iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** III **Month of publication:** March 2023

DOI: https://doi.org/10.22214/ijraset.2023.49411

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue III Mar 2023- Available at www.ijraset.com

Android Application for Online Advertising of Products and Services

Abhiram Reddy Palle[1], Md Shaik Amaan Hussain[2], Siddhartha Nagula[3], Royyuru Srikanth[4]
[1, 2, 3]*Student,* [4]*Faculty, Dept. of Computer Science and Engineering, Vardhaman College of Engineering, Shamshabad, Telangana, India*

Abstract: ***In this paper, we study the concept of Advertising, we have developed a mobile application in which various companies and users can advertise their products in our mobile application. and the viewers can see those ads and go through a survey on those products and services-related questions. In this application we have designed two interfaces for the viewer of the ad and the publisher of the ad. As we know nowadays online marketing plays a vital role in increasing sales and revenue, so we developed an application on that domain to users to advertise their products and services, as we said at the start that there are two interfaces in the application, the second interface and the most important interface where the viewer reviews the product and service of the advertiser by answering the survey about the ad's image or the video that they see in the application, with this the viewer can ignite interest in the product and can try its service or buy those products, for viewing the content in this application the viewer gets coins in return, for viewing every ad in the application it increases the count of the views of the viewer and here one view is equal to one point and here viewer can see only a few numbers of ads per day, when the views reach the prescribed number of views, the views can be converted into rupees and the viewer can withdraw that money from the wallet by adding a bank account or purchase a coupon related to the product or service in the list provided.so It is an application where the viewer views the ads for gaining points and with those points they can either withdraw money or purchase coupons and gift cards, with this application the advertisers gain popularity with their products and services , the viewer if the products more familiar to the interest of the viewer, the viewer may purchase or try the service or product. In this way the application works, which mostly benefits both party's interests and can be mostly used to increase the sales of the products and services, which in turn leads to profits and betterment of the company or industry.***

Keywords: Android application, Advertise, Product, Service, Mobile, Publisher, Viewer, Survey.

I. INTRODUCTION

Nowadays, Advertising plays a major role in increasing the sales of products or services to the company, As these, they are many products are coming to the market every day but users don't have much awareness about the product quality or features and usage about it, In this case, advertising plays an impact role of selling those products and gives a proper explanation about the product usage and verification of the selling company, It leaves positive feedback to the customers towards the company. Most companies prefer advertising their products and services and investing more money in advertisements. If suppose some new product came into the market, which customers don't know about the product at that time advertisement paves the way to customers to identify the product which they may buy according to their needs. In today's world, there are many products are coming into our daily life, as there is huge competition among the sellers to increase their revenue due to the less influence on the name of the company and proper description the product popularity may decrease and may effect on the annual revenue on the product and cause company a huge loss in the selling of the product. To overcome the problem of how to attract customers to purchase the products, companies try to advertise their products on social media, through articles, websites, and videos which help them to gain the attraction of customers and purchase them.

Advertising is classified among the following types print, direct mail, television, radio, and mobile. Print advertising is a type of advertising which is advertised using newspapers or templates or other printed materials. It is mostly in the form of printed materials. Most companies advertise their products in magazines and journals which are mostly read by specific people, they always try to publish their ads or description about the products in the most popular magazines which are read by many people. Direct mail advertising, is a type of advertising in which companies advertise their products through mail to customers. It involves sending mail to customers. In this advertising, it sends mail to the existing customers who once purchased products from the company and to the customers who subscribed their mail for updates, they send to those people which increases the awareness of the customers about the products.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue III Mar 2023- Available at www.ijraset.com

Television advertising in this advertising the company tries to promote its product by making a 20- or 30- or 60-second video and telecasting it on TV. It costs more compared to the other advertisements. It is telecasted daily on TV channels during some shows. Radio advertising is a type of advertising in which a company promotes its product over the radio. They sponsor it through the radio during breaks. It is also a form of advertising which may not be much effective as Television advertising. Mobile advertising is a type of advertising in which a company promotes its products on mobile devices with the internet. These advertisements appear on web pages, apps, or social media. It has an upper hand over other advertising forms as most people have mobile devices and good internet connections, which they are more known about the products and services offered by the companies.

