**How to Use this Template**

1. Create a new document, and copy and paste the text from this template into your new document [ Select All → Copy → Paste into new document ]
2. Name your document file: “**Capstone_Stage1**”
3. Replace the text in green

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## GitHub Username: **ahmedgamalaglan**

# Matchatak

## Description

This great app 😆 will help all football fans all over the world, you can search for matches as well as other things like competitions, teams and players.
You can do all these things depending on the area you choose to search.

## Intended User

This app is for all football fans all over the world at all ages who are interested in the football.

## Features

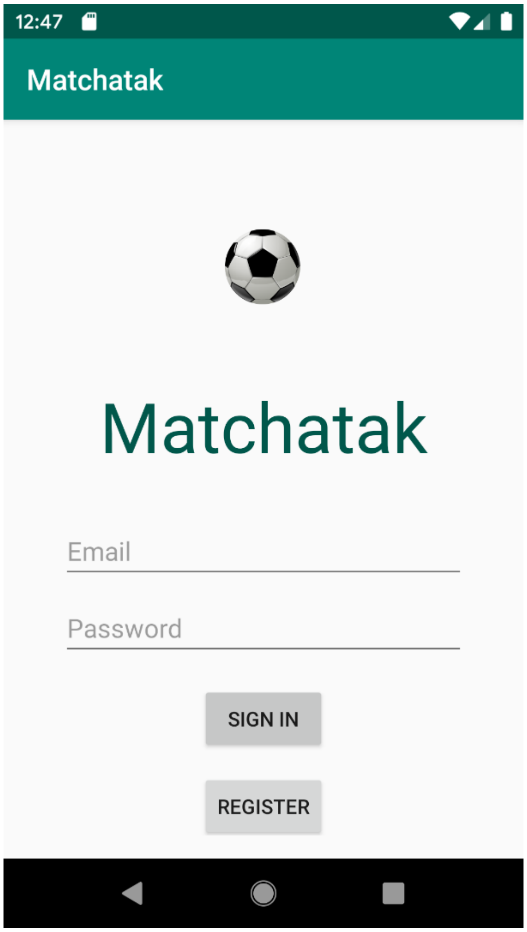
List the main features of your app. For example:

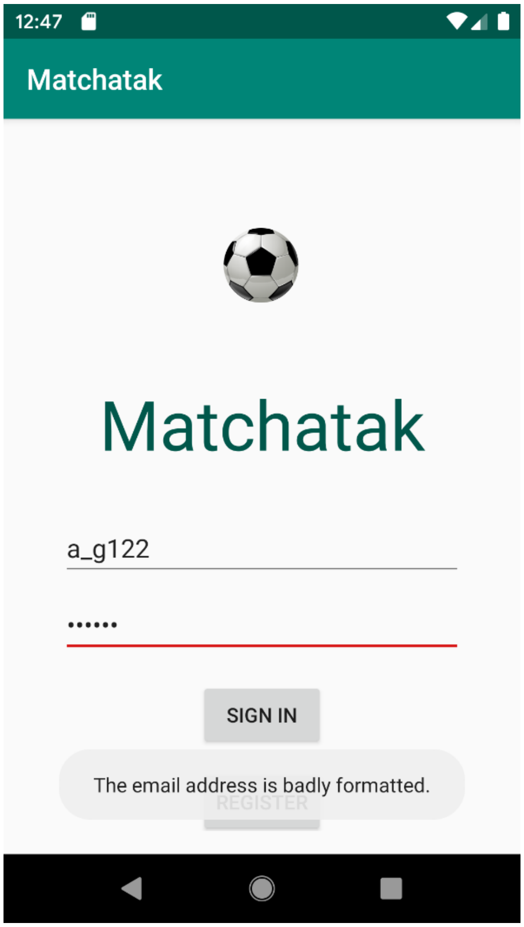
- Show Football Competitions
- Add Favorite Competitions to Database
- Show matches and results
- Show teams and results
- Add Favorite teams to Database
- Show team details
- Show Players details

## User Interface Mocks

These can be created by hand (take a photo of your drawings and insert them in this flow), or using a program like Google Drawings, www.ninjamock.com, Paper by 53, Photoshop or Balsamiq.

