Pizza Delivery App Using Android Platform

By

Arfan Shah, Bashir Alam, and Mirzonabot Mirzonabotov

To fulfill the requirement of semester project for the course of Mobile App Development

Submitted to:

Dr. Dmytro Zubov

Department of Computer Science

University of Central Asia, Naryn Campus Kyrgyzstan

Abstract

This report describes a mobile application which is intentionally developed to order pizzas and drinks. Different applications have been used to develop this mobile application. Java programming language especially object-oriented Java has been used to develop this application. Moreover, Android Studio is platform used to develop this application. Firebase is used as a database for this project. This is simple application which has beautiful and simple interface which can be easily used by any user. This application is mainly focused in the Naryn community.

Key Words: Java, Android Studio, Naryn, Pizza, Drinks

Problem Statement

With the advancement in technology, we need to need to utilize it to automate things in our daily lives to make it easy. Now a days people are searching for comfortable and easy ways to do things in daily life. For instance, food is one of the basic need and people want to eat it in a comfortable way at their homes. Normal food can be available at homes, but fast food is usually difficult to cook at home. In big cities people order fast food using a delivery app. In Naryn we do not have that facility. If someone wants to eat fast food like Pizza, then he/she must visit a restaurant. A good and efficient Pizza delivery service is not available in Naryn. Here we are proposing a solution for this problem. We have made Pizza delivery app, using which people will be able to order delicious Pizza while setting at their homes. People do not have to visit a restaurant to enjoy a Pizza rather they can enjoy it at their homes using our Pizza delivery app.

Another reason for choosing this project is the related to the safety of people. As we know that people are going out to eat delicious pizza at night which can be really dangerous. Going out at night can attract thieves and other criminals. Specifically for women, going out at night is more dangerous as anything can happen to them. So, to avoid any sort of risks, it is better to stay at home, order a pizza, and enjoy with your family. Analyzing the above-mentioned problems, we have come up with an idea to launch a pizza delivery app which will solve all the problems described above.

Introduction

- **Goal**

The aim of building this project is to help our outside community. As we have discussed the issues in the problem statement part. We want to resolve those using the latest technology. It is our utmost desire and responsibility to contribute to our society. By building this mobile application we are playing our role to make Naryn community more digital.

- **Previous Work**

With the advancement of technology, we need to do things online as it is very easy and convenient. Technology has changed the way we live, and it is making our daily lives more comfortable. Few decades ago, we were visiting a Pizza hut to eat a Pizza and enjoy the moment with our dears and nears. Now we can sit at our homes and order a Pizza and it delivers to us within some time. Below are listed some previous work done on the pizza delivery system. Gupta and Shrivastav claim that with rapid development in technology the number of online businesses has increased swiftly. Online business is easier and less costly compared to offline. Now more people have started online businesses. The authors are suggesting having a web-based pizza ordering management system. The authors say that it is usually very dangerous to go out at night to eat pizza in a comfortable way. It is also cumbersome and inappropriate to go to a restaurant at unusual times to eat a pizza. It is better to sit at home and order a delicious pizza and enjoy it along with family members. One of the aims of the authors was to determine human behavior while ordering pizza. They wanted to know what type of pizzas are ordered by the customers (2021, Gupta and Shrivastav).

RestApp is one of the top ordering systems which also gets pizza orders and has a good delivery system. RestApp gets above 1.5 million orders daily and has more than 900 thousand users which is a very huge number. RestApp operates in almost

8 countries (RestApp, n.d.). Mojo pizza is one of the best pizzas cloud-based kitchen in India. It has more than 120 stores across some cities of India. During Covid-19 Mojo Pizza managed to sell more than 0.6 million pizzas. Mojo Pizza's android app is available in Google Store (Mojo Pizza, n.d.). Moreover, Domino's Pizza is an international company which has online delivery system, and it also has mobile app where one can order. Domino's pizza is American company which operates in more than 90 countries, and it is the largest pizza company in the world (Domino's Pizza, n.d.).