II. EXISTING METHODOLGIES AND SYSTEMS

As they are many existing sources available for the advertisement of products and services. Each model has its functionality, In the sense, they are specific for showcasing a particular company product and some are particular at promoting specific products and services. One of the existing models Google ads is quite popular in promoting services or products of the companies. Nowadays google ads pays a major role in advertising the details of products on the websites in the form of photos or videos or random descriptions, the readers or viewers who view the site will get popped up the ads of so on the company and in the right or left side of website they will see the different types of ads on different products according to a previous feed of the particular reader or viewer. As we know nowadays social media marketing is tremendously increased many companies hire social media influencers to promote their products online by making videos of the ads and they promote those ads on the social media applications like Instagram, Facebook, Snapchat, and many more which helps companies to advertise the listing of products in online. Another application is adwallet which gathers ads from many companies in the form of videos or images and promotes them in their application where the viewer gets rewards for watching the ads, google survey is also an application by google instead of promoting content it asks questions to the user according to the recent search feed and collects feedback from them like asking the experience about the search and asks to give reviews on their personal experience.

III. PROPOSED METHOD

The increasing of many products and services in the market makes the low popular for companies or newly established companies hard to sell their products or services to the customers, as customers are purchasing from the well-settled companies, who have a good experience and are oldest in selling goods but due to this affect the new companies cannot able to resist or hold their position in the market which leads to huge losses and cannot able to attract the customers to purchase the goods, there is the solution which can increase their sales that is the advertising of their products so that in that advertisement they can say the total details of the product, price , quality and the usage of the products in a proper description , so we created an application on the domain of advertisement to help the small scale industry and retailer to promote their products and services so that viewers of the application can able to look in to the product and may look interest in it and they can recommend or refer someone to purchase or go through the product, and viewers in the application may get rewards and coupons for viewing the ads and answering the survey ,which is related to the product ad which the viewer had viewed in this we have made an application which is used for promoting the products and services of the company in the form of picture and videos in the application.

IV. PROPOSED OBJECTIVES AND OUTCOMES

We have developed an application that overcomes the problem for companies to advertise their products and services, in this application they can publish the ads in form of videos or pictures which will be viewed by the users of the application and answer the survey related to the product they viewed in the application, as in this application we have built two interfaces one is for the ads publisher and other is for the viewer of the ads here the publisher posts the ads and viewer who watches those ads for watching ads, the viewer get coupons or gift cards or coins for the views. The user can convert those coins into currency and withdraw those amounts by adding a bank account to the profile, as we said there is a view count for the viewer so the viewer counts get increased for watching ads, in this application we are attracting users to view the ads to gain coin, so the user view the ads and after viewing the ads they need to answer the survey question related to the ads they have watched then only coins will upgrade in a wallet, so by implementing this we are making the viewer concentrate on the ads and understand the products what it is meant for, where to use and price of the product, this makes the user go through the product, which can ignite interest to purchase them or suggest or recommend to others.

©IJRASET: All Rights are Reserved

A. User Data Protection

The major thing here to remember before implementing the application is having proper Authentication, which allows users to log in via credentials. Let's see how a typical authentication system works.

