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Android Based Hostel Management System

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ABSTRACT: We are developing a mobile application where a college administration can give announcements to students regarding their syllabus or curriculum, and students can perform various operations that has to be executed. With the help of this mobile application, we can help any college or university to change the way they were teaching from the decades and move it digitally. This mobile application will help students and professor to save the time and use it efficiently. The reason behind we've chosen to build mobile application because nowadays everyone has a mobile phone and it covers the most of the students and professor (users of our application). We are currently suffering from a pandemic where colleges were closed online learning is the only option that our mobile applications aim to do. It'll also help professor to easily use all the necessary features to teach students effectively and seamlessly. We've observed the flaws of other application and aim to solve them in our application.

KEYWORDS: Android Application, Hostel, College Management. Interactive Application.

I. INTRODUCTION

Managing a College is not an easy task to do so. College has to induct lectures and other activities has to be performed by college and the students to run the college. So, there is need of technological advancement which will work as a mediator between the college administration and students. Which will help the administration to provide all necessary information to be communicated to the students. If we observe current college environment there is a vacuous space between students and the college administration. To fill this vacuous space and make the college environment more informative and efficient. There's need of a mediator which every student and administrator can use. Now days everyone has a phone so we can develop a mobile application to fill this gap. It's also very useful for the students so they can properly get the information from the college administration and perform the daily routine and works that are assigned to them. Rather than only communicating the information students can also perform various operations like hostel fee payment, see the menu of mess, upload assignments, and many more. We believe our mobile application can be used in college to improve the college's technological environment and perform daily tasks much more easily and efficiently.

II. METHODOLOGY FOLLOWED

In this application you can login through register page provided in application in certain cases hostel warden also can give the username and password to the hosteler. In the registration process when user registers himself in the application the email and password save safely in google firebase and every time user tries to login in the application its handled by firebase itself. If user forgets the password of hisusername, then he also can reset his password using forgot password functionality. When clicked on forgot password user have to provide username which is email, when user provides the username/email id then it is verified by the firebase that does this username exists or not, if it exists then user will receive an email containing link to reset his password and start using the application by logging in. our application provides most of needed functionalities that are needed for an hosteler such as mess, complaints and council meeting. Also, if hostel warden wants to give any information to the hosteler then he can give using firebase and also our application supports notifications form that user can opt-in or opt-out.



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III. WORKING

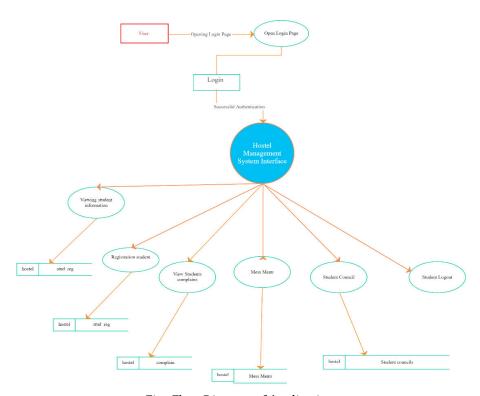


Fig . Flow Diagram of Application

IV. SOFTWARE OVERVIEW

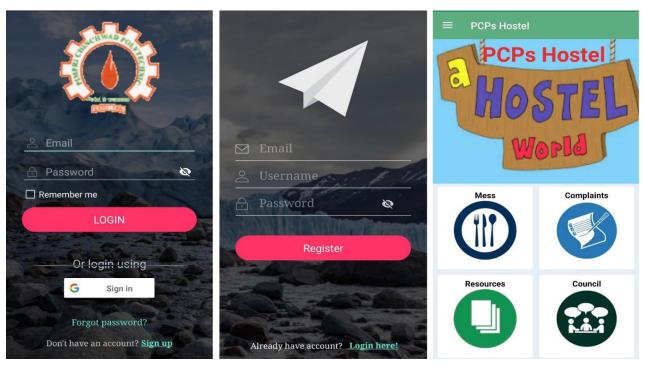


Fig1. Login Page Fig2.Register Page Fig3.Dashboard

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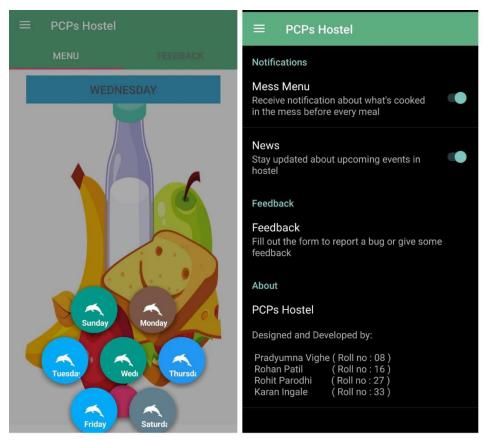


Fig4. Mess Page

Fig5. About Page

The above figure shows the basic UI of our mobile application. All user needs to Login in using their username and password which they can create by registering themselves in our application.

