal Jagtap and Srujana Tankala⁹ in their work proposed an application to manage the student information in an institute. The advantage of this application is mobility, secure and less error prone.. This application runs only on windows operating system which is rarely used in smart phone.

2.4 Firebase in Android App Development-A Study

Author: Daniel Pan , Supriya S. Pore, Swalaya B. Pawari

Year:2018

Daniel Pan in his article has shown how to connect firebase to an Android app and basics of designing the structure of database in Firebase. Landon Cox [5] study highlights the comparison between SQLite and firebase. It also focuses on organizing data in the form of JSON tree in order to store in Firebase.

Supriya S. Pore, Swalaya B. Pawari conducted a comparative study of SQL and NoSQL. The study highlights on the types of databases like SQL and NoSQL, it also differentiates among them. The Axiomatics of SQL and NoSQL databases has been described in this paper. The study says that due to data consistency, ACID property is not used in the NoSQL databases so Vatika Sharma, Meenu Dave have given an overview of NoSQL databases focusing on how it has declined the dominance of SQL with its background and characteristics.

CHAPTER – 3

SYSTEM ANALYSIS AND DESIGN

3.1 SYSTEM ANALYSIS:

EXISTING SYSTEM:

- Newly joined students feel difficulty to find their classes laboratories etc. Also previous day absentees don't know what's happening in the class.
- And their also don't know what announcements given in the class.
And their cannot be able to calculate their CCPA and GPA
- All the students can get the notes of their respective subjects.
- In this app ,the students can get the announcement regarding any examinations, holidays etc..
- To overcome the problem , we developed an companion app to solve all difficulties faces by the student in the class.

DRAWBACKS:

- Different programming languages and skills depending on the operating system.
- Network connectivity is needed for running this app because of firebase.

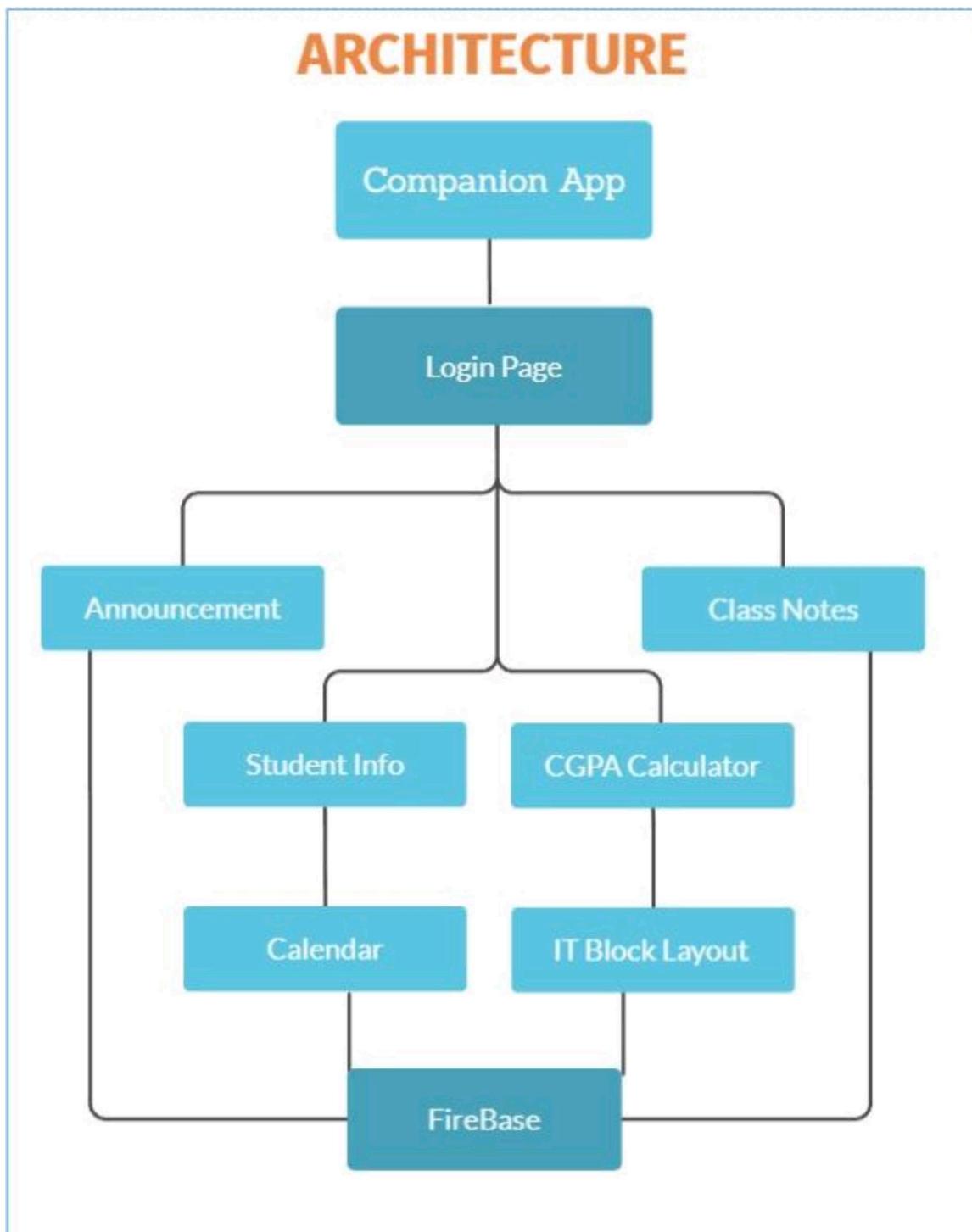
PROPOSED SYSTEM:

- To Overcome the problems in the existing system, we developed an app to guide the students and keep them updated about what's happening In the class.
- Through this app , Students can get the notes of their respective Subjects and exam results also .Through this app students can know Which location their class is located .

ADVANTAGES:

- Easy to Use
- No cost
- Time management

3.2 ARCHITECTURE DIAGRAM:



3.3 ARCHITECTURE DIAGRAM DESCRIPTION:-

The basic diagram of the “**COLLEGE COMPANION APP** ”is shown in the above figure. Mainly this block diagram consists of the following essential blocks:

3.3.1 HOME PAGE

3.3.2 LOGIN PAGE

3.3.3 ANNOUNCEMENTS DETAILS

3.3.4 GPA CALCULATOR

3.3.5 EXAM RESULTS AND CLASS NOTES

3.3.6 BLOCK LAYOUT

3.3.1 HOME PAGE :

The aim of the mobile application home page is to guide the user ,rapidly Present content and its content ,and its own wonderfull content and accurate classification will stimulate the users desire to further use.Home page is a page typically encountered first on a website that usually contains links to other pages of the site.

For developing home page ,android studio and figma illustrator is used.In this home page we created a login button and logo in the home page.Next announcement bar is also developed . For regarding students Information about examinations and results.

3.3.2 LOGIN PAGE:

A login application is a screen asking your credentials to login to some particular application .Login page asks the username and password of that student in that college .It also consists of the logo of that particular college .When login page access for that Candidate it shows all details about the candidate examination results, subjects etc.

3.3.3 ANNOUNCEMENT DETAILS:

Announcement details shows in the home page itself. Staff given announcement to their students for examination date ,timing, results, notes required etc...To show that we created a slide in the home page itself to show the announcement.

3.3.4 GPA CALCULATOR PAGE:

We designed a gpa calculator in this app for calculating the students semester exam gpa. Gpa calculator is designed with java coding and xml . Credits are updated in the java coding itself. Just students want to give their grade to calculate their gpa .

3.3.5 CLASS NOTES AND EXAM RESULTS :

This app is mainly used to show the examination results and used for Downloading their respective notes also this mainly used to reduce the Time for the staff and also for the students. With the help of the usernameAnd password in the login page we can see the examination results..

3.3.6 BLOCK LAYOUT:

Newly joined students feel difficulty to find their way to their classes , Laboratories etc.in their department block . This app solves the difficulties For finding the way. In this app we build a block layout to show the students Where the classes are located .

CHAPTER – 4

REQUIREMENTS AND ITS SPECIFICATION

HARDWARE AND SOFTWARE REQUIREMENTS:

HARDWARE REQUIREMENTS:

- Hard disk -250GB
- Microsoft windows 7/8/10(64-bit).
- Ram space -8GB

SOFTWARE REQUIREMENTS:

- Android studio .
- Figma illustrator.
- Firebase database.
- Microsoft Windows: 10 (32 or 64Bit).

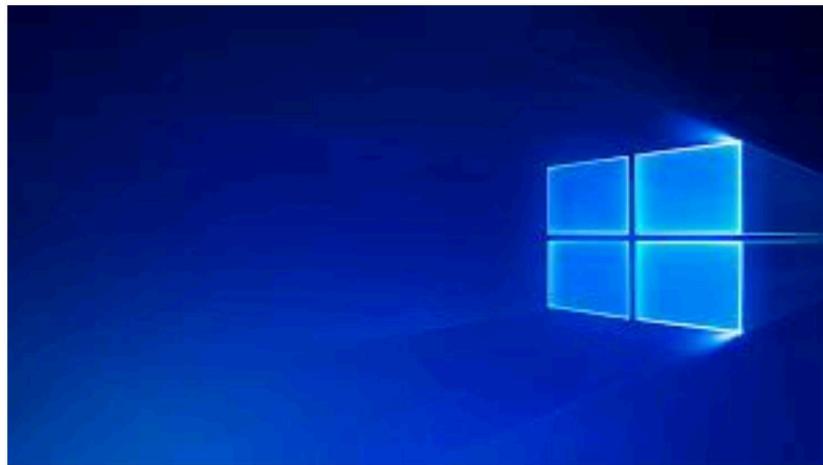
4.1 HARDWARE REQUIREMENTS DESCRIPTION:

4.1.1 Hard disk Space:



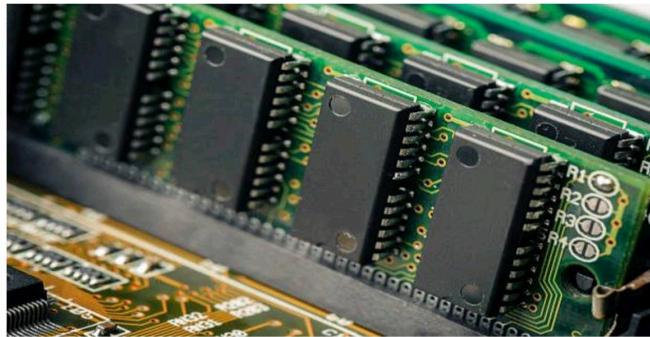
Android provides a number of methods for data storage depending on the needs of the user, developer, and application. For example, some apps use data storage **to keep track of user settings or user-provided data**. Data can be stored persistently for this use case in several ways. At least 250GB of free disk space to check out the code and an extra 150 GB to build it. If you conduct multiple builds, you need additional space.

4.1.2 Microsoft Windows7/8/10 (32- or 64-bit):



A 64-bit environment is required for Android 2.3.x (Gingerbread) and higher versions, including the master branch. You can compile older versions on 32-bit systems. Windows 10 features built-in capabilities that allow corporate IT departments to use mobile device management (MDM) software to secure and control devices running the operating system. In addition, organizations can use traditional desktop management software such as Microsoft System Center Configuration Manager.

4.1.3 Ram Space Required:



Ram are temporary storage so they are used when an app needs memory to execute it when you run it... Ram pass the location of the file to CPU processor, so that it can be solved and you get the display of the calculation. Calculation can be anything from graphics addition, multiple etc. It is dependent upon the type of application that how much it consumes the app. A laptop with 4GB of RAM should suffice. However, application or software developers who need to run virtual machines, emulators and IDEs to compile massive projects will need more RAM. A laptop with **at least 8GB of RAM is ideal**. The requirement goes even higher for game developers.

4.2 SOFTWARE REQUIREMENTS DESCRIPTION:

4.2.1 Android Studio:

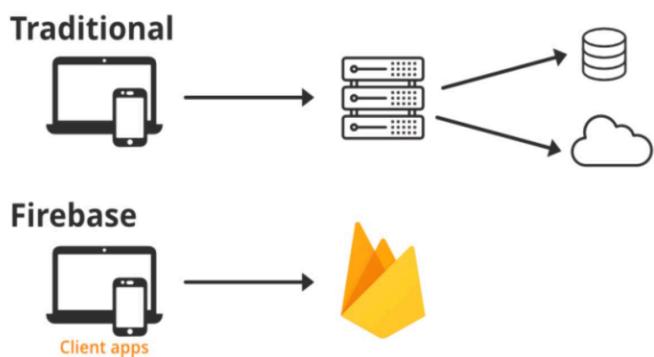


Android Studio is the official Integrated Development Environment (IDE) for android application development. Android Studio provides more features that enhance our productivity while building Android apps.

Android Studio was announced on 16th May 2013 at the Google I/O conference as an official IDE for Android app development. It started its early access preview from version 0.1 in May 2013. The first stable built version was released in December 2014, starts from version 1.0.

It has a flexible Gradle-based build system. It has a fast and feature-rich emulator for app testing. Android Studio has a consolidated environment where we can develop for all Android devices. Apply changes to the resource code of our running app without restarting the app. Android Studio provides extensive testing tools and frameworks.

4.2.2 FIREBASE:



Firebase is a Cloud-hosted, NoSQL database that uses a document-model. It can be horizontally scaled while letting you store and synchronize data in real-time among users. This is great for applications that are used across multiple devices such as mobile applications. Firebase is optimized for offline use with strong user-based security that allows for serverless based apps as well.

Firebase is built on the Google infrastructure and is built to scale automatically. In addition to standard NoSQL database functionality, Firebase includes analytics, authentication, performance monitoring, messaging, crash reporting and much more.

Because it is a Google product, there is also integration into a lot of other products. This includes integration with Google Ads, AdMob, Google Marketing Platform, the Play Store, Data Studio, BigQuery, Slack, Jira, and more. The Firebase APIs are packaged into a single SDK that can be expanded to multiple platforms and languages. This includes C++ and Unity, which are both popular for mobile development.