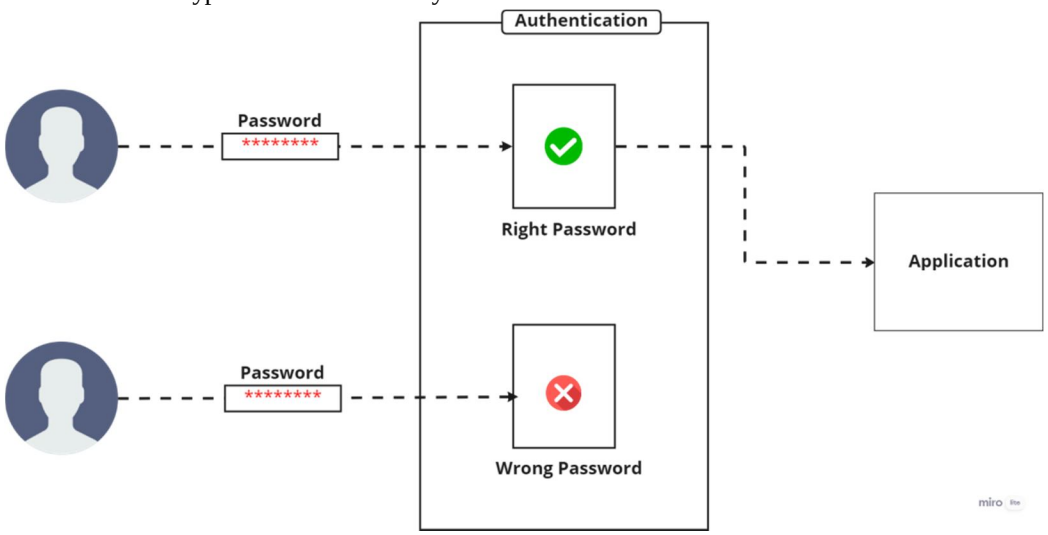


Figure 1: Authentication

So, when the user opens the application, him/her need to log in with the credentials which are stored in the database while registering or creating a new account in the application. If the user logged in with the correct credentials the session time is saved in the database and cache data is stored in the local storage of the device for preventing to logging multiple times, when the user opens the application, it directly opens the content rather again asking the login as the data of previous session stored in the local storage of the device.

V. DATA STORAGE AND COMPUTING

While creating any application, the major concern that arises here is where the data of the application is stored, so we need storage for the application as they are two types of storage available, they are physical storage and virtual storage.

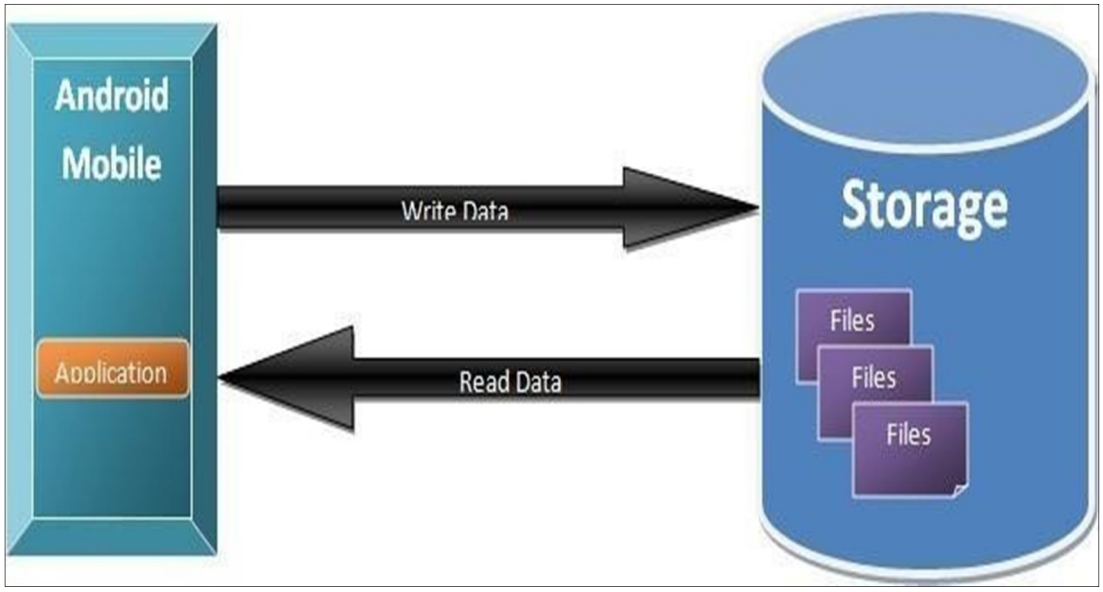


Figure 2: Data Storage

A. Physical Storage

As the name represents, it is a storage unit that stores the data in SD cards, USB drives, and Hard disks, it is also present in the devices as inbuilt storage like RAM and ROM, which in that RAM is used for accessing the data and ROM stores the data, more the RAM the data computing and accessing is fast and satisfies the user. Here physical storage plays a vital role as it stores the application data of the user in the device storage there are two types RAM and ROM where one is used for accessing the cache data and the other is used for storing the activities which are performed on the application by the user.