- **Approach**

  We applied our idea using Java programming language. We have used Android studio to develop the mobile application. Moreover, we used firebase as our database which is free resource. As we all know that free resources have many problems. And the input data has also limitations. If we could have bought a database that would help the app to run smoothly and securely. If we buy the database, then we would not have limitations in saving our data.

  This app is not fully functional commercial app yet. We have work more on its interface to make it more attractive. We haver to really work hard to make the orders interface beautiful. As we had limited time during our semester, so we managed to build that. In future we are planning to make this app a commercial mobile application which will help the Naryn community.

Methodology

We have used both waterfall and iterative methodologies while building out mobile application. First, we have made an outline and a prototype for our application in Canva and Figma. We worked on that design and build interface for our mobile application. For the front-end part, we used waterfall method as our login page and loading page looks very beautiful.

For back-end part we have used iterative model and it was quite difficult to implement all in the first go. We faced a lot of difficulties while implementing the part where the application gets
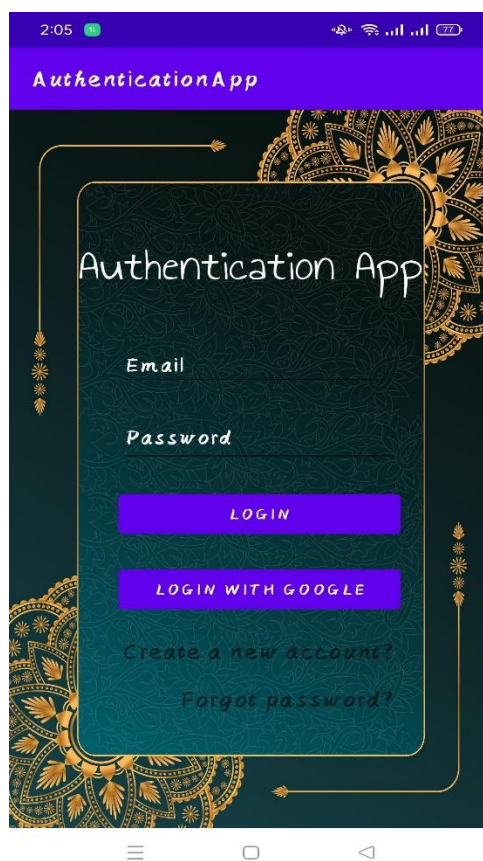
orders from users. We used several methodologies, some worked fairly, some worked well, and still, we are experimenting this that. So, this is an iterative way where we are continuously checking which is the best way to do that.

Results

This is the loading page our mobile application. This welcomes a user to Pizza Hut where he/she can know that they are in correct app to order a pizza.

After this page the user will be directed to the login and sign-up page. In the login page we have an option to login if we have already sign-up to the database. The user needs an email and password to sign in. The user has another option to login using the google gmail account. If the user does not have signed up already and does not want to sign in using gmail then he/she can click on the create a new account by clicking on the create a new account. If the user has forgotten password, then he/she has to click on the last part which says Forgot Passoword? You can look at the interface for both pages in the below pictures.

If the user is not signed up already then, he/she can click on the create a new account of the above shown image and the user will be directed to the page shown below. In the sign-up page below the new user is asked to put the name of pizza, url of the image, and price of the pizza. After filling that information, the new user will click on the add to the pizza button as shown in the below.