4.2.3 FIGMA ILLUSTRATOR:



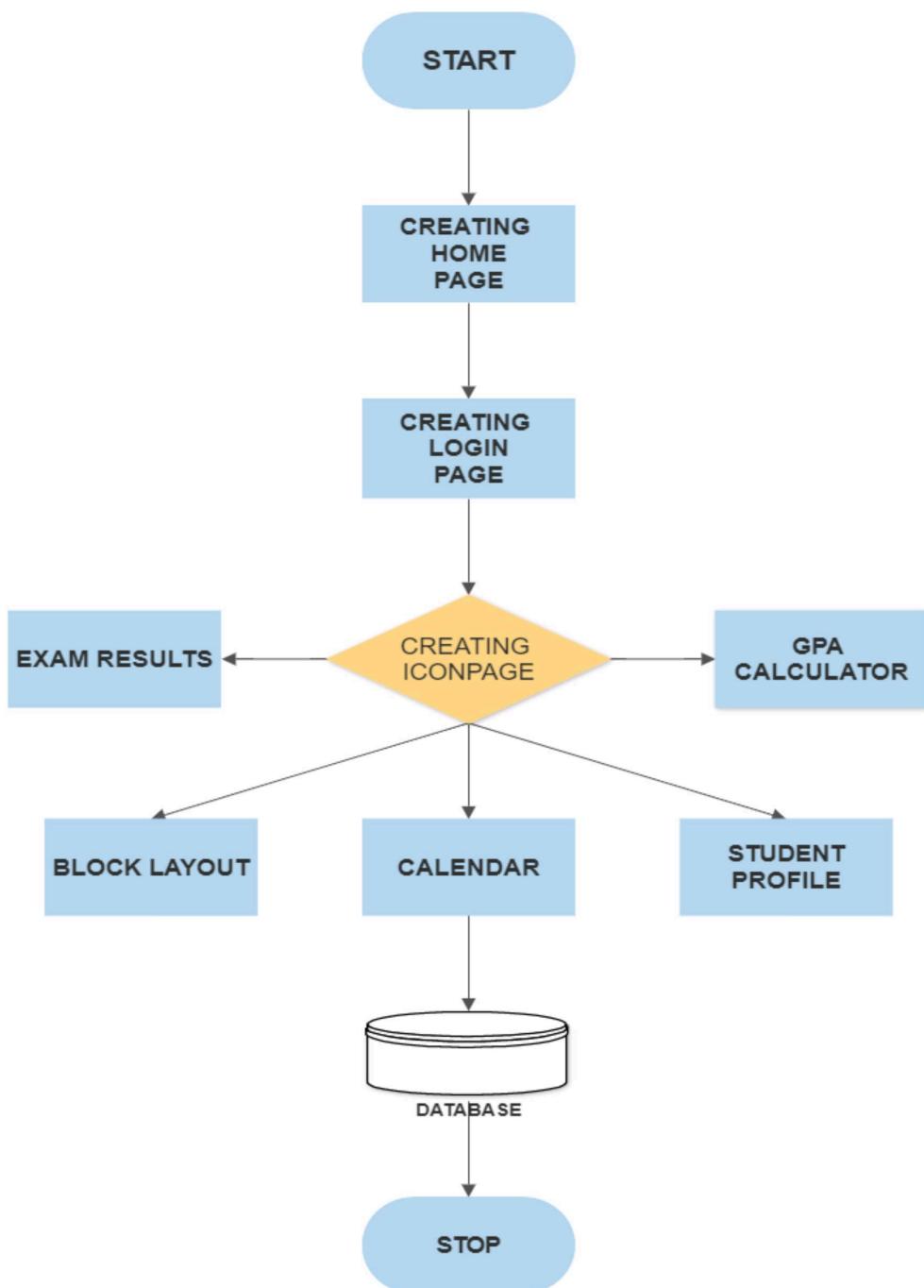
Figma is the first interface design tool with real-time collaboration. It keeps everyone on the same page. Focus on the work instead of fighting your tools. Adobe Illustrator and Figma can be primarily classified as "Graphic Design" tools. A lot of designers think Figma is just meant for UI design and prototyping. But Figma is great for making flat illustrations and icons, and this is a great way for creative designers to collaborate in creating illustrations that tell stories and communicate ideas.

Figma is a cloud-based UI designing and prototyping tool, which allows multiple teams to collaborate on creating, testing .We use figma illustrator for designing the frontend of the app .With android studio and figma Illustrator .

Figma is a powerful design tool that helps you to create anything: websites, applications, logos, and much more. By learning to use Figma, you'll take your first steps into User Interface Design and User Experience Design.

CHAPTER-5
IMPLEMENTATION

5.1 FLOWCHART:



5.2 MODULES:

Module 1 (Creating home page) :

- For developing home page , Android studio and figma illustrator is used.
- First creating a login button and logo in the home page.
- Next announcement bar is also developed, for regrading students information about examinations and results.

Module 2 (Creating first page) :

- This page consists of icons like announcements , results , notes ,navigation etc.
- Announcements regarding examinations results , holidays , information about new notes etc.
- Students can get their notes for their respective subjects.
- Navigator icon is used for newly join students can find their way to their classes , laboratory etc
- Result can be seen through students register no and date of birth .

Module 3 (Using Firebase) :

- Using firebase database , we can store notes and results.
- Through students login with their register number and date of birth

they can see their results .

