

# Scan and Pay Plus

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**Abstract-** This paper presents a novel method of collaborating ease in online shopping and the sense of security money wise as well as for customer satisfaction while doing shopping offline. This is implemented using an Android application. In Offline mode, the customer needs to physically pick up his purchase, carry cash, credit/debit cards along with them and wait in the long queue to make payments. The application mentioned here would read the barcode(s) of the product(s) & add it to the shopping cart in the application. It provides methods to change the quantity of product/s purchased and edit the list. Along with this the customer would be informed about the on-going offers in the store. Payment can be according to customer convenience.

**Keywords-** Android Studio, Android SDK, Firebase, OTP, Zxing Library, UPI Integration.

## I. INTRODUCTION

The retail industry has been advocating “Smart Shopping” for many years by adopting various technologies to enhance the shopping experience at the retail environment. The vision of smart shopping promises is to provide on-the-spot information about various discounts, schemes, etc. at your fingertip. These services are provided by our Application by simply scanning the barcode(s) of the product(s) & products(s) will be added it to the shopping cart of the application and payment can be done according to Unified Payment Interface (UPI) integration application available on user’s phone.

## II. LITERATURE REVIEW

- A. Android Studio is the official and the most used IDE (Integrated Development Environment) among Android developers for Android app development. It is a replacement for the Eclipse Android Development Tools (ADT) as the primary IDE for native Android application development.
- B. Firebase is a platform for building mobile and web application. You can build application quickly with real time data update. Using firebase is very easy and it stores data in JSON format. You do not need to configure your server when you use firebase. Everything will be handled

- by firebase automatically. So, no coding on server side. It will save time and will make you more productive
- C. A one-time password (OTP) is an automatically generated numeric or alphanumeric string of characters that authenticates the user for a single transaction or session. An OTP is more secure than a static password, especially a user-created password, which is typically weak. OTPs may replace authentication login information or may be used in addition to it, to add another layer of security.

## III. STUDY FINDINGS

Currently there are not many applications that provide smart shopping functions. However, there are few applications where customer can buy products but have to wait on a long queue to pay their bills. Thus, those applications give unsatisfactory results.

Nowadays people are in hurry and they just want to buy items and leave the place but instead they are stuck in long lines for just few items. So, instead they leave the place and find other store because they just don’t want to wait in this era of online payments.

## IV. FUTURE ENHANCEMENT

We aim to build a system that can assist the supermarket staff to manage the crowd at their store. This project is our first step towards this goal. We have planned that we can add numerous features in this system to help the customers as well as the supermarket in both different ways. We will provide a Better Design and better working system which we are constantly working on our algorithms to improve the accuracy and performance.

## V. CONCLUSION

In the proposed work, the user will scan the item which he wants to purchase with the help of scanner provided by this app. After scanning of the item, a web service will get called which will create a connection with the database of the shop. As the connection is established, the user is now synced with the database and information related to that item is provided to him. In this whole procedure the overall time of

scanning of individual items is saved and thus reducing the time of the shopping.

## VI. ACKNOWLEDGMENT

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## REFERENCES

- [1] For Mobile Authentication:  
<https://firebase.google.com/docs/auth/android/phone-auth>
- [2] For Barcode Scanning:  
<https://github.com/journeyapps/zxing-androidembedded>
- [3] For UPI Payments:  
<https://stackoverflow.com/questions/39270447/upiunified-payment-interface-integration-android>
- [4] For Google Map:  
<https://developers.google.com/android/reference/com/google/android/gms/maps/GoogleMap>