B. Virtual Storage

In this storage, the data related to the application is stored in a data server which is managed by the database admins, it stores all the data of the users who are using the application, and any updates related to the application are shared in the database server which reflects in the application which is used by the users, suppose if the user deletes the application and he wants to install it again but the user doesn't lose his data as the user's data is stored in the database, when the user logins according to the credentials the application fetches the data of the user when last he/she used the application.

Here for the virtual storage, we used Firebase which is a cloud database maintained by google, it is open-source cloud storage. we have used Firebase as database storage for our application, as all the details related to the application are stored in the cloud storage, as we used cloud storage so we can upload all the data over the internet and extract data over the internet which can be accessible all over the world. The main advantage of using Firebase is we care least about maintaining the data, as Firebase is a built-in cloud storage that has many built-in functions which support the data automatically without any database admin as admin no need to worry about the security of the user's data as it is stored in buckets each bucket has its own unique key which prevents collisions and other problems, it is a combination of cloud and database.

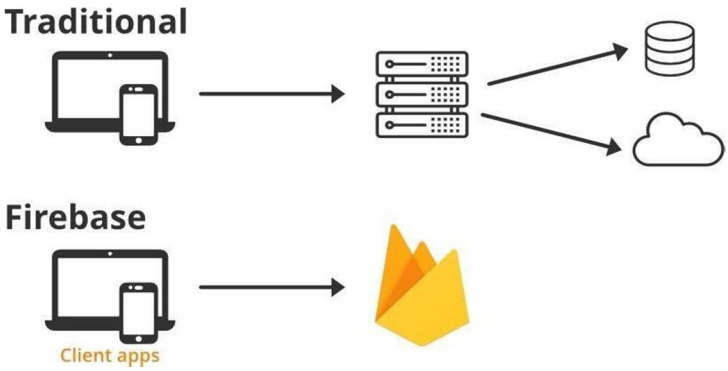


Figure 3: Firebase Real-time Database

VI. PROPOSED MODEL

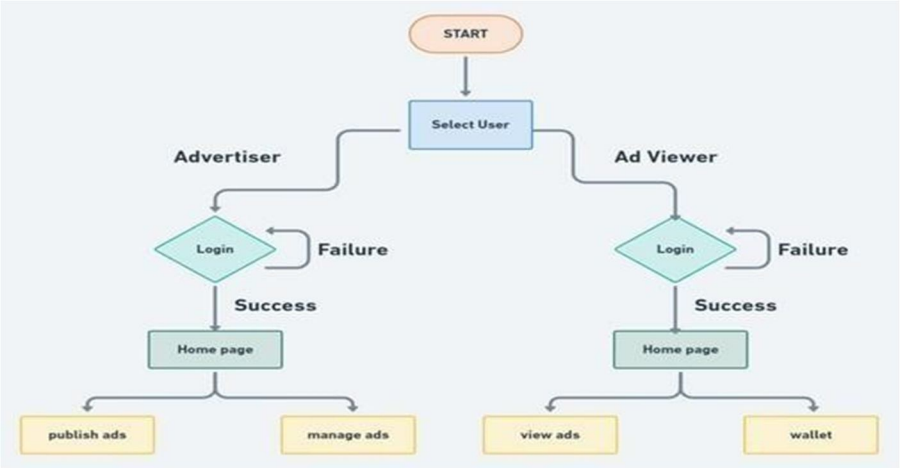


Figure 4: Proposed Model

As the above model and the figure describes the working procedure of the application and the number of objects involved in the application, we implemented three interfaces publishing ads, viewing ads, and wallet to check coins after logging in to the application.