# Screen 1

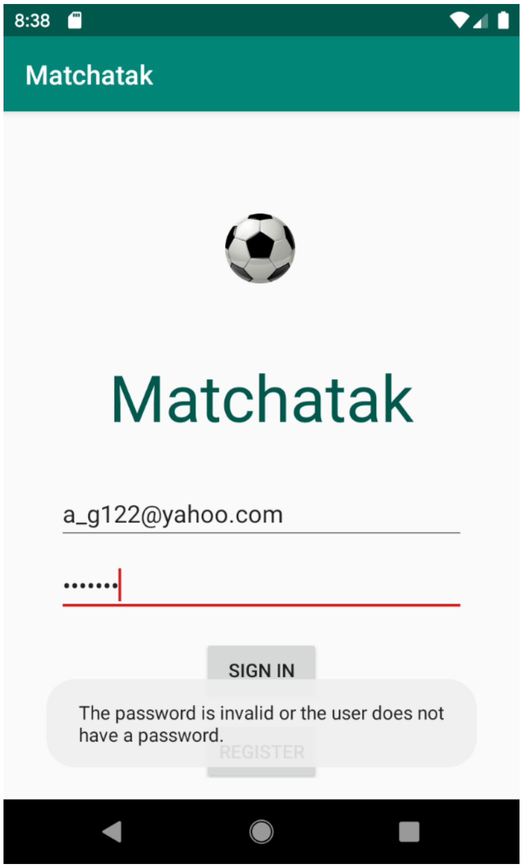




a_g122

••••••

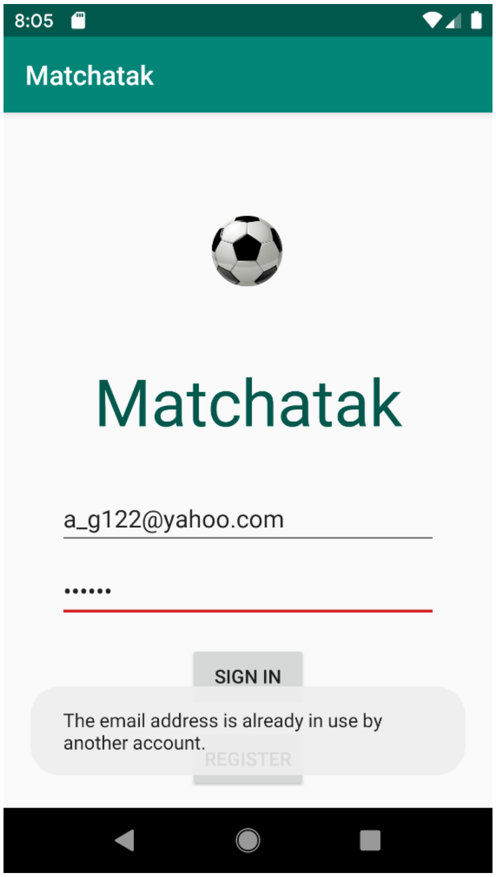
The email address is badly formatted.



a_g122@yahoo.com

•••••••

The password is invalid or the user does not have a password.



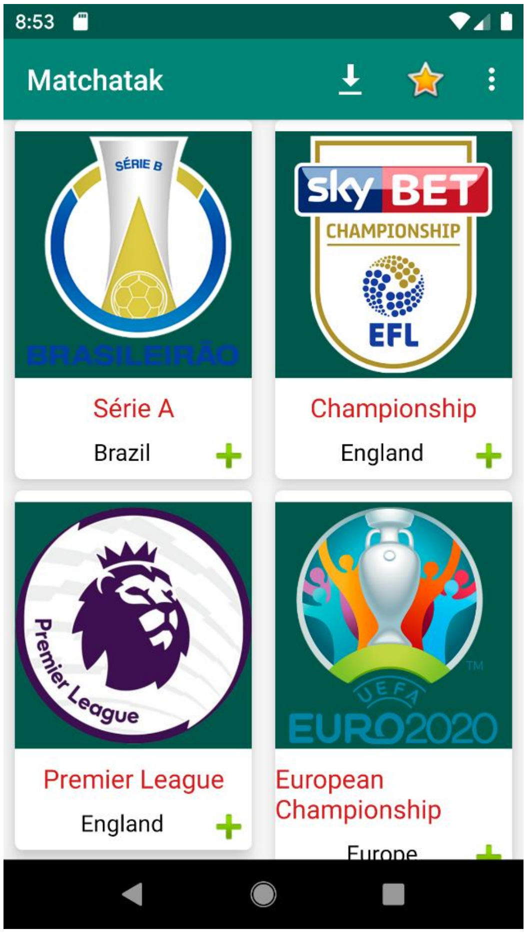
a_g122@yahoo.com

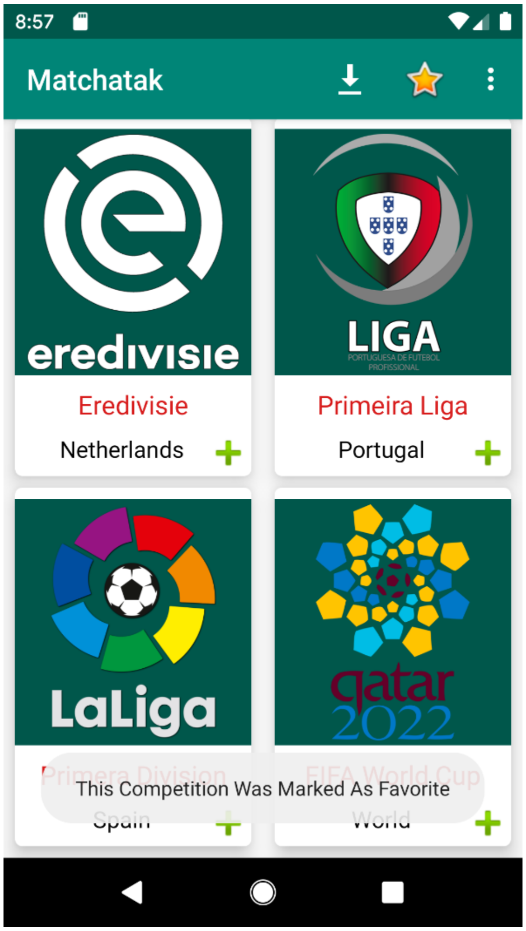
••••••

The email address is already in use by another account.

