

Team NAHH Project Assignment #3

Design pattern used:

Model View Controller

Model:

Firestore

Our model is Firebase, a database provided by Google.

Realtime database:

teamnahmeprojekt



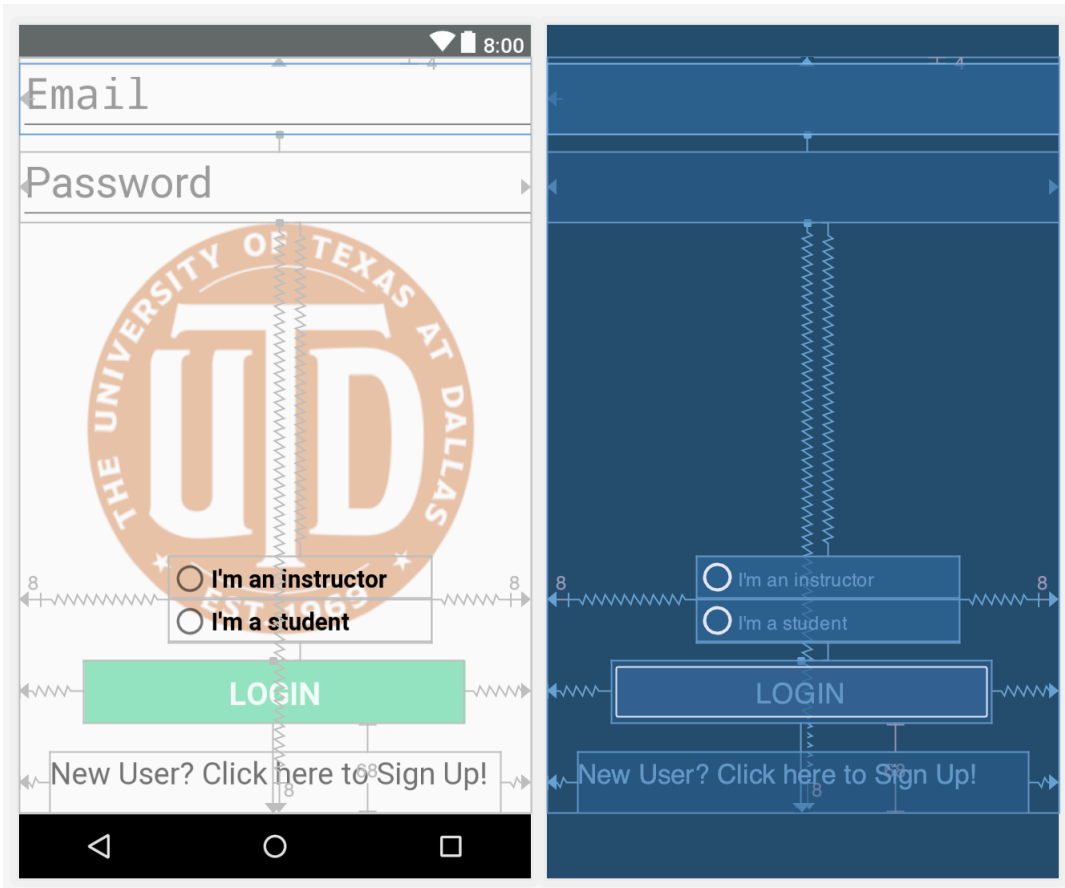
Authentication and user information:

Search by email address, phone number, or user UID					Add user	↺	⋮
Identifier	Providers	Created	Signed In	User UID ↑			
prof2@gmail.com	✉	Dec 7, 2018	Dec 7, 2018	DT6lDccamSa2SIh8LR7E12Q0ZnK2			
nabeel@gmail.com	✉	Dec 7, 2018	Dec 7, 2018	EbXNfLj5zJUcHYxwy1NV6uMlwq13			
prof@gmail.com	✉	Dec 6, 2018	Dec 7, 2018	FugSbRDPReSPfyxBMXJ28ZrN7At2			
hibah@gmail.com	✉	Dec 7, 2018	Dec 7, 2018	GmWERPUXQxaX00YCXS46ntao1...			
hamza@gmail.com	✉	Dec 7, 2018	Dec 7, 2018	PUOsTRwSoJPPgh8QeYkVCSAGi5...			
alisha@gmail.com	✉	Dec 6, 2018	Dec 7, 2018	bDYxgiYW5KUG3doSEYqacru93C62			
art@gmail.com	✉	Dec 7, 2018	Dec 7, 2018	eBWaeaXDCXPIOedRvaOaYBpSFV...			
hamgoat@gmail.com	✉	Dec 7, 2018	Dec 7, 2018	fXJOUXf11uNJEqqzqBSEdOnNCK...			
					Rows per page: 50 ▼	1-8 of 8	◀ ▶