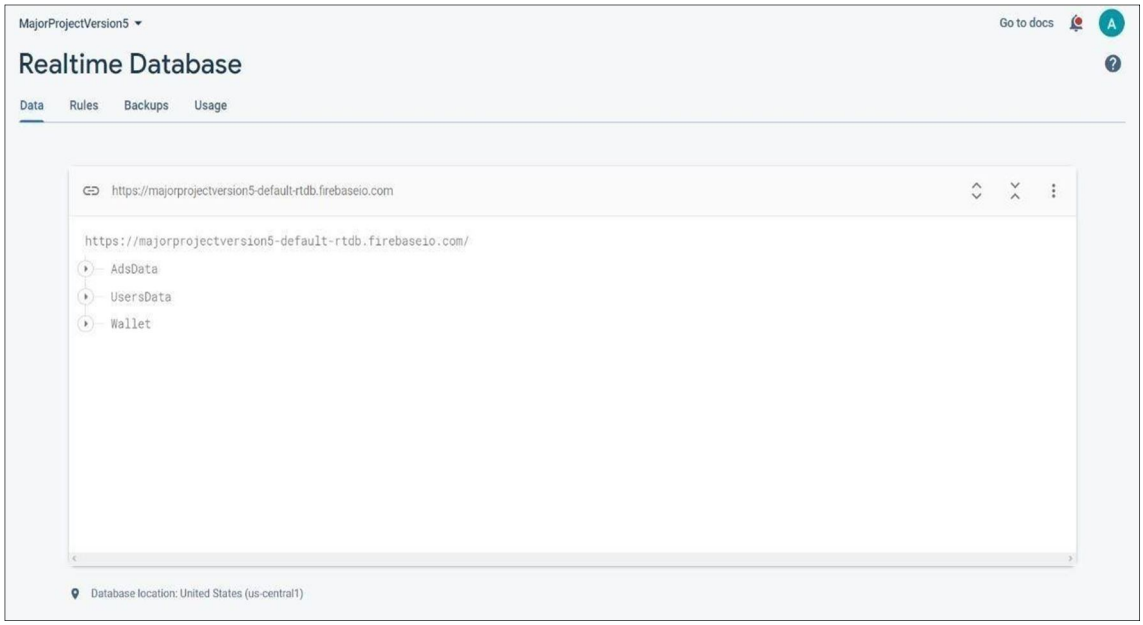


Figure 5**:** Firebase Realtime Database

VII. RESULTS

A. Overview Of The Application Process

The overall application process is demonstrated in Fig. 7. It mainly consists of 19 operations, which include user authentication using email and password, publishing ads to the Firebase Real-time Database, and retrieving ads into the mobile using Firebase Server. Based on the output of the survey, the coins will be credited into the wallet, and the wallet details are stored in the Firebase Real-time Database.

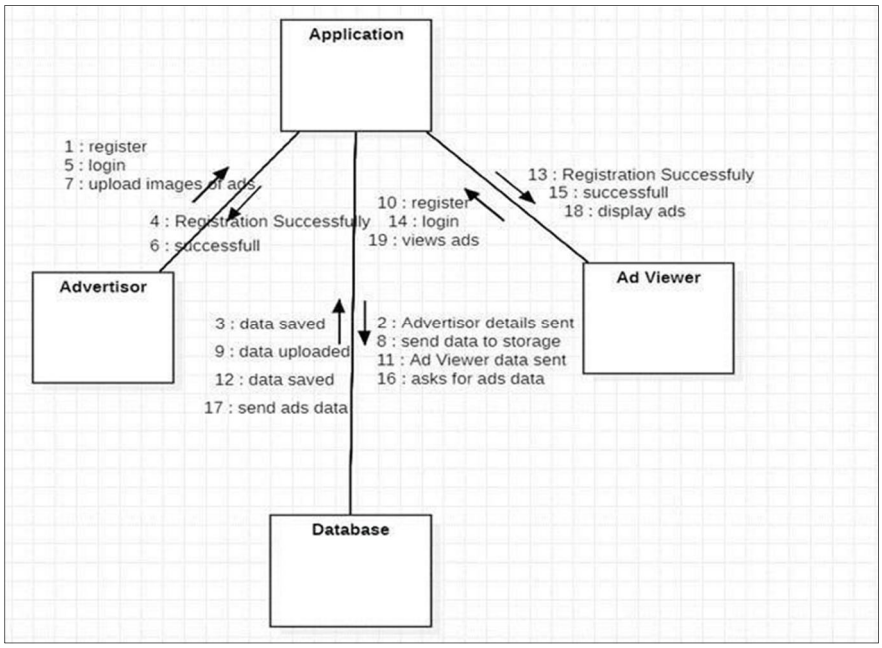


Figure 6: Working Procedure of Application

B. Security And Authentication

To demonstrate the use of authentication we used an email account, in below figures shows the clear procedure of how the process works. The credentials such as username and password will be stored in the Firebase Realtime database and during login the credentials entered in the app will be verified with the credentials stored in the Realtime Database.



