# E-WALLET AND PAYMENT GATEWAY

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**ABSTRACT:** In today's world smart phone has become an important part of life and it users also has increased. The designed online fee payment is an android application that will help effective and efficient payment management for institution. The application will serve as a more reliable and effective means of paying fees and avoiding all forms of delay in process and stress that is involved in the manual system of fees processing. Users should have access to application. They can able to login into their android application with authentication email-id and password. This application will make use of data collected from all regarding fees and store in Firebase database.
**Keywords:** Android Studio, Android SDK, Firebase, Android Application.

## I. INTRODUCTION

Android is developed by the Open Handset Alliance, which is led by Google, based on a modified version of the Linux kernel and other open source software and designed primarily for touch screen mobile devices such as smart phones and tablets. The latest version of Android is 9.0, Pie. The initial version of Android Pie was released on August 6, 2018 on Pixel devices. A mobile application, most commonly referred to as an app. It is a type of application software designed to run on mobile device, which are smart phone or tablet computer. The main objective of the document is to present an application through which college fees, hostel rent and any other payments related to college can be done within the application with any paper work and waiting in long queues. It reduces the difficulties that students have to face while paying fees and management has to maintain a records. Mobile application is a computer program designed to run on a mobile device. Mobile application often stands in contrast to desktop applications that run on desktop computers, and with web application which run in mobile web browsers rather than directly on the mobile devices. The main intension of the project is to present an application through which college fees, hostel rent and any other payments related to college can be done. User input allows for the users to manipulate a system, and device's output allows the system to indicate the effects of the user's manipulation. Android is a software stack for mobile devices that includes an operating system, middleware and key applications.

## II.LITERATURE SURVEY

An online bill payment system allow facility to acceptance of electronic payment for online bill payment. Also it is known as a sample of electronic data interchange (EDI), online bill payment system has become increasing popular due to the vast usage of the internet-based bill payment. To develop and implement a student payment system, manage students and all resources to run a student payment system. To apply a paperless system in a way to reduce the cost of service. E-wallets are intended to replace the existing physical wallets, with its notes, coins, plastic cards, loyalty cards etc. One of the important reasons is selecting this context is widely use of mobile phones at community level and the second reason is sensitivity and protection of people regarding this tool.

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## III. PROPOSED & EXISTING SYSTEM

Fee Payment Application allows the user to pay the fees through the app, which is a time saving process. The designed application will serve as a more trustworthy and effective means of paying college fees and removing all forms of delay in fee process and stress that is involved in the manual system of college fees processing. The project work makes use of data collected from college regarding college fees, hostel rent, mess fess and miscellaneous, fees. The aim objective of this project is to achieve effective and efficient process of student college fees payment and clearance. The implementation of the application based system is carried out using Android Studio and various other software. The students of almost every college pays almost all of their fees whether college fees, hostel fees or any other college-relevant fees by standing in a long queues while paying either by cash or even by demand draft. The process of fee payment wastes a lot of time for both students as well as institute management. The students of the every college pays almost all of them fees whether college fees, hostel fees or any other college-relevant fees by standing in the long queue.

## IV. SYSTEM ARCHITECTURE

The system design is the process of defining the architecture, modules, interface and data for specified requirements. It transforms a logical representation of a given system is required to do into the physical reality during development. The user authentication, data entry and user can view the information. The provided security like authentication and data integrity and user fee payment through the application. The user information is stored in the firebase database provided by the google. The application has to be available anywhere and anytime whenever the user requires the user to use application. The efficient of the system is now related in terms of the number of users able to use. The system should provide with sufficient security.
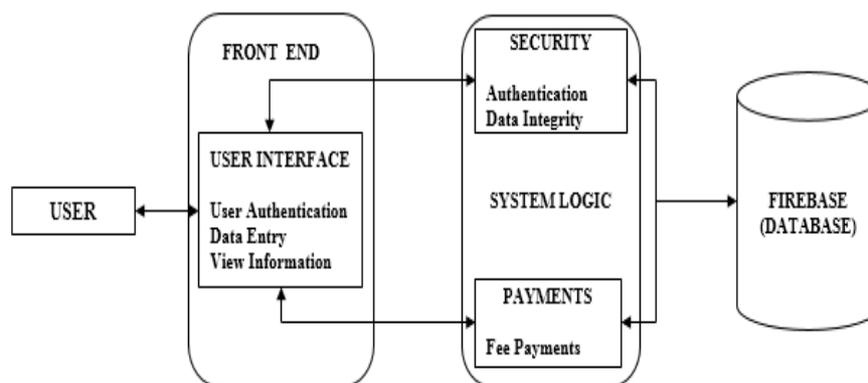


**Figure 1:** System Architecture

Initially the user has to register in the application then during login the user has to provide email_id and password. Then user name is fetched and is compared with the one stored in the database after username and password verification is successful then leads to home page if not successful the user has to re-enter the password. After successful login the user can select one of the provided processes and can check the profile details, then user logout.