View:

Our view is generated by the .xml files created in android studio, located in [CS3354-NAHH/TeamNahhSEProject/app/src/main/res/layout](#)

These .xml files make up the appearance of the different pages of the app. On the next page are screenshots of one such .xml file, in both the design and text modes.



```

1  <?xml version="1.0" encoding="utf-8"?>
2  <android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:app="http://schemas.android.com/apk/res-auto"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:layout_width="match_parent"
6      android:layout_height="match_parent"
7      android:background="@drawable/background"
8      tools:context=".MainActivity">
9
10
11  <EditText
12      android:id="@+id/etUserEmail"
13      android:layout_width="390dp"
14      android:layout_height="54dp"
15      android:layout_marginTop="4dp"
16      android:ems="10"
17      android:hint="Email"
18      android:inputType="textEmailAddress"
19      android:singleLine="false"
20      android:textColor="@color/common_google_signin_btn_text_dark_focused"
21      android:textColorHighlight="@android:color/ho_lo_orange_dark"
22      android:textSize="32sp"
23      android:typeface="monospace"
24      app:layout_constraintStart_toStartOf="parent"
25      app:layout_constraintTop_toTopOf="parent" />
26
27  <EditText
28      android:id="@+id/etUserPassword"
29      android:layout_width="390dp"
30      android:layout_height="54dp"
31      android:layout_marginTop="8dp"
32      android:layout_marginBottom="8dp"
33      android:ems="10"
34      android:hint="Password"
35      android:inputType="textPassword"
36      android:textColor="@color/common_google_signin_btn_text_dark_focused"
37      android:textSize="32sp"
38      app:layout_constraintBottom_toBottomOf="parent"
39      app:layout_constraintEnd_toEndOf="parent"
40      app:layout_constraintHorizontal_bias="0.0"
41      app:layout_constraintStart_toStartOf="parent"
42      app:layout_constraintTop_toBottomOf="@+id/etUserEmail"
43      app:layout_constraintVertical_bias="0.01" />
44
45  <Button
46      android:id="@+id/btnLogin"
47      android:layout_width="286dp"
48      android:layout_height="47dp"
49      android:layout_marginBottom="68dp"
50      android:background="@color/colorAccent"

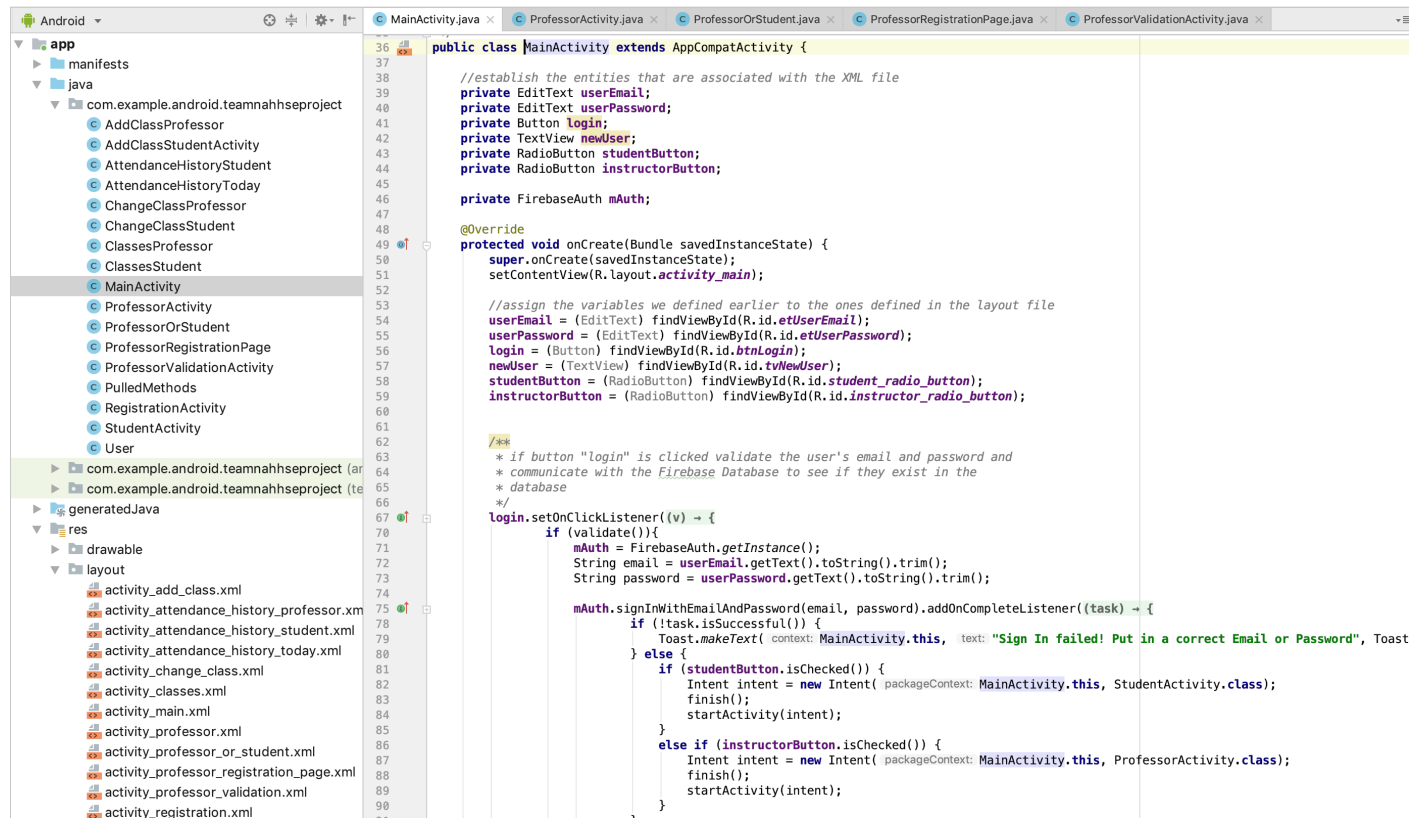
```