Figure 7: Registration Screen



Figure 8: Login Screen

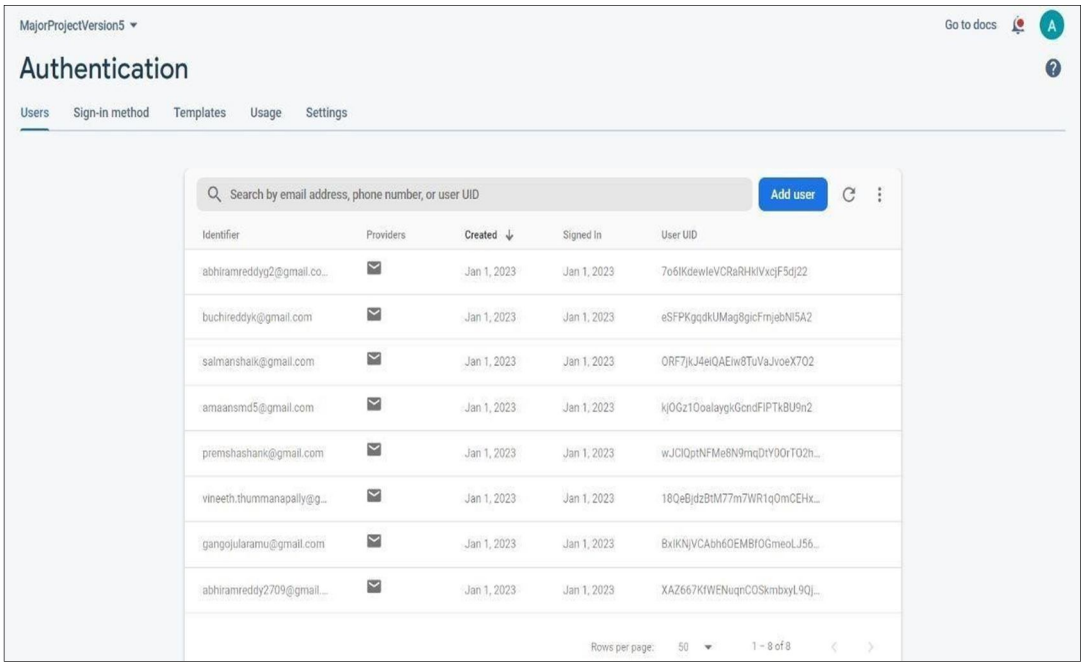


Figure 9: Users Data in Firebase Database

The Figure 9 shows about the details of the application users stored in the Firebase Authentication and they will be used to verify the credentials from the login activity.

C. Proposed Application

In this section we give the leading working of the application, as we know the application is majorly focused on the advertising domain, we here concentrate on publishing ads and viewing ads in our application. After registration and login tasks are finished, we move to the next task which includes publishing ads, viewing ads, and wallet of the user.

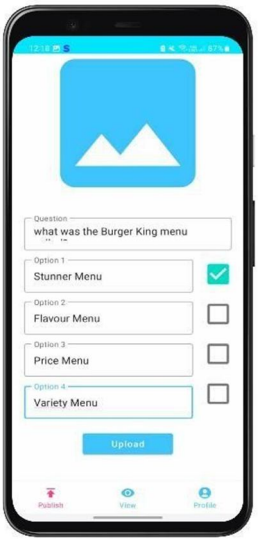


Figure 9: Ad Publishing Screen

1) *Publishing Ads Tab:* It is present at the bottom left of the bottom navigation bar in the app as shown in the Figure 9. This part of the app is used for publishing the ads to the cloud database in the Firebase. The ad details will be stored along with the survey, which includes questions and answers.