- Firebase is also used for authentication in login page

5.3 WORKING:

- Mainly this app is created for education purpose for students.
- To developed this app Android studio and firebase used and for designing figma illustrator is used.
- At first , we have created home page and then we have created login page for students entry and exit.
- In login page ,User name and password is involved. If username and password is incorrect , then it will not enters into the next page.
- In the main page , we have created Announcement icon , Student profile icon , Block layout icon, gpa calculator icon , notes icon etc.
- While Clicking the notes icon Students Can get their respective notes. And while clicking Student icon , Students can see their Profile picture with name ,reg no etc.
- While Clicking Gpa calculator , Students can calculate GPA grades.
- Newly joined students do not know the class room are. So for that we have added block layout in this app.
- Announcements details will be viewed in the home page itself . To see that announcement fully just click to continue button , So that user can see that announcement fully.

CHAPTER-6

TESTING AND MAINTENANCE

6.1 UNIT TESTING

Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit testing to be conducted as two distinct phases.

6.2 WHITE BOX TESTING

White Box Testing is a testing in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is used to test areas that cannot be reached from a black box level

6.3 BLACK BOX TESTING

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software under test is treated, as a black box .you cannot “see” into it. The test provides inputs and responds to outputs without considering how the software work

Test objectives

- All field entries must work properly.
- Pages must be activated from the identified link
- The entry screen, messages and responses must not be delayed.

Features to be tested

- Verify that the entries are of the correct format
- No duplicate entries should be allowed
- All links should take the user to the correct page.

6.4 INTERGRATION TESTING

Software integration testing is the incremental integration testing of two or more integrated software components on a single platform to produce failures caused by interface defects. The task of the integration test is to check that components or software applications, e.g. components in a software system or – one step up – software applications at the company level – interact without error.

Test Results:

All the test cases mentioned above passed successfully. No defects encountered

6.5 SYSTEM TESTING

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

6.6 ACCEPTANCE TESTING

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements.

Test Results:

All the test cases mentioned above passed successfully. No defects encountered.

6.7 FUNCTIONAL TESTING

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

- Valid Input : identified classes of valid input must be accepted.
- Invalid Input : identified classes of invalid input must be rejected.
- Functions : identified functions must be exercised.
- Output : identified classes of application outputs must be exercised.
- Systems/Procedures: interfacing systems or procedures must be invoked.

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Business process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

CHAPTER – 7
CONCLUSION AND FUTURE WORK

7.1 CONCULSION:

- This application is mainly used for the students from saving timing complexity.
- Hence this application is used for gather new information about class for students and highlight the direction to the each students

7.2 FUTURE WORK:

- This app we have developed only one department information for students, by developing all department information in future this app is helpful for all students studing in that college.
- Not only for Colleges for offices also this app will be used for announcement and layout purpose.

CHAPTER-8

REFERENCES

REFERENCES:

- [1] “Educational app for Students academic Performance” by Jasmine Erika A. Ababa, Cyrel Sean
- [2] “An Android Based Mobile Framework for Student Alert Notification” by Winfred Adjardjah Geor.
- [3] “Android Based Student Reminder System” by S.Bhavani ,Y.Sanjay.
- [4] “Fire base in android app development –study” by Daniel pan , supriya.
- [5] “Android Programming in a Day! The Power Guide for Beginners In Android App Programming” by Sam Key
- [6] “Head First Android Development: A Brain-Friendly Guide” by Dawn Griffiths and David Griffiths
- [7] “The Definitive Guide to Firebase: Build Android Apps on Google's Mobile Platform” Moroney, Laurence
- [8] “Build Mobile Apps with ionic 4 and firebase: Hybrid Mobile App Development” Cheng, Fu

APPENDIX A

CODE:

LOGIN PAGE CODE:

```
package com.example.test;  
import androidx.annotation.NonNull;  
import androidx.appcompat.app.AppCompatActivity;  
import android.content.Intent;  
import android.os.Bundle;  
import android.util.Patterns;  
import android.view.View;  
import android.view.Window;  
import android.view.WindowManager;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
import com.example.test.Model.User;  
import com.google.android.gms.tasks.OnFailureListener;  
import com.google.android.gms.tasks.OnSuccessListener;  
import com.google.firebase.auth.AuthResult;
```

```
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebaseio.database.FirebaseDatabase;
import com.google.firebaseio.database.ValueEventListener;
import java.util.Objects;

public class Login extends AppCompatActivity {
    private EditText Email, Pass;
    private TextView textView;
    private Button loginbtn;
    FirebaseDatabase database;
    DatabaseReference users;
    private FirebaseAuth mAuth;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        requestWindowFeature(Window.FEATURE_NO_TITLE);

        this.getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,
        WindowManager.LayoutParams.FLAG_FULLSCREEN);

        Objects.requireNonNull(getSupportActionBar()).hide();
        setContentView(R.layout.activity_login);
        database = FirebaseDatabase.getInstance();
        users = database.getReference("Users");

        Email = (EditText) findViewById(R.id.roll);
        Pass = (EditText) findViewById(R.id.pass);
```

```

loginbtn = (Button) findViewById(R.id.button2);
textView = (TextView) findViewById(R.id.text);

mAuth = FirebaseAuth.getInstance();
textView.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        startActivity(new Intent(Login.this , FrontPage.class));
    }
});

loginbtn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        loginUser();
    }
});

private void loginUser(){
    String email = Email.getText().toString();
    String pass = Pass.getText().toString();

    if (!email.isEmpty() &&
Patterns.EMAIL_ADDRESS.matcher(email).matches()){
        if (!pass.isEmpty()){
            mAuth.signInWithEmailAndPassword(email , pass)
                .addOnSuccessListener(new OnSuccessListener<AuthResult>() {
                    @Override
                    public void onSuccess(AuthResult authResult) {