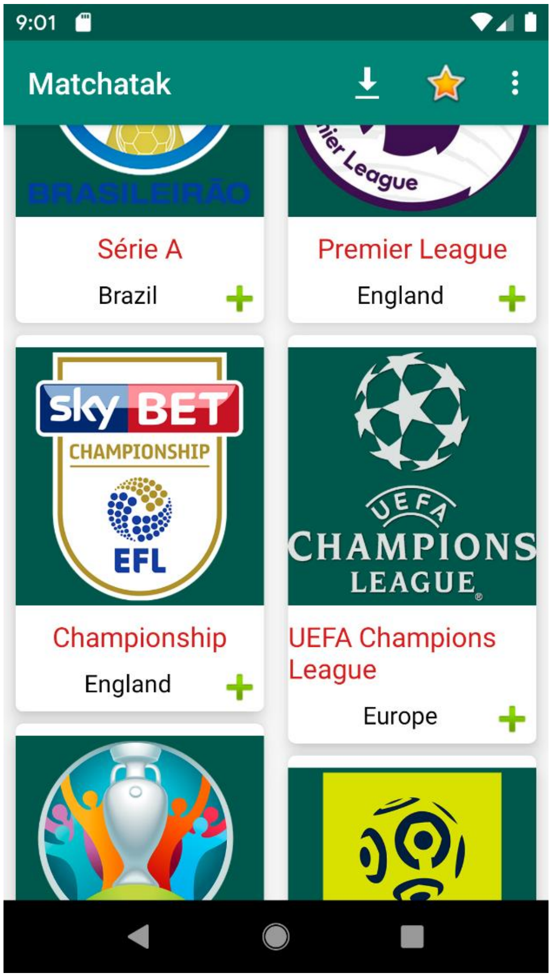
This screen is used to login and register users and add authentication through firebase authentication, the user must first register and then login to the app so he can use it as he wants, in cases of wrong password or invalid email format or other error ,the error message is shown in a toast or in the edit Text set error method.

# Screen 2



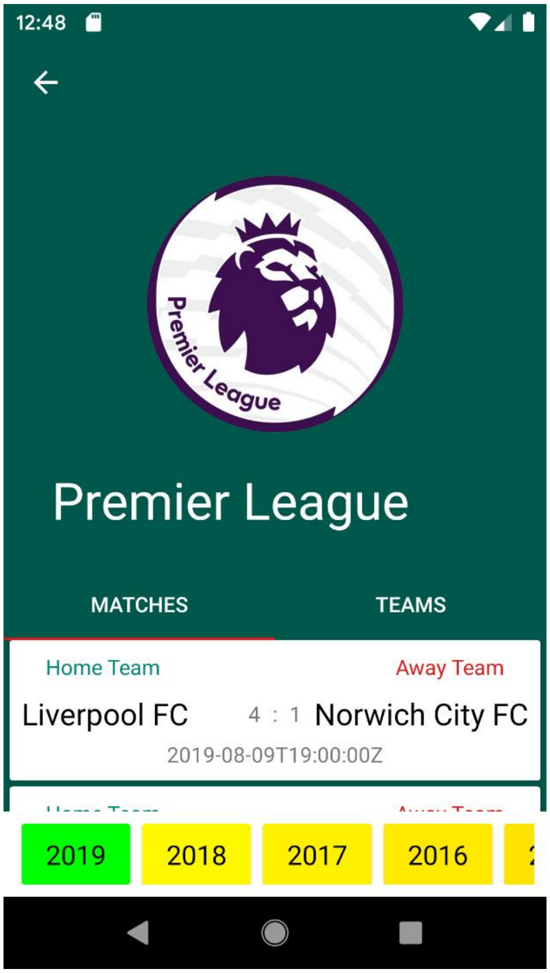


This Competition Was Marked As Favorite



That screen shows as a default all the free competitions in the API that I use so the user can see and open all the shown competitions,
The users also can add a certain competition to his favorites throw the + sign in every item and also can show only the favorite ones by clicking the star icon in the action bar, and can reload all the competitions again throw the download icon I the action bar also,
And by clicking a certain competition item it opens a competition details in the next activity.
You can logout of your account by clicking on options and choose “Sign Out”