## V. MODULE DESCRIPTION

The system is divided into different module; in our project we make use of two modules that is Admin module, User module. Each module will be having different functionalities.
The modules used in the application are:
**Admin Module:** Admin manages the user data gathered from the application. Admin is allowed to view the user details using database expect password. The data is stored as JSON and synchronized in real-time to every connected client. Every time Data is stored as JSON and synchronized in real-time to every connected client. When you build cross-platform apps with our iOS, android, and java script SDKs. All of your clients share one real-time database instance and automatically receive updates with the newest data. Database used here is 'firebase provided by google which is an open source database. The firebase real-time database is a cloud-hosted database. When application is offline firebase is remained responsive. Once the connectivity is re-established, the client device can receive any changes it missed. The database can be accessed directly from a mobile device or web browser, no need of application server. It is a No SQL database and it has different optimizations and functionality compared to a relational database.

**User Module:** User module is implemented using an Android Studio by making use of different APK files and is written using JAVA programming. The implementation process has been carried out by making use of different layouts, android activity and widgets available in it.
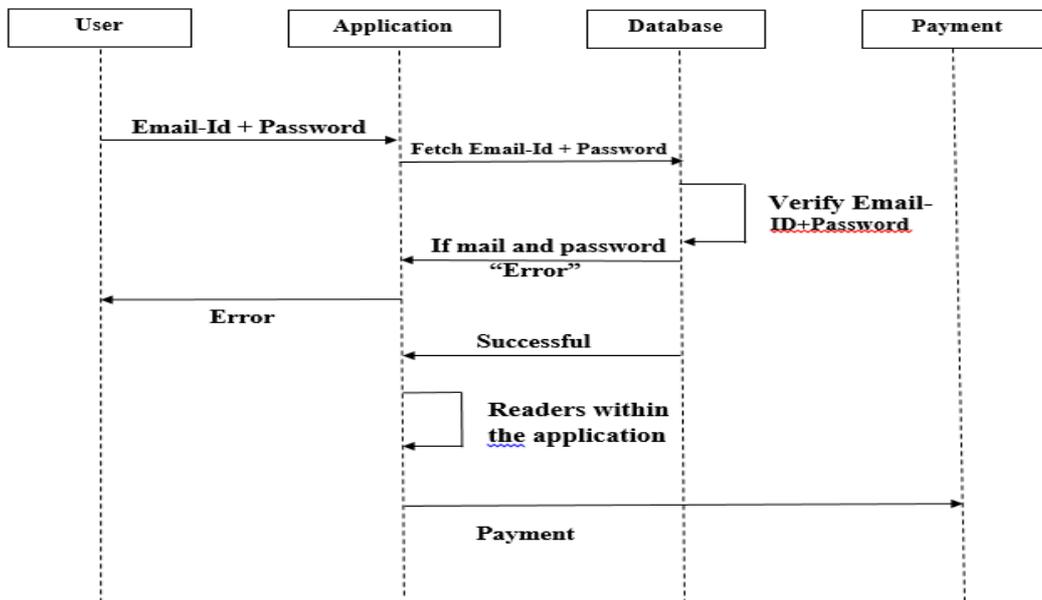


**Figure 2:** Sequence diagram

The data is stored in the firebase database in the form of JSON tree, the real-time Database data is always stored as in JSON objects. It can be thought of as a cloud hosted JSON tree. The above represents the sequence diagram show working of the application where the user enters the email as username and password is to log in into the application. The database will fetch the email as username and password and verify it with the data stored in the database if it is wrong it will show error and return back to the login page and if correct proceed to the home screen. The user request to pay so, the application return to user to choose the payment option after user selected option the payment will be proceed and sent message to email of user. Users should have access to application. They can able to login into their android application with authentication email-id and password. Before login users has to register to application ifvalid email-id and password, then only they can login and pay their fee through the application user has to login with email-id and password where the password is stored in database after the registration is done. If entered password is matches with the password which present in the database, then users will be able to pay the fees through the application. The students of every college pays almost all of their fees whether college fees, hostel fees or any other college-relevant fees by standing in long queues while paying either by cash or even by demand draft. Some parents who live in other villages or cities they have to cover long distance only for paying the fees of colleges. This type process of fee payment wastes a lot of time for both the students as well as the college management.