2:06

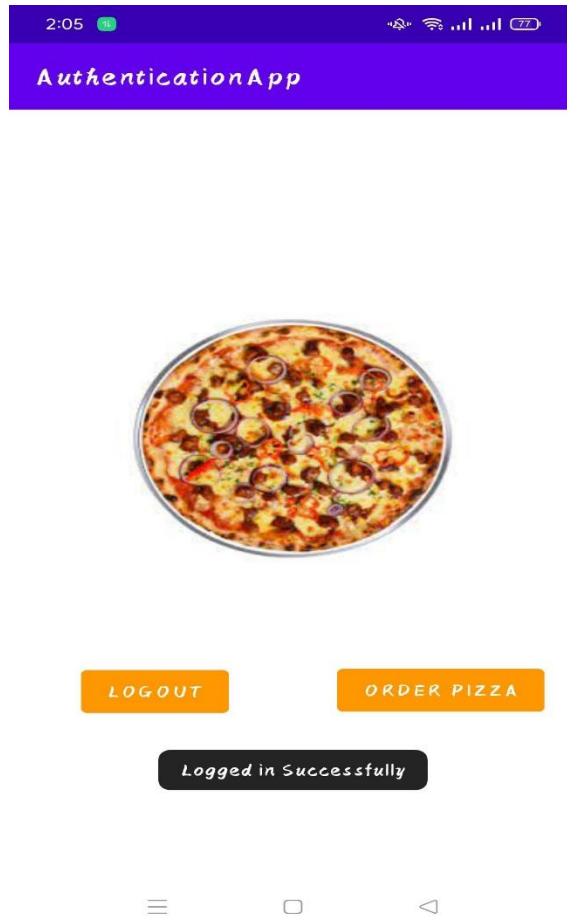AuthenticationApp

Add the details of the new Pizza

Name of the Pizza

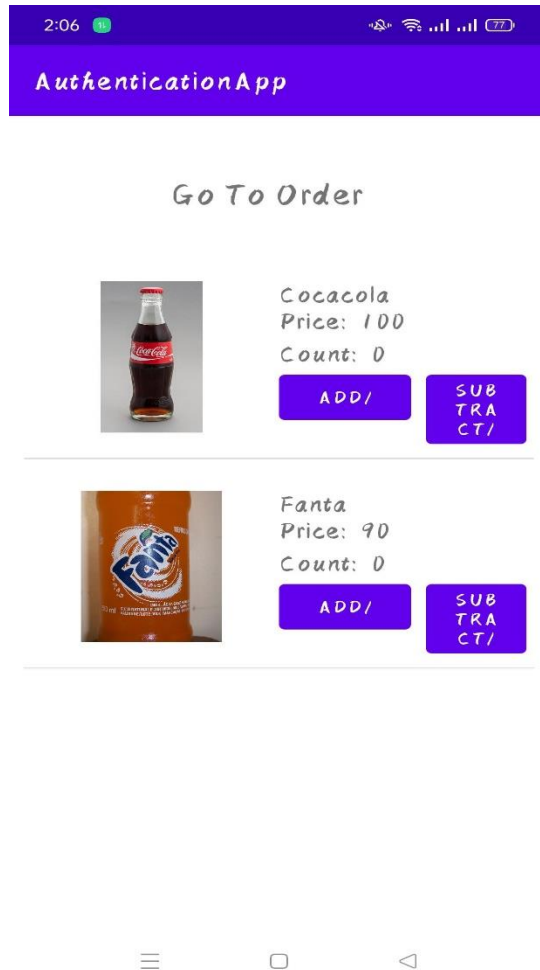Url to an Image

Price Of The Pizza

ADD TO THE PIZZA

If you are successfully sign-up into the database, then you will be directed to the sign-up page. After you sign in then you will be able to go to the page below. There you will be notified that you are successfully logged into the application, and you will be able order the pizza there. In that page you will see two buttons: one will ask you to log out if you want so. The other button will let you order a pizza as shown below.
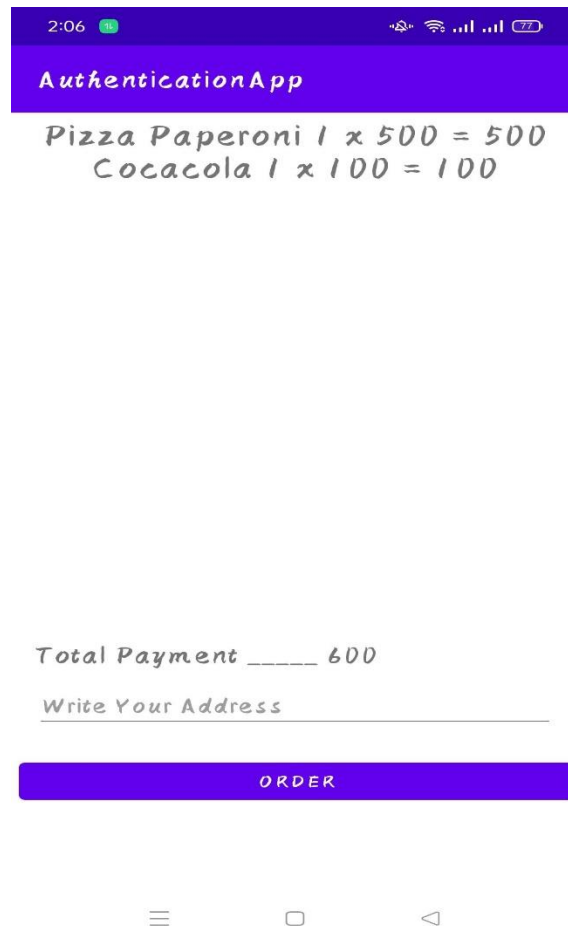
After this page when you will click order pizza then the application will direct you to the page shown below. In the page you can see a text on the top where it says go to drink. When you will click that it will take you to