

# Mobile Apps 2024

## Shopping Application

### Assignment 4

Due: 22 April 2024 11:59PM

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### **Work**

To do this assignment, I first drew the designs for the screens that you can see below, and then coded.

Then I tackled the navigation. I schemed the routes between the different screens in the document you can see below, then coded. In order to navigate from screen to screen, I used the navigation Controller from Jetpack Compose. I also built the app around the Scaffold component to display the bottom app bar. The overall navigation is organised around three main screens : the Categories, the Cart and the Profil.

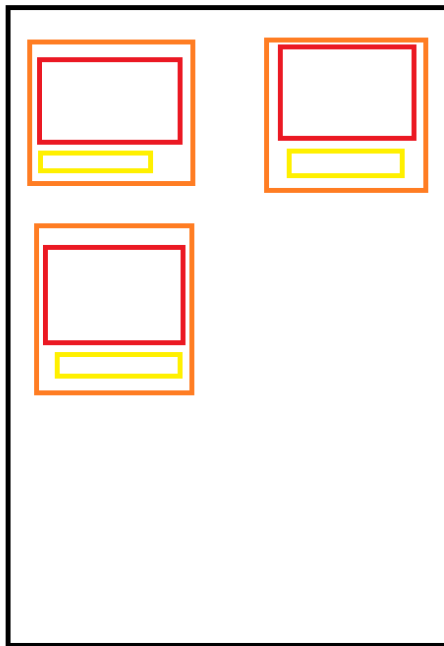
To get the Authentication working, I used Firebase. The user can register and login using a password and an email. Furthermore, once the user is logged in, the application verifies the user's token every time the bottom app bar is pressed. That is because I noticed that checking the token at every action was slowing down the application too much. Additionally, the user can choose to log-out or to delete his account via the Profil screen.

To store the user's data and my products, I used the firestore from Firebase's tool pack. In order to populate my database with products, I asked chatGPT to generate some samples, which I then pushed into my firestore via the application. However, as you may have noticed, some images do not fit the descriptions. This is because the image is being randomly retrieved from a pack of images related to the product's name.

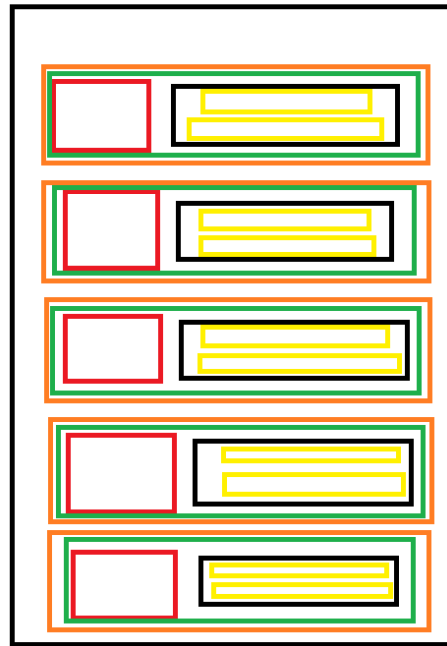
You may see the History section to view the project step by step.