Controller:

Our controller is generated by the various Java classes located in

[CS3354-NAHH/TeamNahhSEProject/app/src/main/java/com/example/android/teamnahhseproject](#)

These java classes actually interacted with our database and added functionality to the various UI elements seen in the .xml files. Below is a screenshot of one such class.



Test cases:

We were able to produce one test case located in

[CS3354-NAHH/TeamNahhSEProject/app/src/test/java/com/example/android/teamnahhseproject](#)

Majority of our testing came from seeing the actual data being written to and read from firebase. Due to the nature of the app and its heavy use of Firebase, unit test cases were very difficult. Additionally, many of our classes and methods utilized firebase methods. The code we put inside the firebase methods is what brings our app to life. While this made database programming much easier, it made unit testing near impossible.

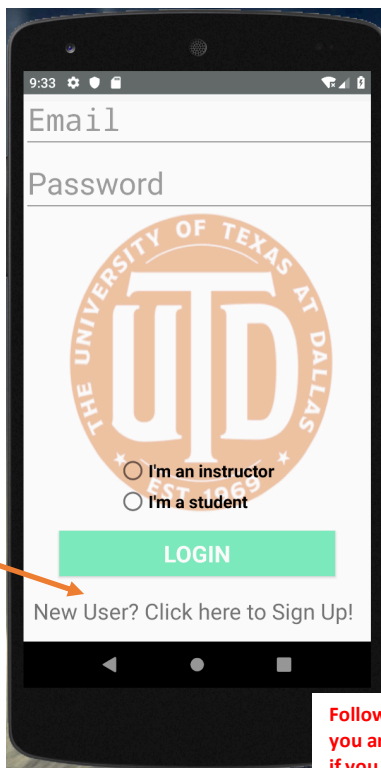
Instructions for building and usage:

Building:

1. Clone the repo from github: <https://github.com/art160630/CS3354-NAHH>
2. Open android studio and select 'open existing android studio project'
3. Select the folder 'TeamNahhSEProject' (location: CS3354-NAHH/TeamNahhSEProject)