another page where you will be able to order drinks. Below that text there is option to choose a pizza with its image. You will be asked to order pizza from the list. For now, there are only two pizzas shown but when the pizzas will be added you will be able to see all of them and from you can order the pizza. You will also see the name of the pizza and its prize. So, order accordingly by looking at the page shown below.
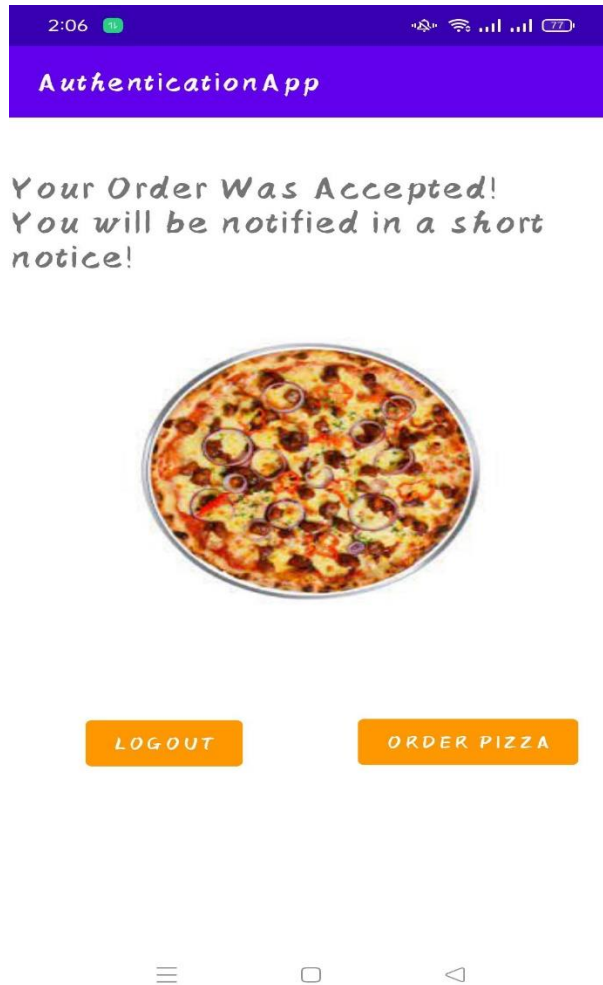
After you finished ordering pizza then you can click on order drinks, and you will be directed to the page shown below. In the page below you will se that there is a text at the top which says go to order and when you will click that you will again go to the pizza order page shown above. Below that text there are options to select drinks. For now, we have only two drinks but there will be more in future. You can pick the drinks and proceed.