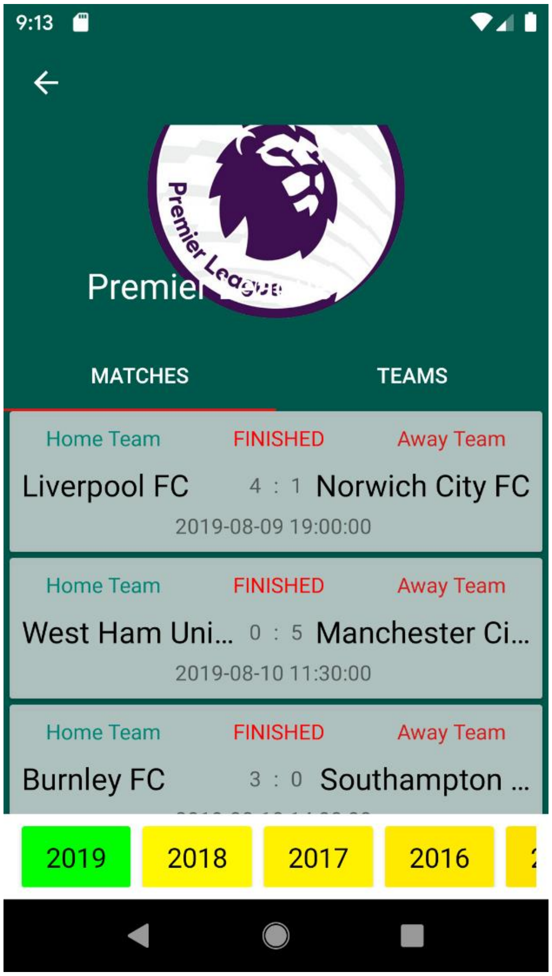
## Screen 3



Home Team Away Team

Liverpool FC 4 : 1 Norwich City FC

2019-08-09T19:00:00Z



Home Team FINISHED Away Team

Liverpool FC 4 : 1 Norwich City FC

2019-08-09 19:00:00

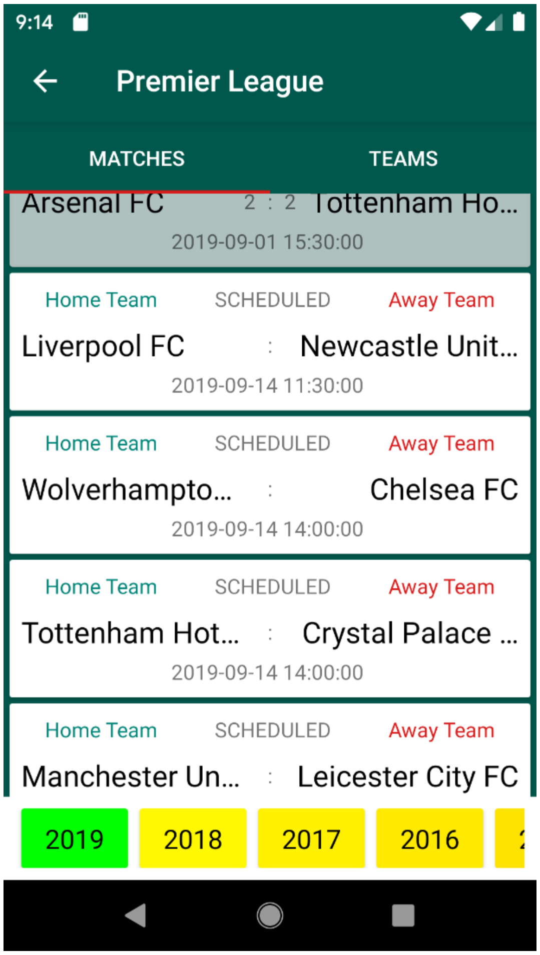
Home Team FINISHED Away Team

West Ham Uni... 0 : 5 Manchester Ci...

2019-08-10 11:30:00

Home Team FINISHED Away Team

Burnley FC 3 : 0 Southampton ...



9:14

Premier League

MATCHES TEAMS

Arsenal FC 2 : 2 Tottenham Ho...
2019-09-01 15:30:00

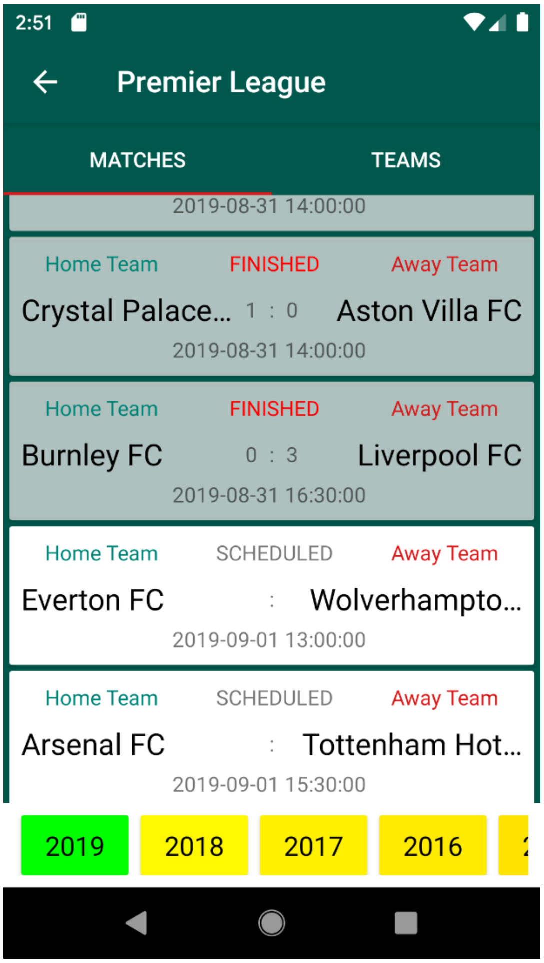
Home Team SCHEDULED Away Team
Liverpool FC : Newcastle Unit...
2019-09-14 11:30:00

Home Team SCHEDULED Away Team
Wolverhampto... : Chelsea FC
2019-09-14 14:00:00

Home Team SCHEDULED Away Team
Tottenham Hot... : Crystal Palace ...
2019-09-14 14:00:00

Home Team SCHEDULED Away Team
Manchester Un... : Leicester City FC

2019 2018 2017 2016



2:51

Premier League

MATCHES TEAMS

2019-08-31 14:00:00

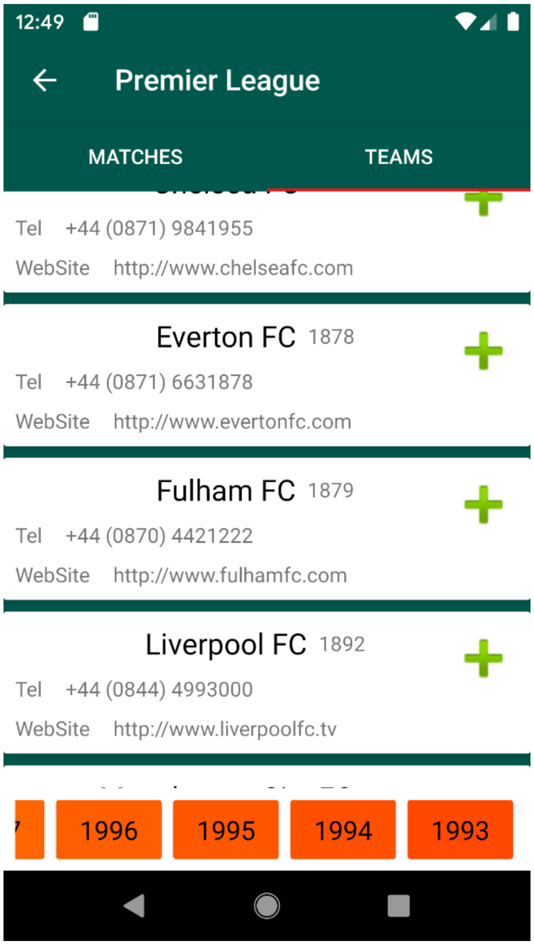
Home Team FINISHED Away Team
Crystal Palace... 1 : 0 Aston Villa FC
2019-08-31 14:00:00