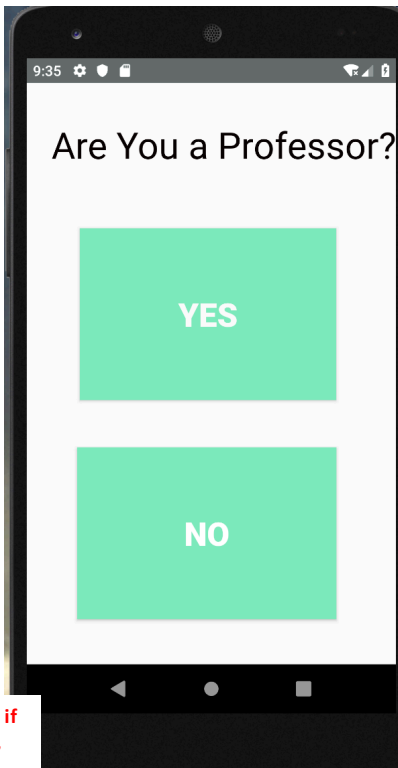
Instructions for Usage:

To start the application, open android studio with the project loaded and press the 'green arrow pointing right' button in the top right corner.

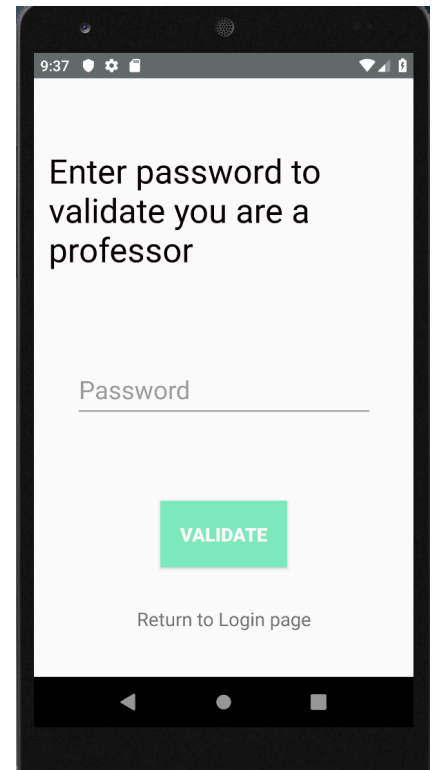


Click on the link to create a new account

Follow the next steps if you are an instructor, if you are a student, skip to the next page

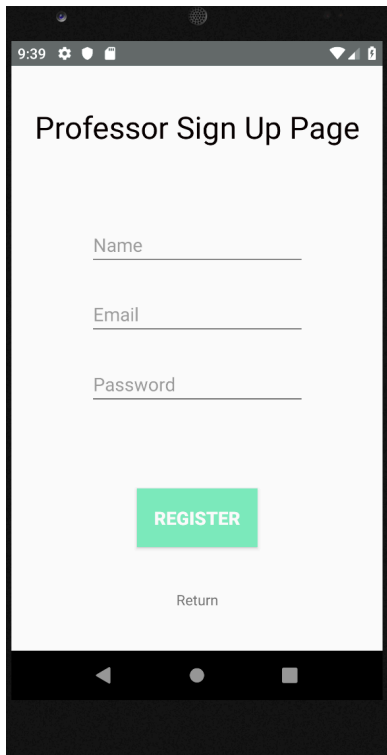


Click whether or not you are a professor



Enter the password to validate. You should have received this password when UTD gave you access to the app. However, for development purposes this password is currently "1234".

continued on next page.



9:39

Professor Sign Up Page

Name _____

Email _____

Password _____

REGISTER

Return

Create your account by entering required information



10:57

Please enter the semester information with the season and the year

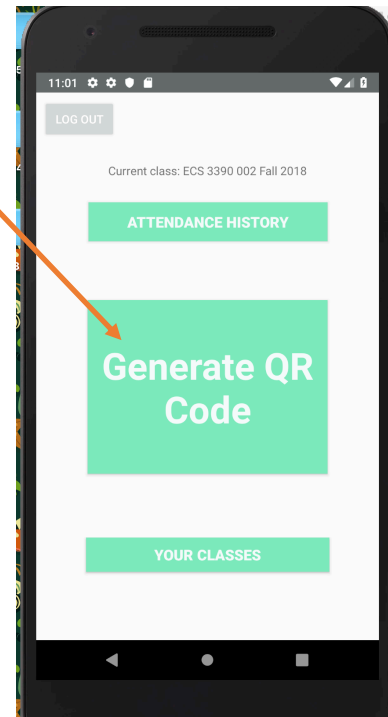
ex: CS 3354 003

Please enter the class information with the major, course number and section number.