When you are done with ordering drinks then you will be directed to the page shown below. When you are done with picking pizzas and drinks the you will be directed to page below where you can add your address and click on the order button and your order will be placed.

After you order your pizza and drink, you will give your address and your order will be completed. Then you will be directed to the page shown below. In the page below you can see that there is a notification which says that your order is accepted by the system and you will be notified soon, which means your order is placed correctly.
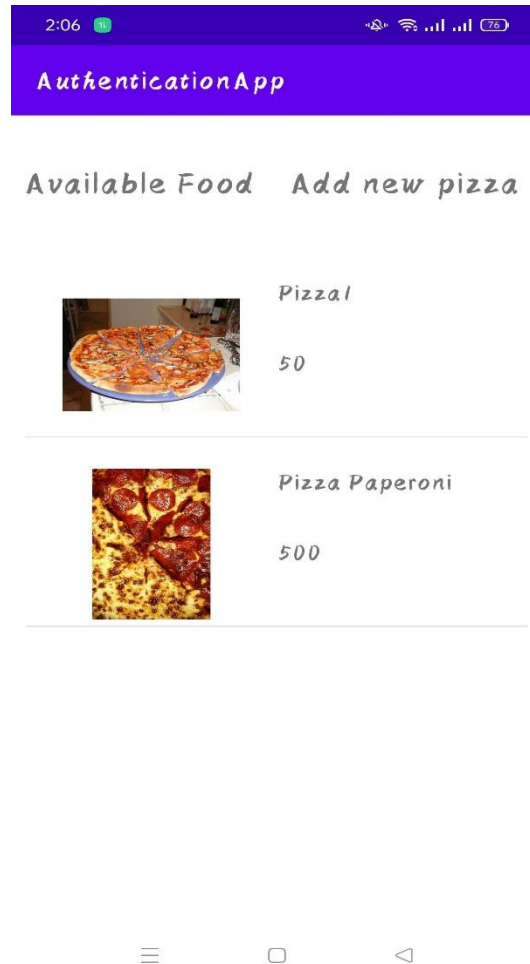
After you are done with your ordering you will log out from the application, and you will again the sign-up page.

There are two pages for admins where they can see all orders which have been done. In the page shown below the admins can see all orders done. In the page shown below admins can see either the orders are delivered or not.

The admin will have also right to access the page where he/she can add other available pizzas. The admin can also select the price of pizzas and orders by going to the page shown below.

Discussion

We have successfully developed whatever we have promised. We have developed an android mobile application to order pizzas and drinks. We have applied both waterfall and iterative models to develop this application. We have added the required features for now. We have added enough features to order a pizza, order drinks, and complete the ordering process. We have also added features so that the user can see the price and image of the available pizzas and drinks. We have also successfully developed the admin panel using firebase where the admin can add new drinks and pizzas. The admin can also see the orders are delivered or not. For now, we think these features are enough.

In future we are planning to make this mobile application a fully commercial running application for the Naryn community.

Conclusion

We have achieved our target of building a mobile application to order pizza. The interface is very friendly and easy to use. Anyone can grab a phone and sign up as a new user and use our mobile application. Our loading page very attractive as we had planned., it contains a picture of pizza which explicitly tells what the application is about. We have made separate pages for every function. For instance, login page is separate, new users must sign up in a new page. Moreover, there are separate pages for pizza order, drinks order, and also to store the ordered items. Our application also notifies the user when his/her order completes by saying your order is placed and you will be notified soon. If we don't have the desired pizza or drink the application also tells the user that currently we don't have the item which the user asks for. In a nutshell, we achieved whatever we had planned for.

References

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Appendices

Our appendices consist of computer programs which have separately sent you instead of adding here. We could have added the code here but it will be very messy, so we decided to send you the whole application containing all the code.