Home Team FINISHED Away Team
Burnley FC 0 : 3 Liverpool FC
2019-08-31 16:30:00

Home Team SCHEDULED Away Team
Everton FC : Wolverhampto...
2019-09-01 13:00:00

Home Team SCHEDULED Away Team
Arsenal FC : Tottenham Hot...
2019-09-01 15:30:00

2019 2018 2017 2016



12:49

Premier League

MATCHES TEAMS

Tel +44 (0871) 9841955

WebSite http://www.chelseafc.com

Everton FC 1878

Tel +44 (0871) 6631878

WebSite http://www.evertonfc.com

Fulham FC 1879

Tel +44 (0870) 4421222

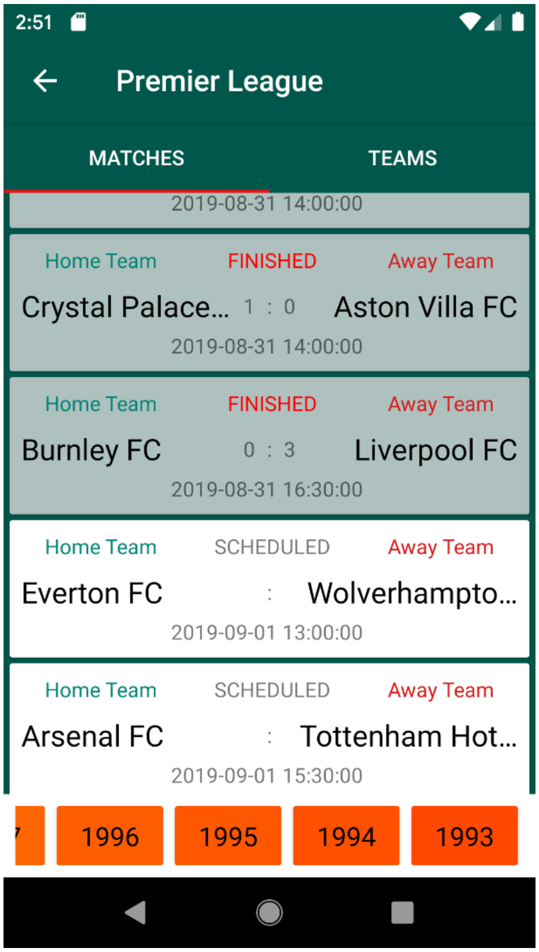
WebSite http://www.fulhamfc.com

Liverpool FC 1892

Tel +44 (0844) 4993000

WebSite http://www.liverpoolfc.tv

1996 1995 1994 1993



2:51

Premier League

MATCHES TEAMS

2019-08-31 14:00:00

Home Team FINISHED Away Team

Crystal Palace... 1 : 0 Aston Villa FC

2019-08-31 14:00:00

Home Team FINISHED Away Team

Burnley FC 0 : 3 Liverpool FC

2019-08-31 16:30:00

Home Team SCHEDULED Away Team

Everton FC : Wolverhampto...

2019-09-01 13:00:00

Home Team SCHEDULED Away Team

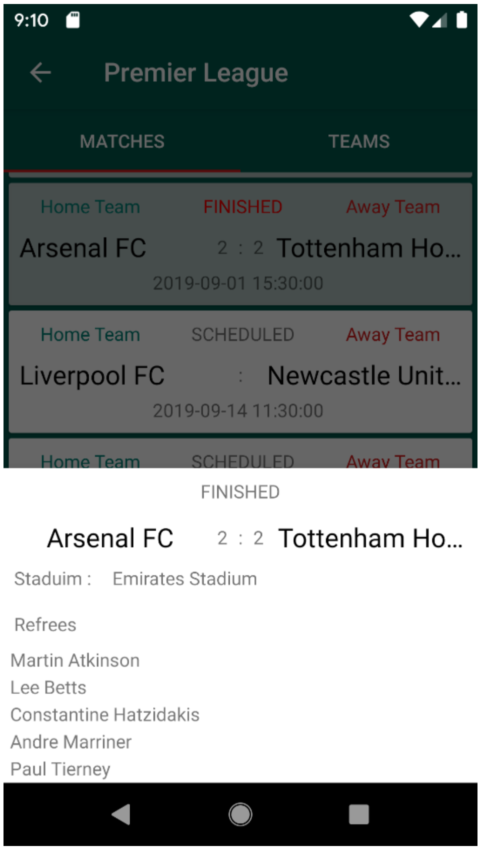
Arsenal FC : Tottenham Hot...

2019-09-01 15:30:00

1996 1995 1994 1993

That screen shows the details of the certain competition that the user clicked before,
It shows the matches and its results and the teams participated in that competition,
The app can show all available seasons of that competition by clicking the season item in the bottom navigation view and scroll it till the wanted season.
By clicking a certain match or a team a very detailed view appears with all needed information about the item clicked.

