

CMPS 312 Mobile Application Development

In this lab, you will:

- Learn how to interact with lists such as search, sort.
- Learn how to navigate between screens.

PART A

1. Use the application “Qatar 2022” that we created in the previous lab.
2. The json file has been updated with a new item seating capacity, so update the Stadium class , stadium card and the stadiumlist.

```
{  
  "name": "Al-Gharafa Stadium",  
  "city": "Al-Rayyan",  
  "status": "Major renovation",  
  "imageName": "al_gharafa",  
  "seatingcapacity": 2412
```

3. Add a search box to the top App Bar

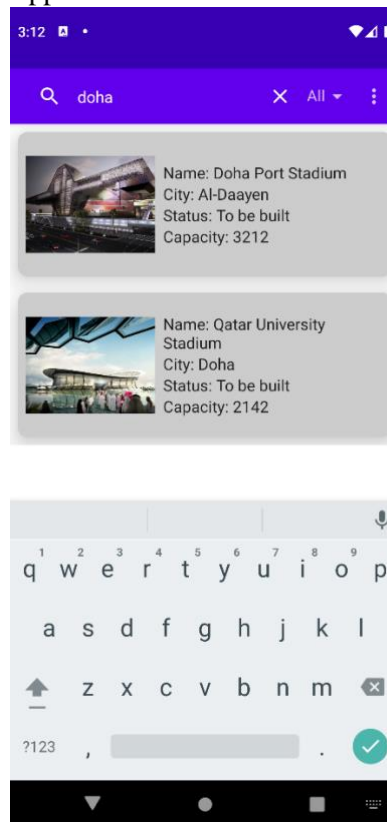


Figure 1. Search Box

4. Create a dropdown list that filters the stadiums based on the status (To be built, Major renovation or All)



Figure 2. Dropdown

5. Create a sort menu that sorts the stadiums based on Seating capacity, and alphabetically based on city and stadium name.

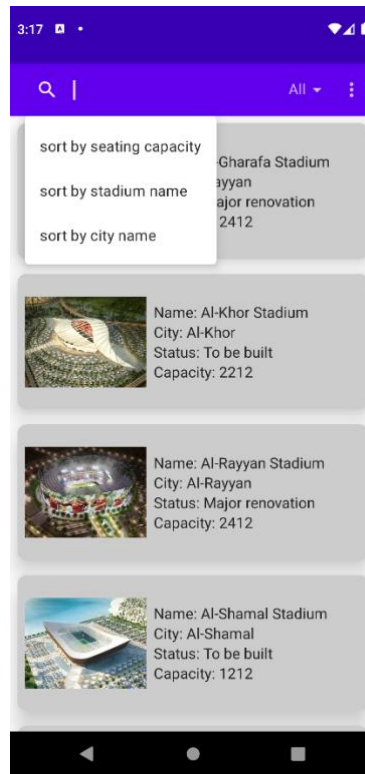


Figure 3.Sort options

The stadiums are sorted based on seating capacity (Lowest to highest)

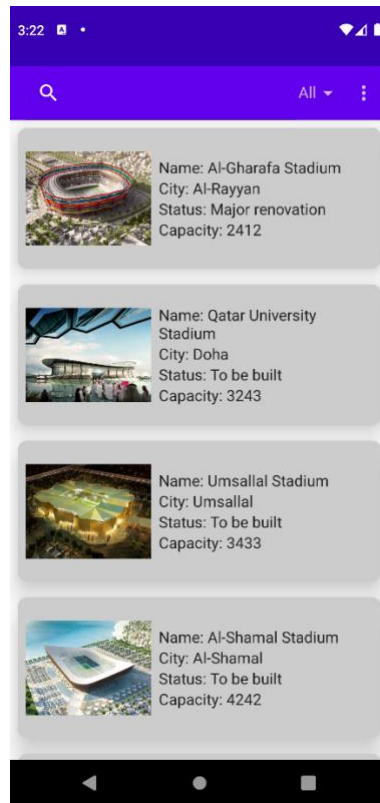


Figure 4.Sorted based on seating capacity

PART B (NAVIGATION)