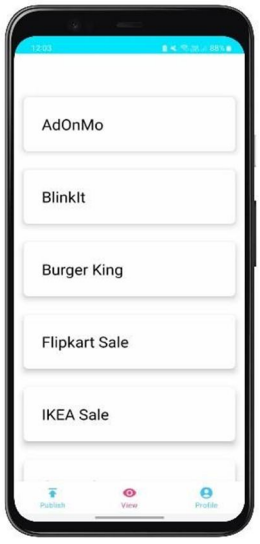


Figure 10: Ad Viewing Screen



Figure 11: Ad Display

2) *Viewing Ads Tab:* It is present at the center of the bottom navigation bar. This screen contains all the ads which are associated with the app as shown in the Figure 10, when the user clicks on the specific ads it opens the ad as an image as shown in Figure 11 and after 10 secs a survey prompt appear which asks the question related to the previous ad viewed by the user and after correctly answering the survey question the response stored in the database.

©IJRASET: All Rights are Reserved

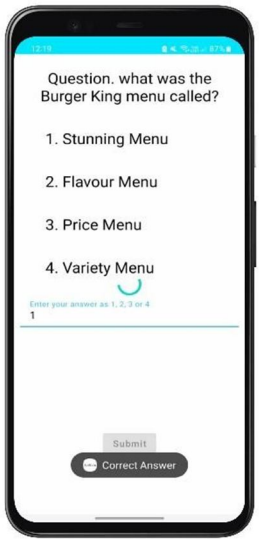


Figure 11: Survey Screen



Figure 12: Wallet Screen

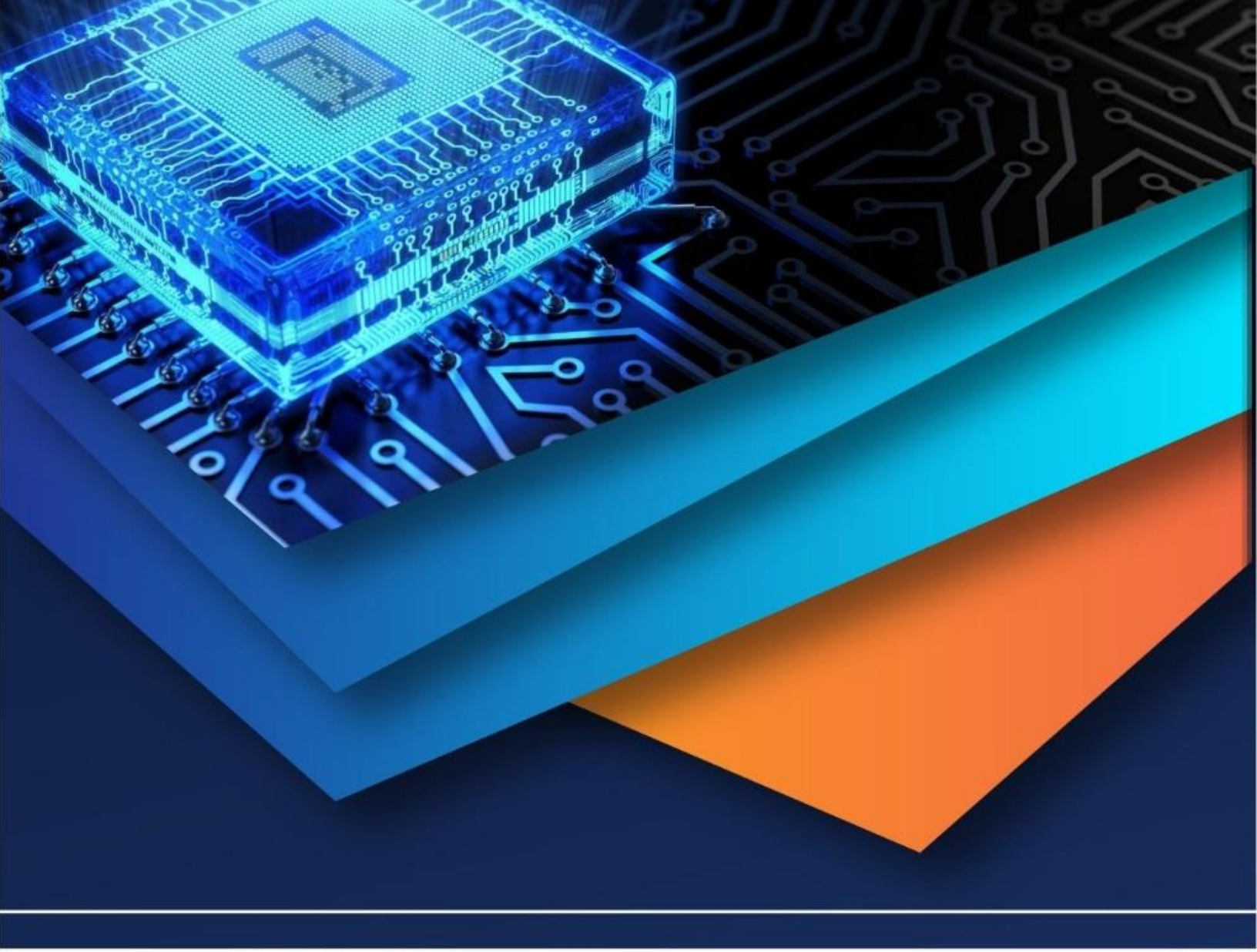
3) Wallet Tab: After viewing the ads, a survey prompt as shown in Figure 11, it appears and asks a question related to the previous ad viewed by the user, and after correctly answering the question, for every correct response user gets rewarded with wallet coins as shown in the Figure 12, which can be used for buying the coupons or offer to the products and services of the ads associated with the application.