## Screen 4



Home Team FINISHED Away Team
Arsenal FC 2 : 2 Tottenham Ho...
2019-09-01 15:30:00

Home Team SCHEDULED Away Team
Liverpool FC : Newcastle Unit...
2019-09-14 11:30:00

Home Team SCHEDULED Away Team

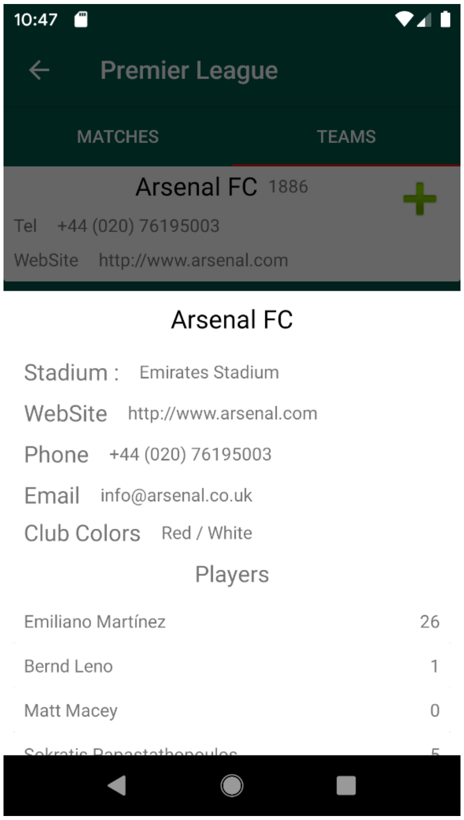
FINISHED
Arsenal FC 2 : 2 Tottenham Ho...
Staduim : Emirates Stadium

Refrees

Martin Atkinson
Lee Betts
Constantine Hatzidakis
Andre Marriner
Paul Tierney

That screen comes up to the screen by clicking on a certain match in a certain competition as it holds the given details of the match, it is implemented as a bottom sheet dialog fragment.

## Screen 5



Arsenal FC 1886

Tel +44 (020) 76195003

WebSite http://www.arsenal.com

Arsenal FC

Stadium : Emirates Stadium

WebSite http://www.arsenal.com

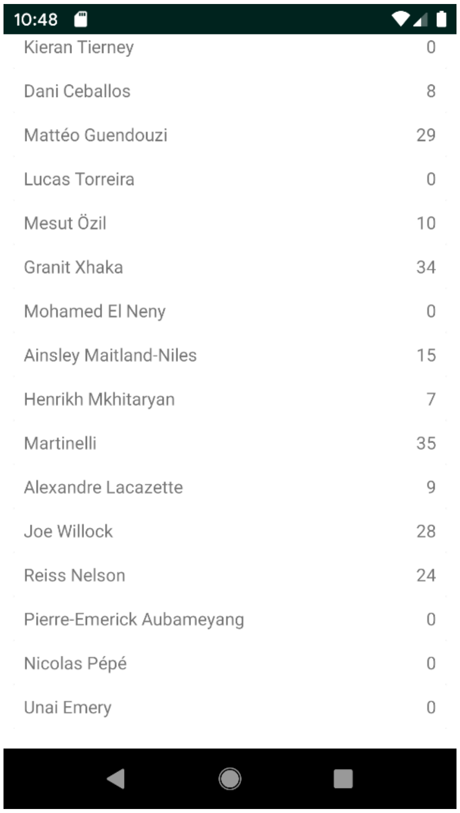
Phone +44 (020) 76195003

Email info@arsenal.co.uk

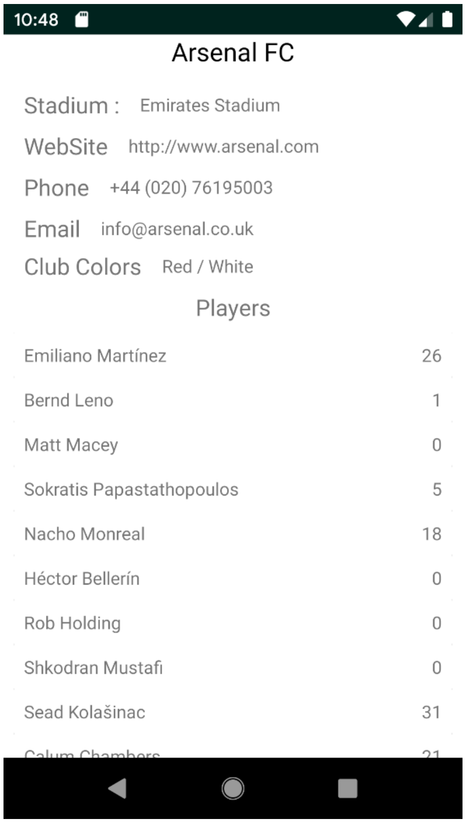
Club Colors Red / White

Players

| | |
|---|---|
| Emiliano Martínez | 26 |
| Bernd Leno | 1 |
| Matt Macey | 0 |
| Sokratis Papastathopoulos | 5 |



| | |
|---|---|
| Kieran Tierney | 0 |
| Dani Ceballos | 8 |
| Mattéo Guendouzi | 29 |
| Lucas Torreira | 0 |
| Mesut Özil | 10 |
| Granit Xhaka | 34 |
| Mohamed El Neny | 0 |
| Ainsley Maitland-Niles | 15 |
| Henrikh Mkhitaryan | 7 |
| Martinelli | 35 |
| Alexandre Lacazette | 9 |
| Joe Willock | 28 |
| Reiss Nelson | 24 |
| Pierre-Emerick Aubameyang | 0 |
| Nicolas Pépé | 0 |
| Unai Emery | 0 |



