

# PROJECT REPORT

## CONTENT

1. Project Overview
2. Things learned through it
3. Technical Stack
4. Future Development
5. Future Scopes

# PROJECT OVERVIEW

**COMPANION** application is there to help students in their day-to-day life in college which includes from keeping track of there timetables in each semester to having quick access to there branch syllabus details and many more utilities which could be bundled up in an application to provide a one stop solution for students.

Especially new students who joins some institute takes time to get use to their procedures ,their way of work ,etc which creates nuisance to those students if the management of those college is not great.

So **companion** provides some solution to those students and the faculty members who are incharge of those management task.

The list of solution that this application currently provides are:-

1. Login Screen
2. Register Screen
3. Reset Password Screen
4. CGPA calculator
5. Timetable for each semester of students
6. Whole Syllabus for there respective branch
7. Library Fine Calculator and record of book issued
8. To-Do list which helps students to plan and schedule there projects and assignment
9. Academic Section tab which consists of registering for some back paper , check for registered back paper and contact Academic Section

## ***CGPA calculator***

CGPA calculator screen consist of multiple edit text for each semester till his previous semester ,calculated with credits system for there respective branches

***NOTE: I have used credits according to bput cse branch and reused that credits for each branches which could be changed easily from the code for their respective branches***

## ***Login & Registration***

Login & Registration helps us add student to a database and keeps there records separate. Individual details like library or todo needs anonymity. We have used SharedPreferences too so that the user need not have to login each and every time he starts the application

## ***Reset Password***

Reset Password for resetting there account password in case they lose their passwords

## ***Timetable***

Faculty need not have to go through the work for sharing the new timetable to respective department , then department to respective semester's

student . They can now directly update the timetable to the database which would now could be accessed easily by students anytime through this app

***NOTE:- For the ease of development i have used the same timetable for each and every branch and semester , which could be changed easily in the firebase firestore .***

## **Syllabus**

Students needs syllabus in each every semester but sometimes it's tedious to pick or search for syllabus in your filemanager in time of need. So this app provides one touch solution for downloading and reading that document

***NOTE:- For the ease of development i have used the same syllabus for each branches ,which could be updated easily***

## **Library Fine**

Students could use this application to keep track of books they have issued with addition to getting notified for how many days still left before the due date and what's the total fine you need to pay post failure to return book after due date which is Rs 2 per day

## **TODO List**

Todo list helps students add projects and assignments for planning and management for their work.

## **Academic Section**

Academic Section does three task .

Firstly, helps students to contact academic section's incharge or faculty member through one click.

Secondly , helps student register for there back papers ,

Lastly ,for checking what back subjects they have registered

## THINGS LEARNED THROUGH IT

This task helped me have a good grasp upon the android development topic and build my confidence enough for accepting any challenging task related to android . Looking forward to applying the learning from this task in my future android development work and enhancing my skills on the same.

These are the list of things which i came to learn and know about through this project:-

1. SplashScreen implementation
2. Firebase Authentication for login and register
3. Firebase CloudStorage for creating database of user and retrieving data through it
4. Downloading and uploading files to Firestore FireStorage and using it
5. Recycler View
6. View Lifecycle in android
7. Starting different application using intent and uri
8. Dialogs
9. Material ui
10. Writing more readable codes
11. Designing and planning before actually writing codes makes coding easy
12. More modularity in codes makes code more readable

# TECHNICAL STACK

1. JAVA
2. ANDROID
3. FIREBASE
4. XML (LAYOUT DESIGNING)
5. MATERIAL UI

# FUTURE DEVELOPMENTS

According to current version of this application these are the list of things that need improvements:-

1. Email authentication
2. Signing out of the account
3. Changing student's semester automatically each year
4. Uploading correct timetable and syllabus for each branch
5. Deleting task that have been added like library books, and in todo list
6. Changing subjects for each branch to their respective subject for back paper registration
7. Updating the credits for each branch in Branch\_Credits.java file
8. Enhancing ui and ux.
9. Results publishing and previous results records

# FUTURE SCOPES

This application could be further developed to be used as the college's own application for connecting to their students .They would not need facebook groups anymore for informing students regarding the college's work.

Further adding functionalities like online lectures portal, assignment submission portal, examination related information , or any other information which are now shared to students using whatsapp groups forwards or through facebook news feed. We could make our college independent so that we are not dependent on any other sources i.e. any social media.