```

```

        Toast.makeText(Login.this, "Login Successfully !!",
Toast.LENGTH_SHORT).show();

        startActivity(new Intent(Login.this , MainPage.class));

        finish();

    }

}).addOnFailureListener(new OnFailureListener() {

    @Override

    public void onFailure(@NonNull Exception e) {

        Toast.makeText(Login.this, "Login Failed !!",

Toast.LENGTH_SHORT).show();

    }

});

}else{

    Pass.setError("Empty Fields Are not Allowed");

}

}else if(email.isEmpty()){

    Email.setError("Empty Fields Are not Allowed");

}else{

    Email.setError("Please Enter Correct Email");

}

}

}

```

GPA CALCULATOR CODE:

```
package com.example.myapplication;
```

```
import android.os.Bundle;  
import android.widget.Button;  
import android.widget.Spinner;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
    // Six Subjects  
    // Six grades  
    // calculate button  
    // Show result  
  
    String finalValue = "0.00";  
  
    String[] gradeStorage = new String[6];  
  
    @Override  
  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        Spinner gradeOne = findViewById(R.id.grade);  
        Spinner gradeTwo = findViewById(R.id.grade2);  
        Spinner gradeThree = findViewById(R.id.grade3);  
        Spinner gradeFour = findViewById(R.id.grade4);  
        Spinner gradeFive = findViewById(R.id.grade5);  
        Spinner gradeSix = findViewById(R.id.grade6);
```

```
TextView resultValue = findViewById(R.id.cgpa);

Button Result = findViewById(R.id.Result);

Result.setOnClickListener(view -> {

    gradeStorage[0] = gradeOne.getSelectedItem().toString();
    gradeStorage[1] = gradeTwo.getSelectedItem().toString();
    gradeStorage[2] = gradeThree.getSelectedItem().toString();
    gradeStorage[3] = gradeFour.getSelectedItem().toString();
    gradeStorage[4] = gradeFive.getSelectedItem().toString();
    gradeStorage[5] = gradeSix.getSelectedItem().toString();
    finalValue = String.format("%.2f",cgpa(gradeStorage));
    resultValue.setText(finalValue);

});

}

public static float cgpa(String[] grades){

    float result;
    float temp = 0;
    for (String value: grades) {

        switch (value){

            case "O":
                temp += 10;
                break;

            case "A+":
                temp += 9;
                break;

            case "A":
                temp += 8;
                break;

            case "B+":
                temp += 7;
                break;

            case "B":
                temp += 6;
                break;

            case "C+":
                temp += 5;
                break;

            case "C":
                temp += 4;
                break;

            case "D+":
                temp += 3;
                break;

            case "D":
                temp += 2;
                break;

            case "F":
                temp += 0;
                break;
        }
    }
    return temp / grades.length;
}
```

```

        temp += 8;
        break;

    case "B+":
        temp += 7;
        break;

    case "B":
        temp += 6;
        break;

    case "C":
        temp += 5;
        break;

    case "U":
        temp += 0;
        break;
    }

}

result = temp / 6;

return result;
}

}

```

MAIN PAGE:

```

package com.example.test;

import androidx.appcompat.app.AppCompatActivity;