In this part we will create a banking application wherein we:

- Will navigate from one screen to another
- Pass values between various screens

Add the following dependency in build.gradle(:app)

```
implementation "androidx.navigation:navigation-  
compose:2.4.0-alpha04"
```

1. Create a composable Navigation function that hosts the *NavHost* and the *navController*
2. Create a sealed Screen class that contains objects for each of **HomeScreen**, **FundTransferScreen**, **DetailScreen** and **ConfirmationScreen**
3. Create composable for all the screens. The name of the composable should be the same as the name of the object (of that screen) in the Screen class.
4. The HomeScreen UI will be as follows

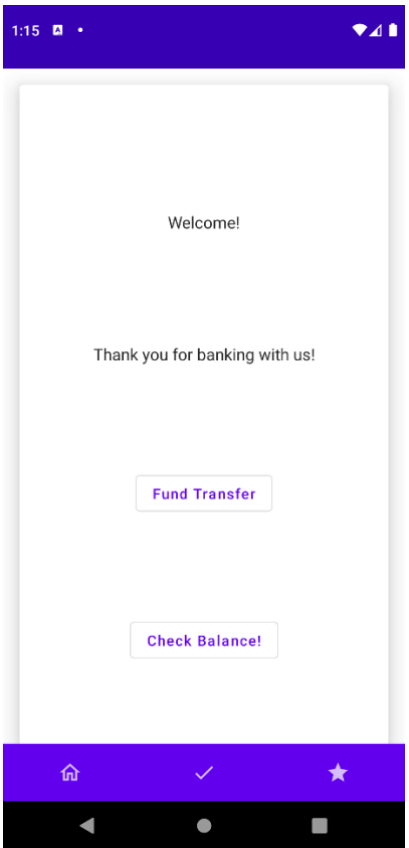


Figure 5.HomeScreen

5. When Fund Transfer button is clicked it navigates to FundTransfer screen whose UI will be as

1:15

From Account Number

Amount

Beneficiary Account Number

Beneficiary Name

Fund Transfer

Figure 6.FundTransferScreen

6. After filling the details and On clicking the FundTransfer we will be navigated to a Confirmation page
7. On clicking the Fund Transfer button and navigating to the ConfirmationScreen, we pass all the parameters such as Account Number, Amount, Beneficiary Account Number, and Beneficiary Name to the ConfirmationScreen.
8. The confirmation page has been passed all the parameters from the FundTransfer page.
9. The confirm button raises a toast

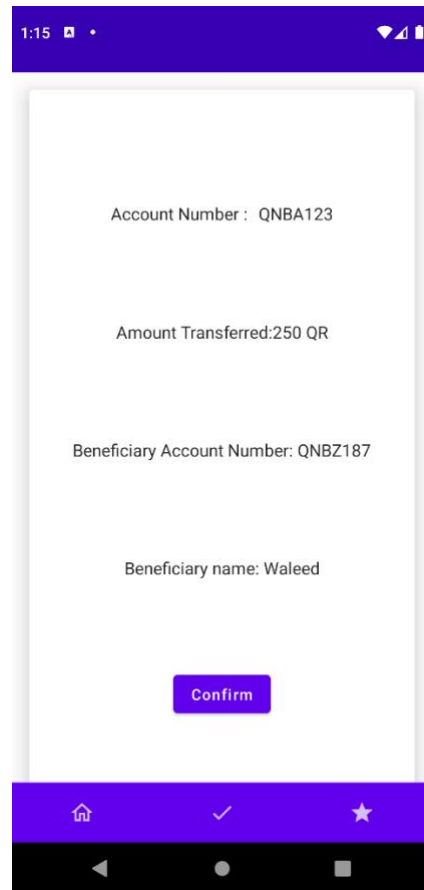


Figure 7.ConfirmationScreen

10. The bottom navigation bar navigates between HomeScreen, FundTransferScreen and DetailsScreen