## **Designs**

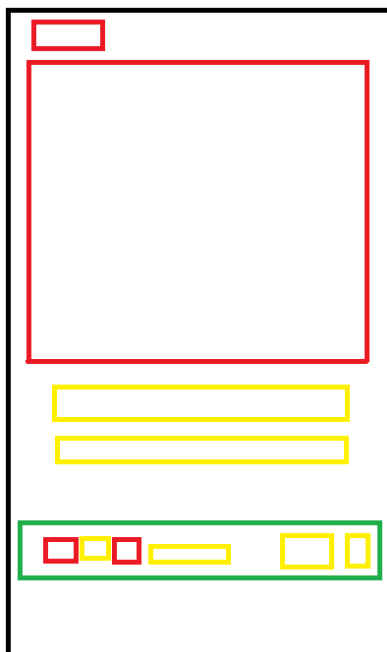
## CATEGORIES



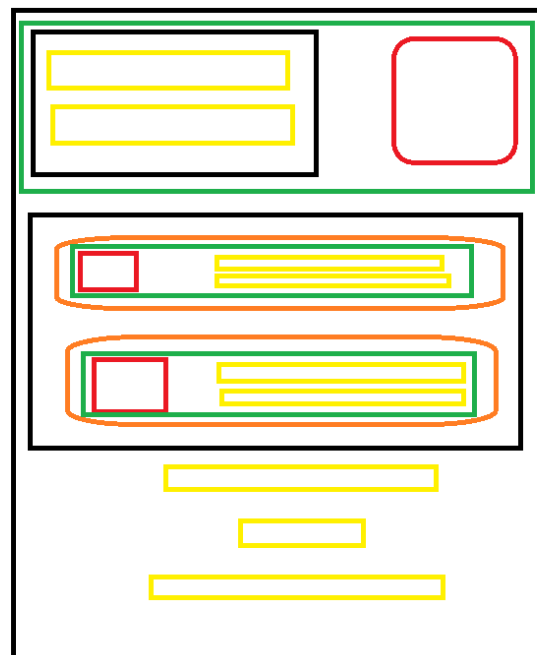
## PRODUCTS



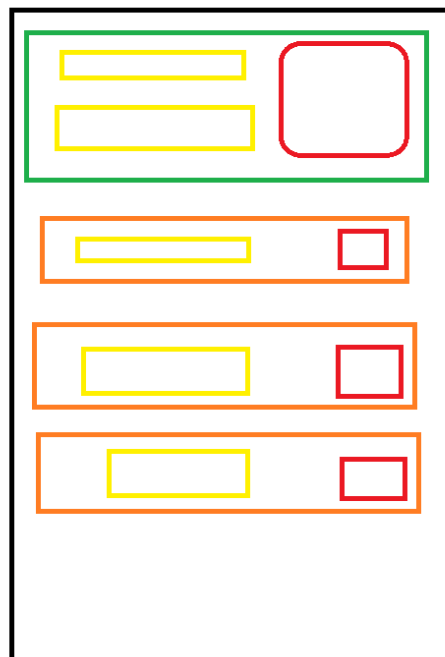
## PRODUCT



## CART



## PROFIL



## Legend

Column/**Row**/**Image**/**Text**/**Card**/Spacer

## Screens

For the login and register screen, I used the code from the first assignment.

Then the screen named Categories uses a **GridLayout** to display the categories of products fetched from the firestore. Each **GridCell** contains an image and a Title.

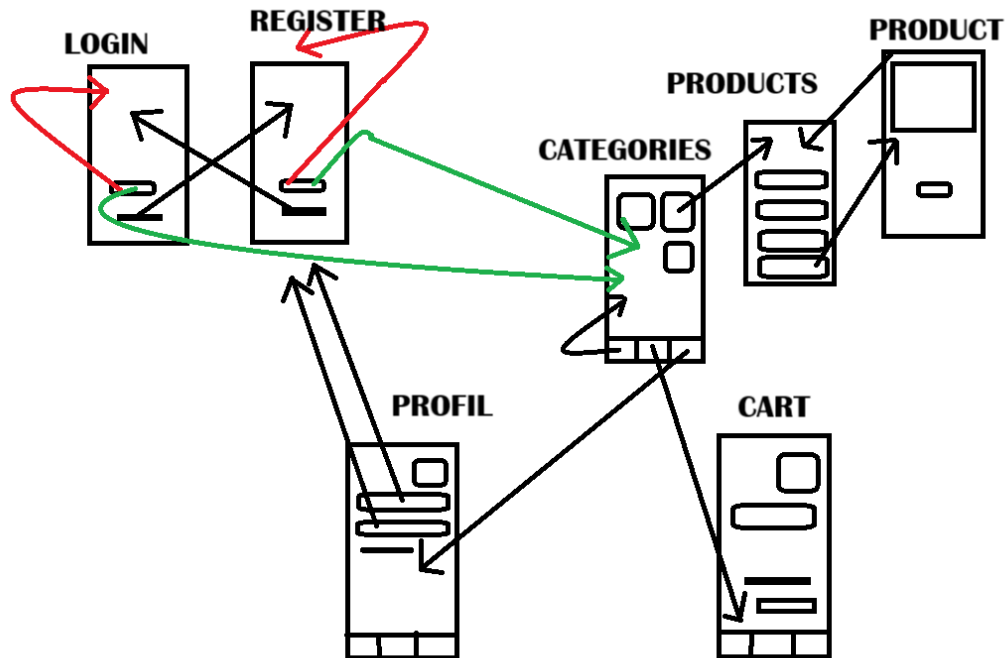
Moving on to the products screen, which is basically a **LazyColumn** displaying the items from the firestore.

Now, about the product screen. I reused the same design from the **movie assignment** and modified it slightly in order to fit it in the shopping application.

The Cart screen features a **Header**, which contains an image and some text. Then there is a **LazyColumn** that lists the orders made by the user fetched from the firestore.

Finally the profile screen is a **Header**, followed by three clickable **Cards**.

## Navigation



The navigation is pretty straightforward. Once the user is registered or logged-in, he is redirected to the page that displays the Categories of products. From that point on the bottom bar will appear on every screen. The user can either : see his Profile, see his Cart or click on a category image to see a list of related products. Once on the Products screen, upon clicking an item, the user goes to a buying screen. On the Product screen, the user can place orders on the products, or go back to the list of products using the upper left back arrow.

## **History**

### **STORY 1**

I have encountered a big issue with my Cart. When deleting an object, the cart would not update. To solve this, I simply refresh the Cart Screen once a delete icon is pressed.

### **STORY 2**

On my emulator, the images are fetching very slowly from the firestore. About ten seconds. That has led me to implement a waiting screen. In fact it turns out to be useless because the download is much faster on a real phone.

### **STORY 3**

I had no intention of making a bottom bar. Except when I found out that navigation would be much harder without it, I did it.

### **STORY 4**

At first the content of a Cart was stored locally. It turns out it was a lot easier to store it online, so I rebuilt this system.