VIII. CONCLUSION

The increase in the number of products and services launched every day has contributed to the increase in the need for marketing and promoting their services. But there is a lack of platforms for advertising products for small and mid-scale companies. For any company, marketing is crucial because that's what influences a company's overall growth. The proposed and developed android application will act as a medium for those companies which can attract new users by promoting their services. This app will allow companies to publish their ads and allow users to watch them and answer surveys about those ads, which may also lead to a user purchasing the product or service or it can also increase the popularity of the product among users. In the future, the app could also allow its users to convert the coins into real cash and withdraw the money into bank accounts. In a way, it is helpful for a publisher who wants to publish and an ad-viewer who wants to earn some rewards. This application could be the newest way of marketing products and services in the near future.

REFERENCES

[1] D. Lugovoy; E. Pobedinskaya." Advertising in popular instant messengers" in 2018 IEEE Communication Strategies in Digital Society Workshop (ComSDS).
[2] DE. Ezhova; E. Zamozhnykh." Communication strategies in public service advertising" 2018 IEEE Communication Strategies in Digital Society Workshop (ComSDS).
[3] Samuel Andi Kristyan; Suhardi; Albarda; Budiman Dabarsyah." Targeted advertising optimization using vector space model for online behavior on news portal computational advertising case study: Harianjogja.com" 2013 Joint International Conference on Rural Information and Communication Technology and Electric-Vehicle Technology.
[4] Anna A. Dorofeeva." Simulation of Advertising Activity in Tourist Business" 2018 IEEE International Conference" Quality Management, Transport and Information Security, Information Technologies".
[5] Hengbo Du; Yanfeng Xu." Research on advertising strategy based on game theory" in 2011 International Conference on Electrical and Control Engineering.
[6] E. Phaisangittisagul; Y. Koobkrabee; K. Wirojborisuth; T. Ratanasrimetha; S. Aummaro." Target Advertising Classification using Combination of Deep Learning and Text model" in 2019 10th International Conference of Information and Communication Technology for Embedded Systems (IC-ICTES).
[7] Berliana Kusuma Riasti; Ramadhian Agus Triono Sudalyo; Fiddin Yusfida A'la; Eko Harry Pratisto." Implementation Analysis on the Advertising Information System", in 2022 1st International Conference on Smart Technology, Applied Informatics, and Engineering (APICS).
[8] Naoya Kuwamura; Miharu Fuyuno; Riichi Yoshimura." Application of Gamification to Online Survey Forms: Development of Digital Template System "Bingo Survey" and Evaluation" in 2021 Nicograph International (NicoInt).
[9] Huimin Qin; Jinfeng Lei." The Application of Virtual Reality Technology in Advertising Communication" in 2019 International Conference on Virtual Reality and Intelligent Systems (ICVRIS).
[10] Guang Qiu; Jiajun Bu; Chun Chen; Feng Zhang." Intelligent Advertising for User Generated Content through Sentiment Analysis" in 2009 International Conference on Advances in Social Network Analysis and Mining.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)