### VI.RESULTS

The proposed application basically serves fee payment application to make fee paying easier for students in college and services like payment of college fees, hostel fees and mess bills. The primary user of the application is students. A user can see the personal data associated with a specific user and like USN, registered email-id, branch and year. The user can make choice between college fees, hostel fees, and others. All options are provided with the same page. The user can make a use of Paytm and Debit card, Credit card, net banking and other ways. Using this application will reduce a time that is wasted while standing in queues for paying fees and decrease the work of the office management. The order ID is randomly generated number. All details are fetched by the database automatically.

1. As shown in the Figure 3, it is page of application which user has to choose regarding option to log in. Then they have to enter their full details in order to register.

2. As shown in the Figure 4, it is page of application which the user have to log in. If the user is new then they have to enter their full details in order to register.
3. As shown in the Figure 5, when user choose the Payment Option, they will get the order ID and the get directly transferred to the payment gateway.
4. As shown in the Figure 6, the user can check the payment history in this page.
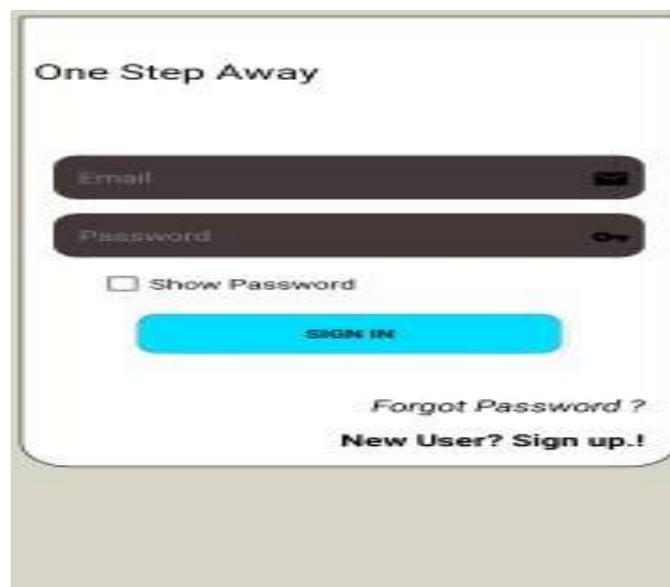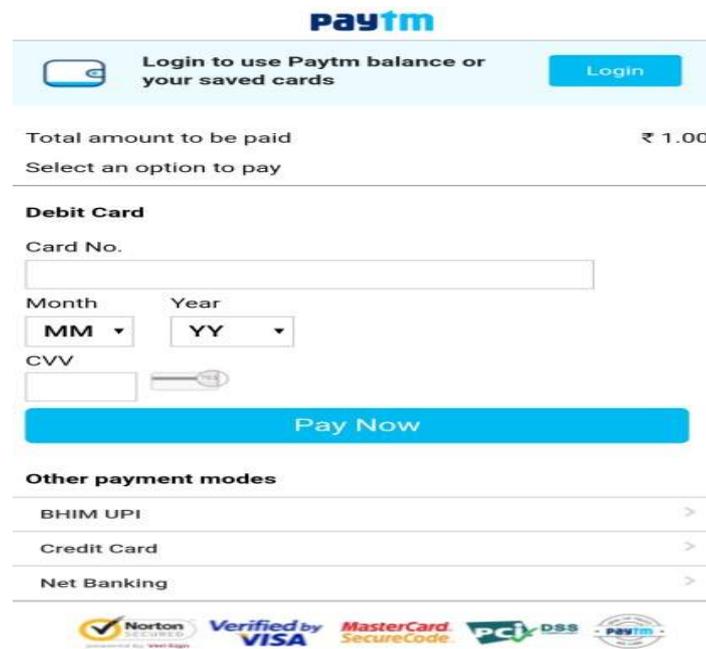


**Figure 3:** Login Option



**Figure 4:** Login page

**Figure 5:** Payment Page



**Figure 6:** Payment History

### VII.CONCLUSION

The proposed application basically serves fee payment application to make fee paying easier for students in college and services like payment of college fees, hostel fees and mess bills. The Application requires the students to fill in their following details and register in the application. They can use email-id and password to Sign In into the application and continue with the fees process. Using this application will reduce the time that is wasted while standing in queues for paying fees and decrease the work of the office management. This application is user friendly and it will be processed easily. Online Fee Payment Application allows the user to pay the fees through the app, which is a time saving process and void lot of paperwork. The designed application will serve as a more trustworthy and effective means of paying college fees and removing the all forms of delay in fee process and stress that is involved in the manual system of college fees processing. The work makes use of data collected from college regarding college fees, hostel rent, mess fess and miscellaneous, fees. The main objective of the paper is to achieve effective and efficient process of student college fees payment and clearance.

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