Arsenal FC

Stadium : Emirates Stadium

WebSite http://www.arsenal.com

Phone +44 (020) 76195003

Email info@arsenal.co.uk

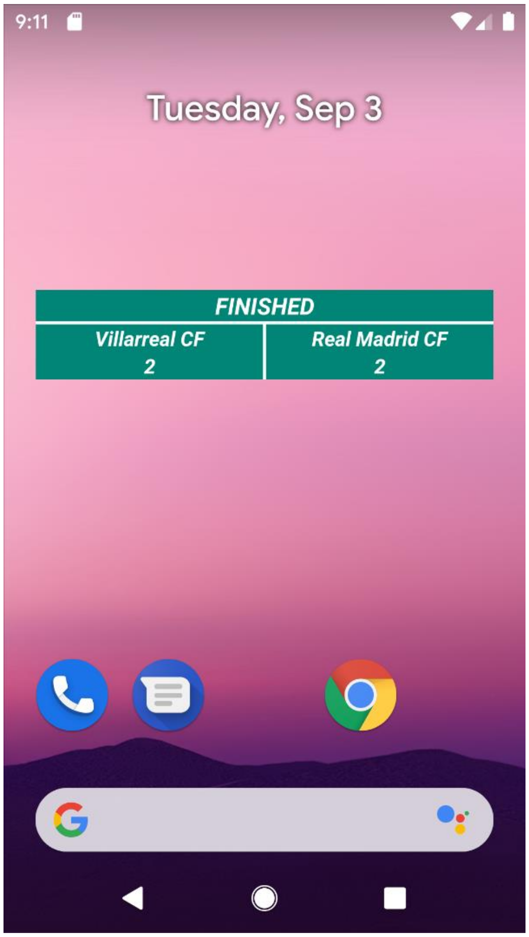
Club Colors Red / White

Players

| | |
|---|---|
| Emiliano Martínez | 26 |
| Bernd Leno | 1 |
| Matt Macey | 0 |
| Sokratis Papastathopoulos | 5 |
| Nacho Monreal | 18 |
| Héctor Bellerín | 0 |
| Rob Holding | 0 |
| Shkodran Mustafi | 0 |
| Sead Kolašinac | 31 |
| Calum Chambers | 21 |

That screen also is show by clicking on a certain team item in the teams recyclerView It show the details as possible I can get from the APIs