Fig. 3 is the Main or home page for the student login. Students have many options such as join class, pay dues, etc.

Fig. 4 is the Main or the page for the Administrator's login. Administrator can create Assignments for students, publish any announcement, etc.

V. SOFTWARE & TECHNOLOGIES USED

Following is the list of software that we are using for our development purpose:

- [1] Android Studio Software Development Kit
- [2] Adobe XD user experience and interaction designers.
- [3] Firebase Database
- [4] Proto.io User experience Designing

VI. ADVANTAGES

- [1] Easy to use interface.
- [2] Provide a platform where hosteler and hostel management can perform operations related to hostel.
- [3] It will help hosteler to solve their query faster and efficiently.
- [4] It will help professors to reach everyone with announcements and assignment stuff.

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VII. DISADVANTAGES

- [1] Very limited user base.
- [2] Limited functionality provided.

VIII. CONCLUSION

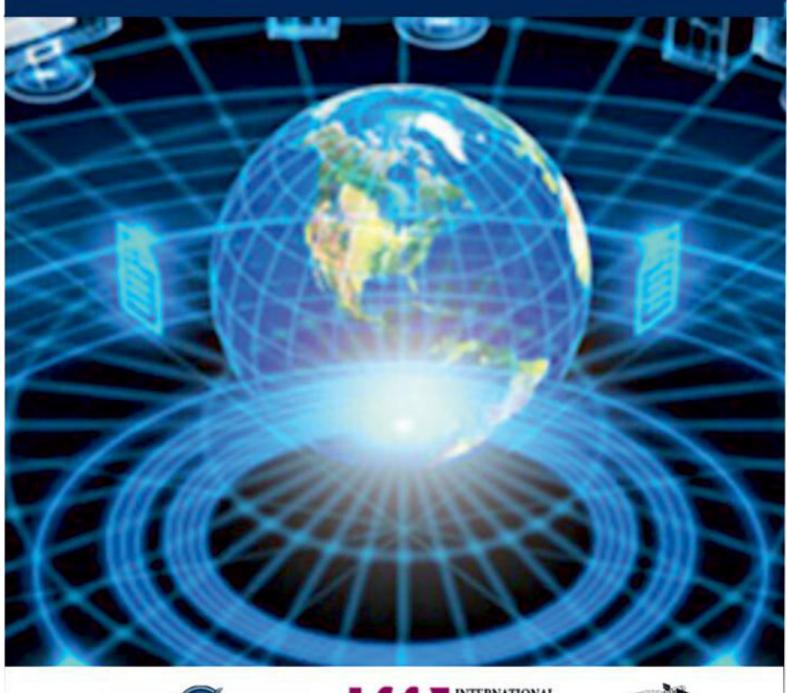
Development of this mobile application will help the Hostel wardens and the hosteller to perform there operations more seamlessly and efficiently. This will help hostel management to move in more digital way. Development of this mobile application aims to provide a platform for hosteller's and hostel administrator to communicate. This is need for hostel as well as hosteller too. It will help hosteler to save time and use it in more efficient way. It will also save time of hostel management by not having a complaint session in the hostel physically, that complaint can be raised in our application. Hosteller can ask their queries and get them solved by hostel management at their suitable time and vice versa. Development of this project will help lot of hostellers and hostel management to make their life easy and use their time more efficiently.

IX. FUTURE SCOPE

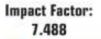
- [1] In future more functionalities can be introduced such as printer sharing where hosteler can send prints directly to common printer which is available inside the hostel.
- [2] Various payment methods can also be introduced so hosteler can directly make payment through online modes without having hassle to handle and get the cash from bank.
- [3] Messaging and chatting feature also can be introduced so whole hostel can chat and make friends also socialize.
- [4] We can also add feature such as generating hostel ID card. Hostel ID is needed in various situations such as while opening an bank account they need address proof so it'll be useful for hosteler.
- [5] Students also have to travel to near places so we can do partnership with ridesharing companies and directly book an cab from our app itself.

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