ex: Fall 2018

ADD CLASS

Create a new class by entering the class information



11:01

LOG OUT

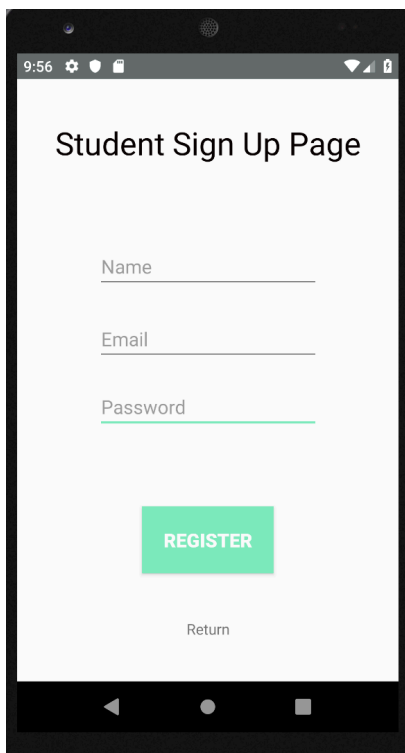
Current class: ECS 3390 002 Fall 2018

ATTENDANCE HISTORY

Generate QR Code

YOUR CLASSES

You will be given three options as shown above. To view your students attendance history, click on the button. To view your classes, click on it. To generate QR code for student to scan, click on it. Project this code onto a screen for better capture. Log out so we can create a student account.



9:56

Student Sign Up Page

Name _____

Email _____

Password _____

REGISTER

Return

Create a student account by entering required log in information



10:57

Please enter the semester information with the season and the year

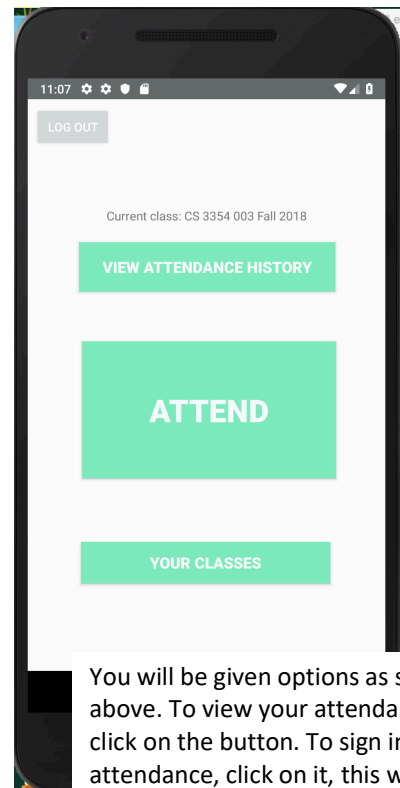
ex: CS 3354 003

Please enter the class information with the major, course number and section number.

ex: Fall 2018

ADD CLASS

Add an existing class



11:07

LOG OUT

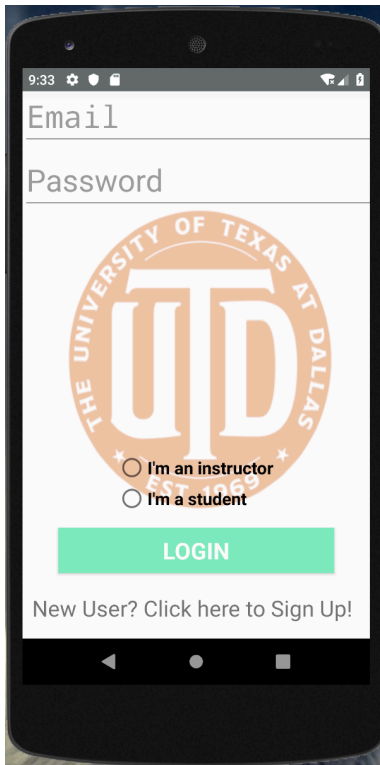
Current class: CS 3354 003 Fall 2018

VIEW ATTENDANCE HISTORY

ATTEND

YOUR CLASSES

You will be given options as shown above. To view your attendance history, click on the button. To sign in for attendance, click on it, this will open your camera. Scan the QR code, and you will be marked as present for the day. You can view, add, and change your classes by pressing "your classes".



After creating these accounts, you can log in from the log in page by entering the credentials and selecting whether you are a student or professor

The app already has pre-loaded test data. There is one test professor account and three student accounts.

Professor account:

email: prof@gmail.com

password: 111111

Student accounts:

email: alisha@gmail.com

password: 111111

email: nabeel@gmail.com

password: 111111

email: hamza@gmail.com

password: 111111

These accounts have previous attendance history loaded, but feel free to use these to add more attendance logging and more classes.