## Screen 6



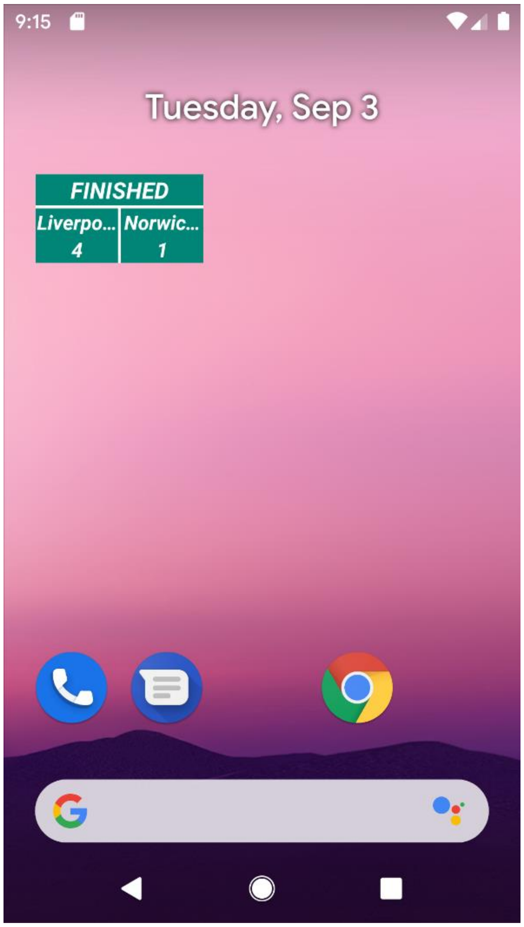
9:11

Tuesday, Sep 3

FINISHED

Villarreal CF
2

Real Madrid CF
2



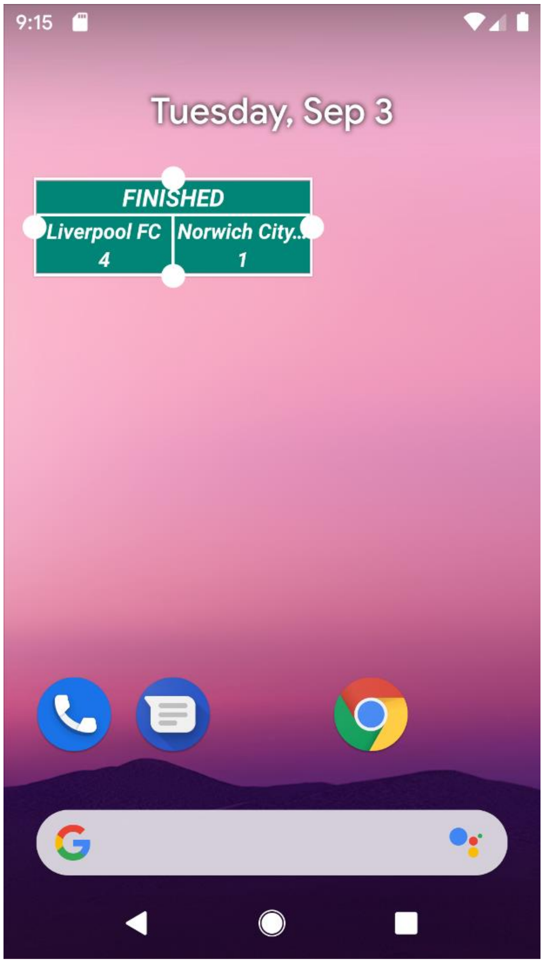
9:15

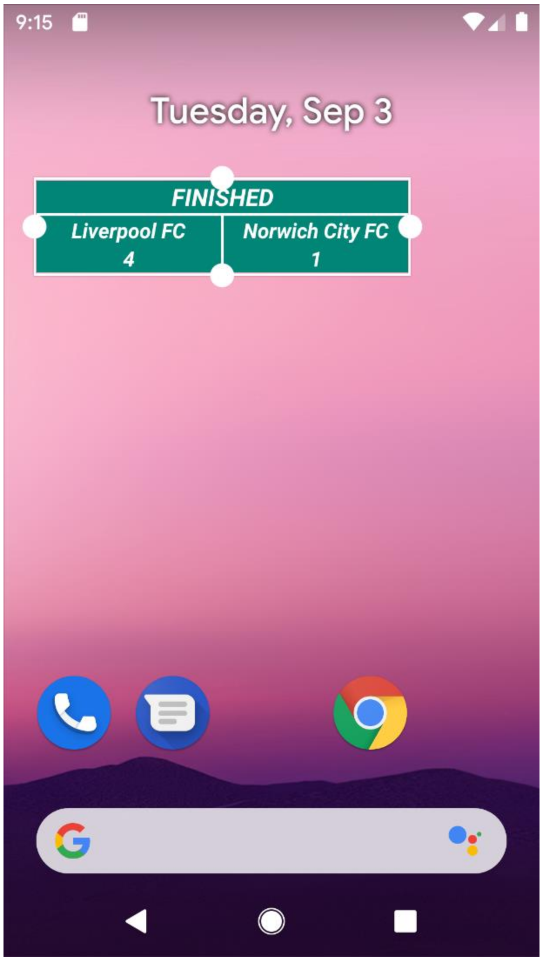
Tuesday, Sep 3

FINISHED

Liverpo...
4

Norwic...
1





Those screens show the app widget on the home screen with certain match data,
Status, Teams names, Result of the match
That match is set every time we click an item in matches recycler view

Add as many screens as you need to portray your app’s UI flow.

# Key Considerations

### How will your app handle data persistence?

The app can handle data persistence only when the user clicks the add to favorite icon (+)
The app stores the data throw a room database.

### Describe any edge or corner cases in the UX.

In the main activity after logging in when the user chooses to open the favorite competition,
He can back to all available competitions by clicking the download icon again

### Describe any libraries you’ll be using and share your reasoning for including them.

- I will use android studio 3.5 to make this project with gradle 3.5.0
- com.google.gms:google-services version:**4.2.0**
- Firebase Authentication: is used to auth users for login and register version: **16.0.5**
- Firebase Analytics: is used to provide me with information about users of the app and the most used features version: **16.0.4**
- RecyclerView: is used to implement lists smoothly version: **1.0.0**
- Okhttp3: version:**4.1.0**
- retrofit2:converter-gson: version:**2.5.0**
- logging-interceptor version:**4.0.0**
- Picasso, is used to load the images from the URLs version: **2.71828**
- Retrofit, is used to handle networking and calling APIs. version: **2.6.0**
- Room Database, is used to handle database operations. version: **2.1.0**

### Describe how you will implement Google Play Services or other external services.

I already have firebase account, I will use it to implement: -
Firebase Auth, is used to register and login and provide necessary authentication.
Firebase Analytics, is used to report the commonly used accounts or any category.
Android studio has assistant that helps to implement any firebase services, I will use it to implement the mentioned services.

# Next Steps: Required Tasks

This is the section where you can take the main features of your app (declared above) and break them down into tangible technical tasks that you can complete one at a time until you have a finished app.

## Task 1: Project Setup

The project will be written solely in the Java Programming Language,

And because of the API provider doesn't provide any other languages but English, the app will not support RTL.

Almost all strings, colors are stored in resources files,
The dimensions of the view are almost dynamic to the view using Constraint Layout as many as possible in every layout except things like widget,
The margins and paddings are almost static to every view case.

The app will require football-data APIs and use other libraries so the next tasks will be

- Sign up at (https://www.football-data.org) web site which is the API provider
- When signing in I will get an ApiKey that will be used as a header to be able to call APIs to avoid restrictions
- Add dependencies to gradle and sync them.
- Implement the code to do its purpose.
- Most of the app contents will have content description so the app will support accessibility as possible

If it helps, imagine you are describing these tasks to a friend who wants to follow along and build this app with you.

## Task 2: Implement UI for Each Activity and Fragment

Making the home screen a login and register screen, so its not necessary to open it every time the app starts:

- Build UI for LoginActivity.
- Build UI for MainActivity.
- Build adapters for RecyclerView.
- Build fragments UI and adapters and Implement click listeners.
- Pass data through intents and uses callbacks in the listeners.

- Start activities with intents and try the cycle of the UI.

## Task 3: Understanding APIs and handling calls

Understand the APIs the make a complete cycle with postman and then:

- Add dependencies for the libraries that will handle API calls
- Signup to get Api-Key
- Try calling the first API through the app
- If it works, I will go on calling the rest of needed APIs.

## Task 4: Handling ViewModels and Repository

Create my view-models and repositories and log the results to validate them:

- Create new Class Called Repository
- Implement methods that returns the wanted data
- Implement ViewModels in the activities and fragments
- Bind the data to the views after observing them from attached view models.

## Task 5: Handling Databases

Implement room database in the app:

- Create MyDatabase class that introduces a singleton instance of DB
- Use the database in the repository and handling actions manually to test them
- If it succeeds in adding and retrieving data from database.
- Implement Database operations with UI events.

Add as many tasks as you need to complete your app.

**Submission Instructions**

- After you’ve completed all the sections, download this document as a PDF [ File → Download as PDF ]
  - Make sure the PDF is named “**Capstone_Stage1.pdf**”

- Submit the PDF as a zip or in a GitHub project repo using the project submission portal

If using GitHub:

- Create a new GitHub repo for the capstone. Name it “**Capstone Project**”
- Add this document to your repo. Make sure it’s named “**Capstone_Stage1.pdf**”