```

```
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.Window;
import android.view.WindowManager;
import android.widget.Button;

public class MainPage extends AppCompatActivity {

    Button ann,info,note,cal,map,calendar;

    Button logout;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        requestWindowFeature(Window.FEATURE_NO_TITLE);

        this.getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,WindowManager.LayoutParams.FLAG_FULLSCREEN);

        getSupportActionBar().hide();
        setContentView(R.layout.activity_main_page);

        ann = findViewById(R.id.ann);
        info = findViewById(R.id.info);
        note = findViewById(R.id.note);
        cal = findViewById(R.id.Cal);
        map = findViewById(R.id.map);
        calendar = findViewById(R.id.calendar);
        logout = findViewById(R.id.button3);

        note.setOnClickListener(new View.OnClickListener() {
```

```
@Override  
public void onClick(View view) {  
    Intent intent = new Intent(MainPage.this,NotePage1.class);  
    startActivity(intent);  
}  
});
```

```
calendar.setOnClickListener(new View.OnClickListener() {
```

```
@Override
```

```
public void onClick(View view) {
```

```
    Intent intent = new Intent(MainPage.this,CalendarPage.class);  
    startActivity(intent);  
}
```

```
});
```

```
ann.setOnClickListener(new View.OnClickListener() {
```

```
@Override
```

```
public void onClick(View v) {
```

```
    Intent intent = new Intent(MainPage.this,Announcement.class);  
    startActivity(intent);  
}
```

```
});
```

```
info.setOnClickListener(new View.OnClickListener() {
```

```
@Override
```

```
public void onClick(View v) {
    Intent intent = new Intent(MainPage.this,InfoPage.class);
    startActivity(intent);
}

logout.setOnClickListener(new View.OnClickListener() {

@Override
public void onClick(View v) {
    Intent intent = new Intent(MainPage.this,FrontPage.class);
    startActivity(intent);
}

});

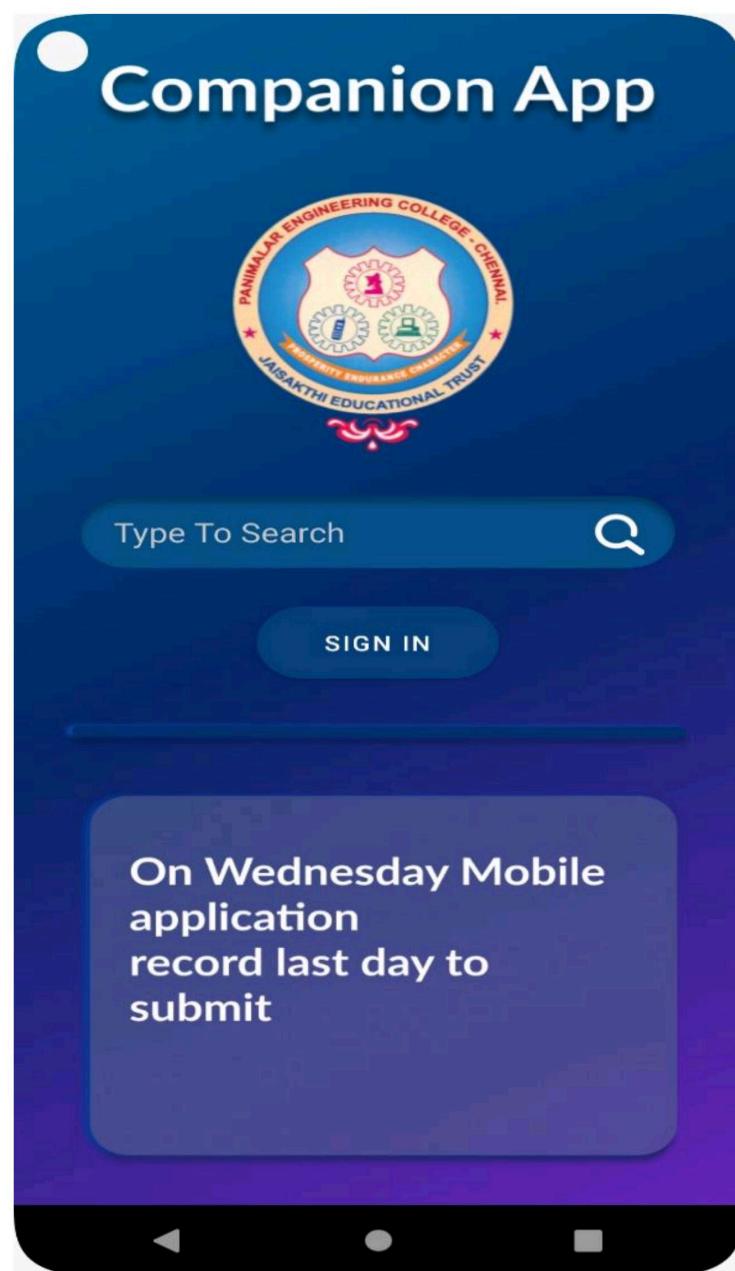
map.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View view) {
    Intent intent = new Intent(MainPage.this,NotePage1.class);
    startActivity(intent);
}

});
```

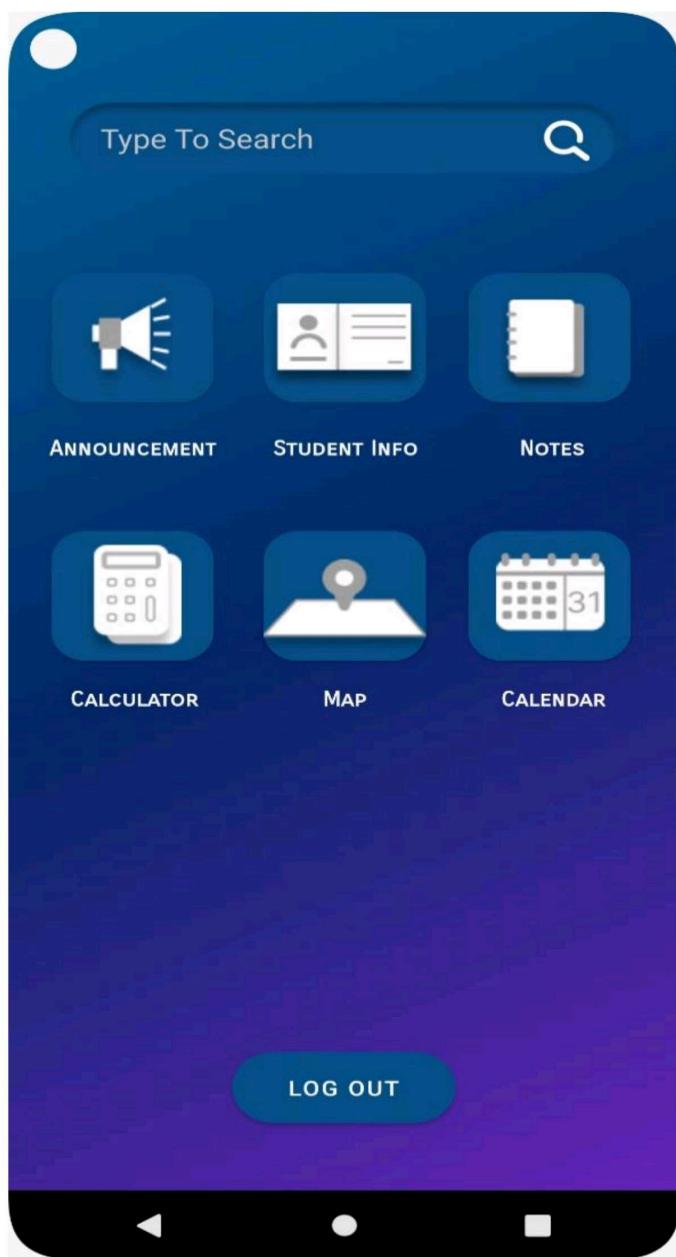
APPENDIX B

SAMPLE OUTPUT:

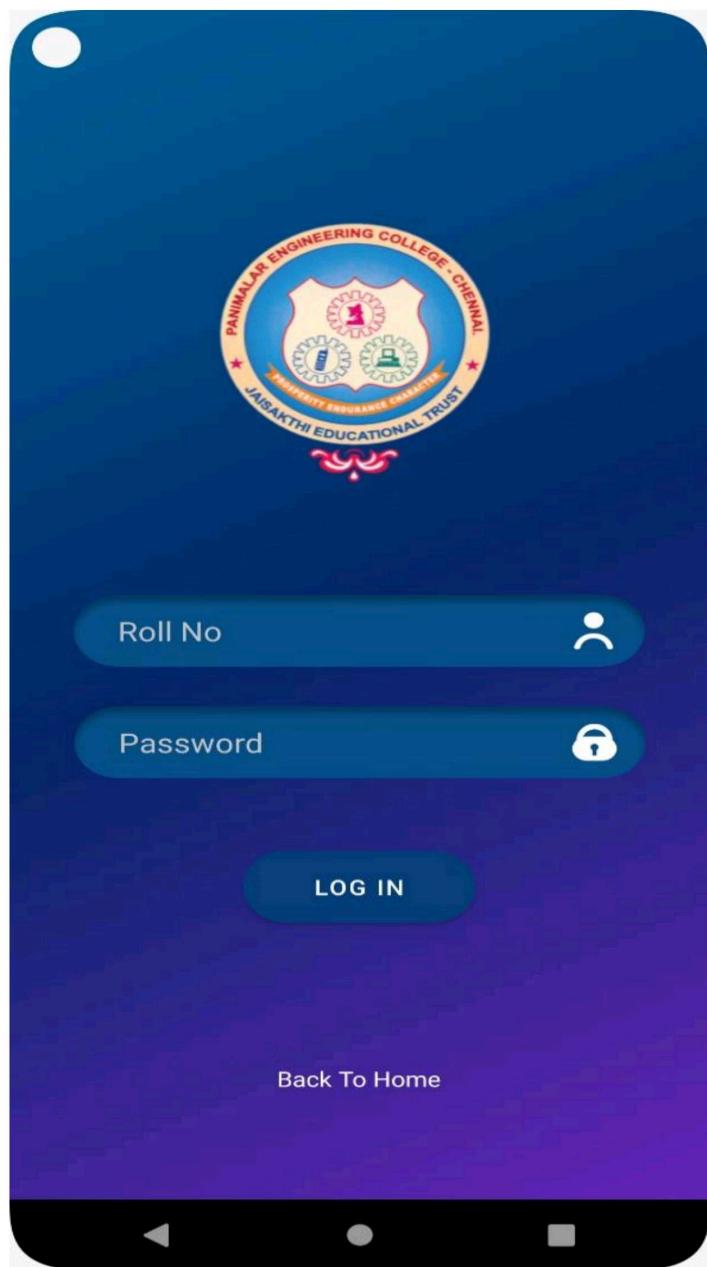
- **HOME PAGE:**



ICON PAGE:



LOGIN PAGE:



NOTES PAGE:



BLOCK LAYOUT PAGE:



CALENDAR PAGE:

