ICP8

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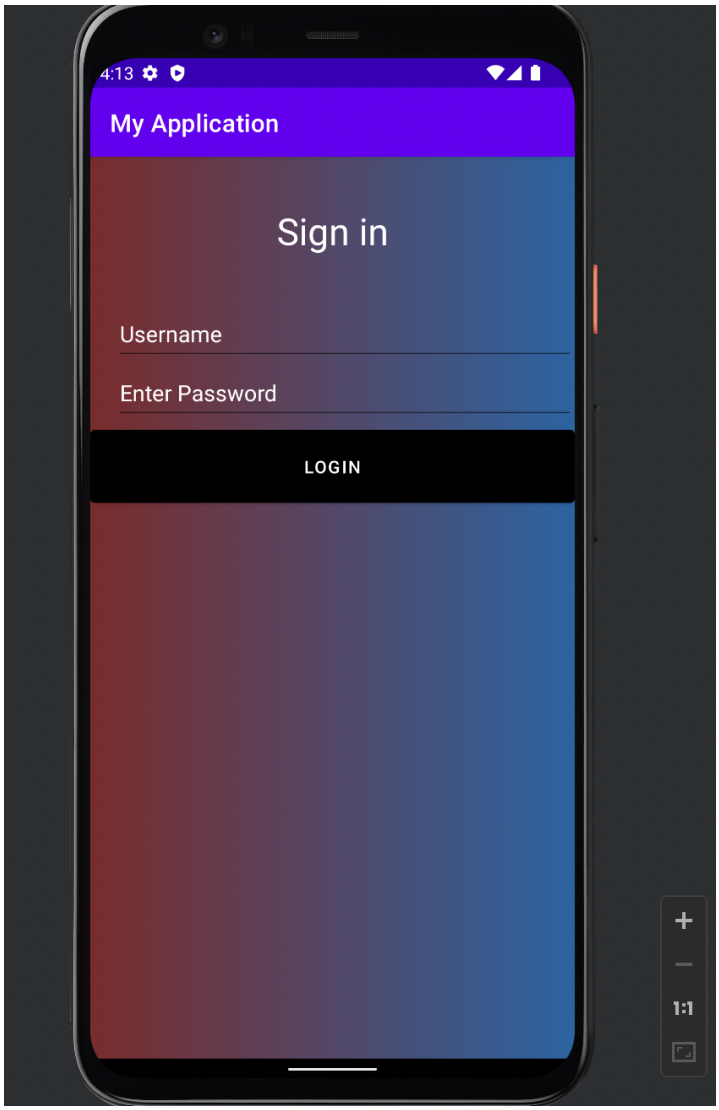
In this ICP, we got an introduction to Android Studio. Android Studio is a powerful tool to create apps on mobile devices (specifically Android devices). In this introduction to Android, we created 2 activity screens. 1 of these screens is a login page where a user can enter a username and password. Because there is no backend, the valid username and password is hardcoded into the program. If a user enters the correct username of 'XXX' and the correct passoword of 'XXX', the Sign In Activity will take the user to a Welcome Activity which is just a landing page. This Welcome Activity has a logout button which the user can click to be redirected to the Sign In Activity.

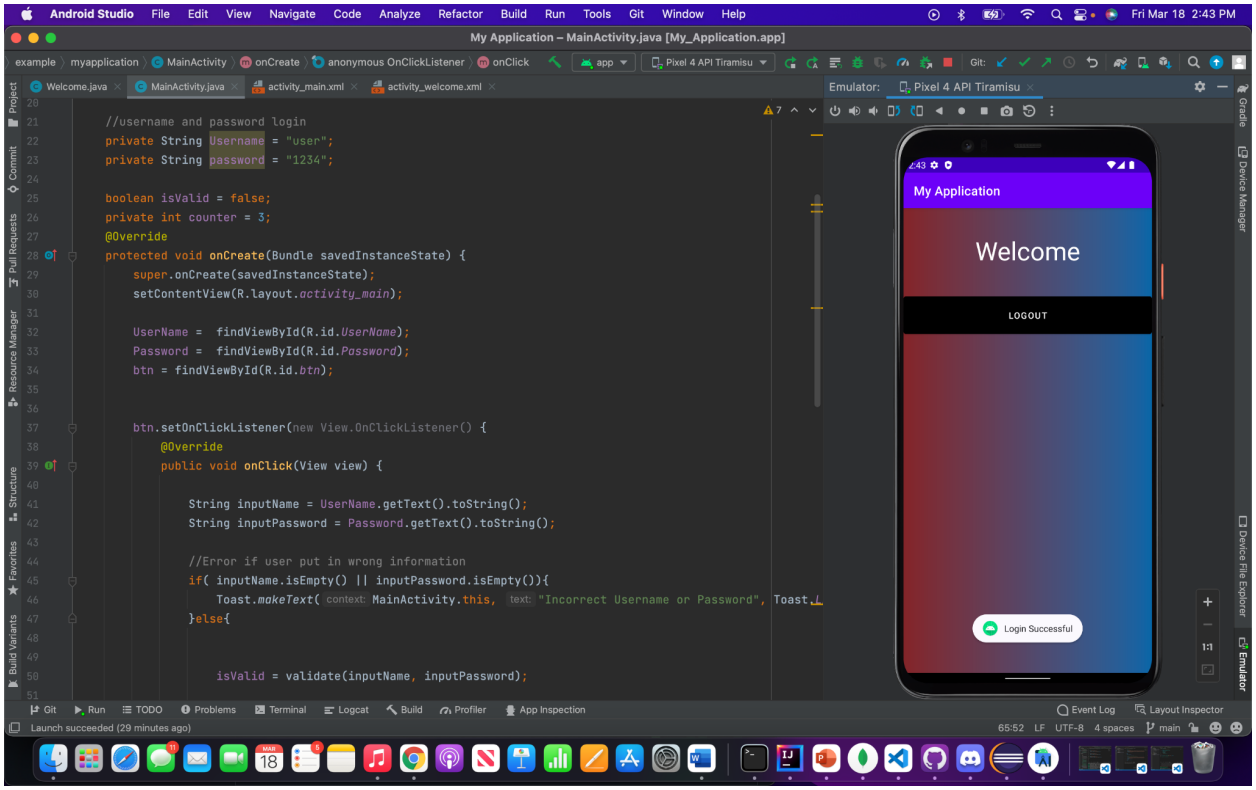
The Sign In activity consists of an XML and Java file. The XML file contains layout information such as the 'Sign in' header, 'Username' and 'Enter Password' input fields, and a Login button. The location and layout of these objects are specified in the XML file. The username, password, and button have an associated ID, which can be passed to the Java file. By referencing the ID, the Java file can perform operations such as validating the username and password input. The Java file can also perform a startActivity() action that takes the user to a new activity. In this case, the Sign In Activity takes the user to the Welcome Activity.

The Welcome Activity has a similar XML and Java file. The XML file specifies the header and button layout. The Logout button will take the user back to the Sign In Activity by using a similar startActivity() method.

The program will also display text to the user using the Toast library. This library sends notifications to the user such as 'Incorrect Username or Password'.

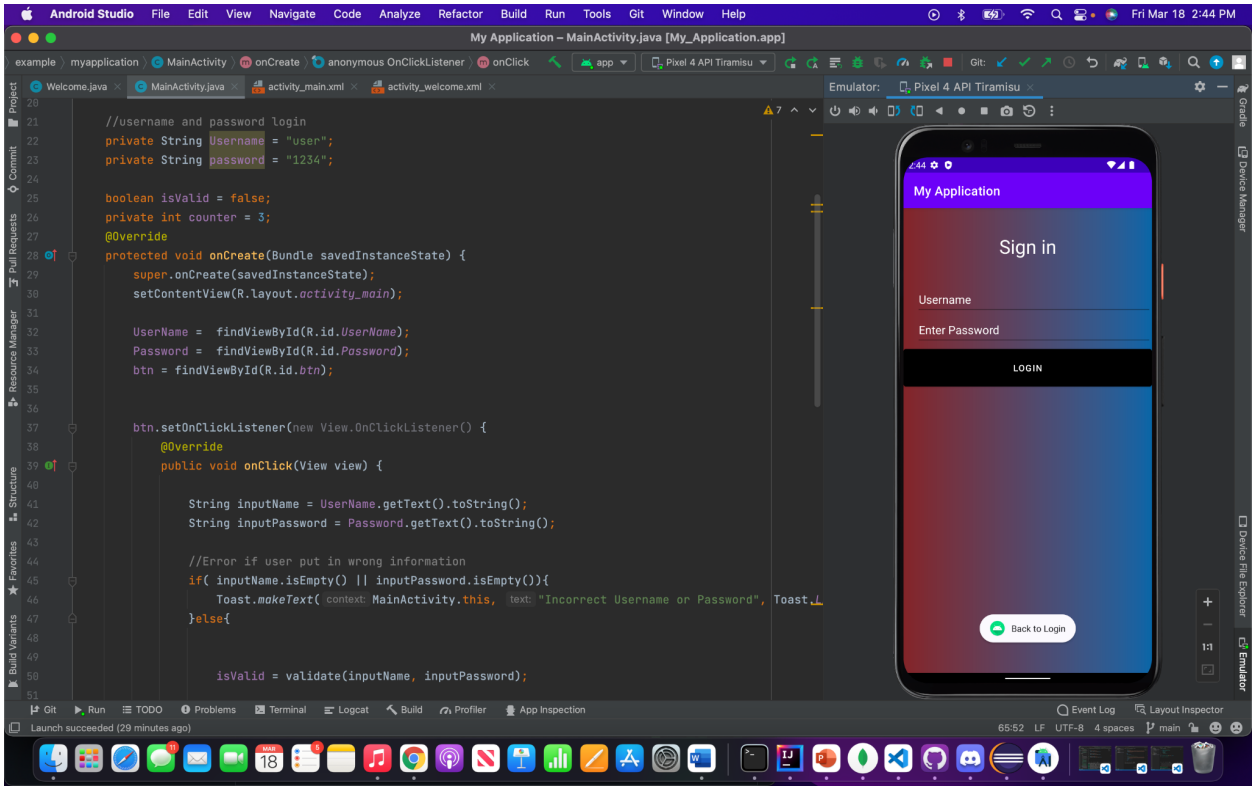

4:13
My Application
Sign in
Username
Enter Password
LOGIN
1:1

Login Page



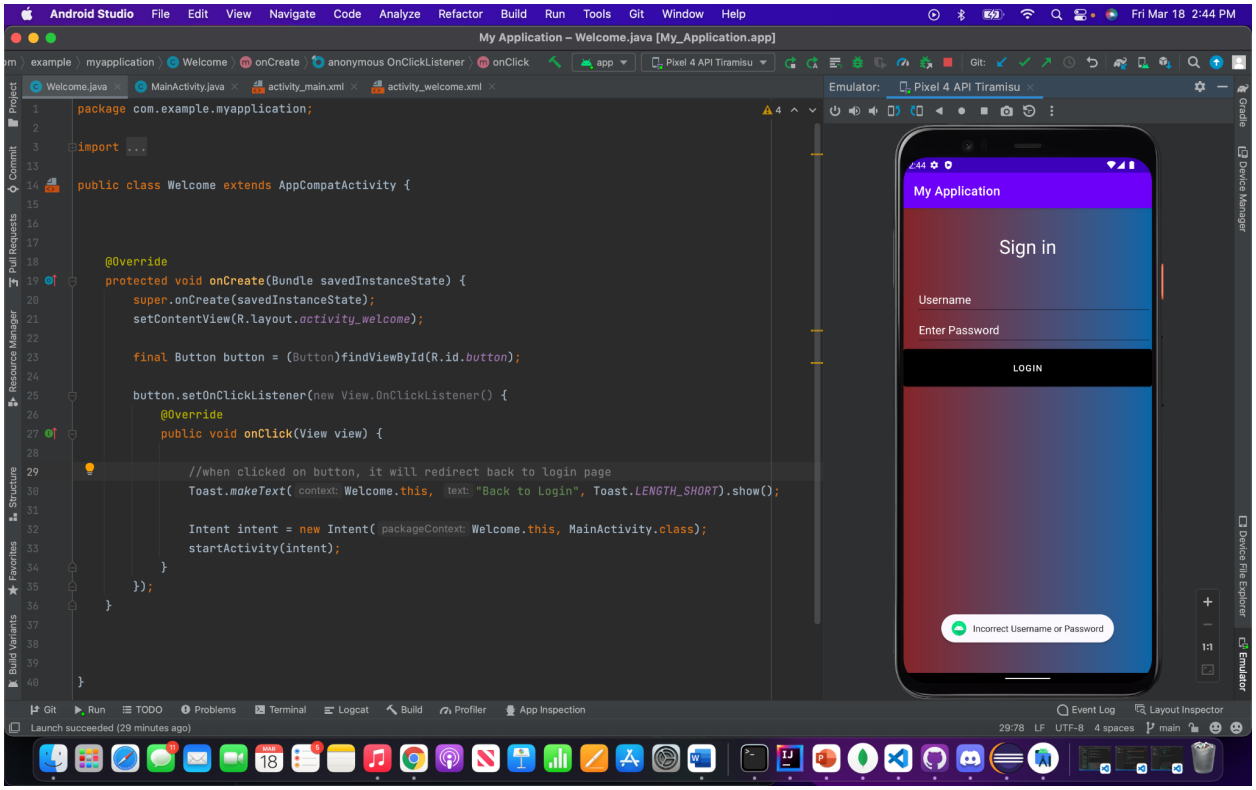
MainActivity.Java Logout Page

When entering a username or password it redirects to the welcome page that is also the logout page.



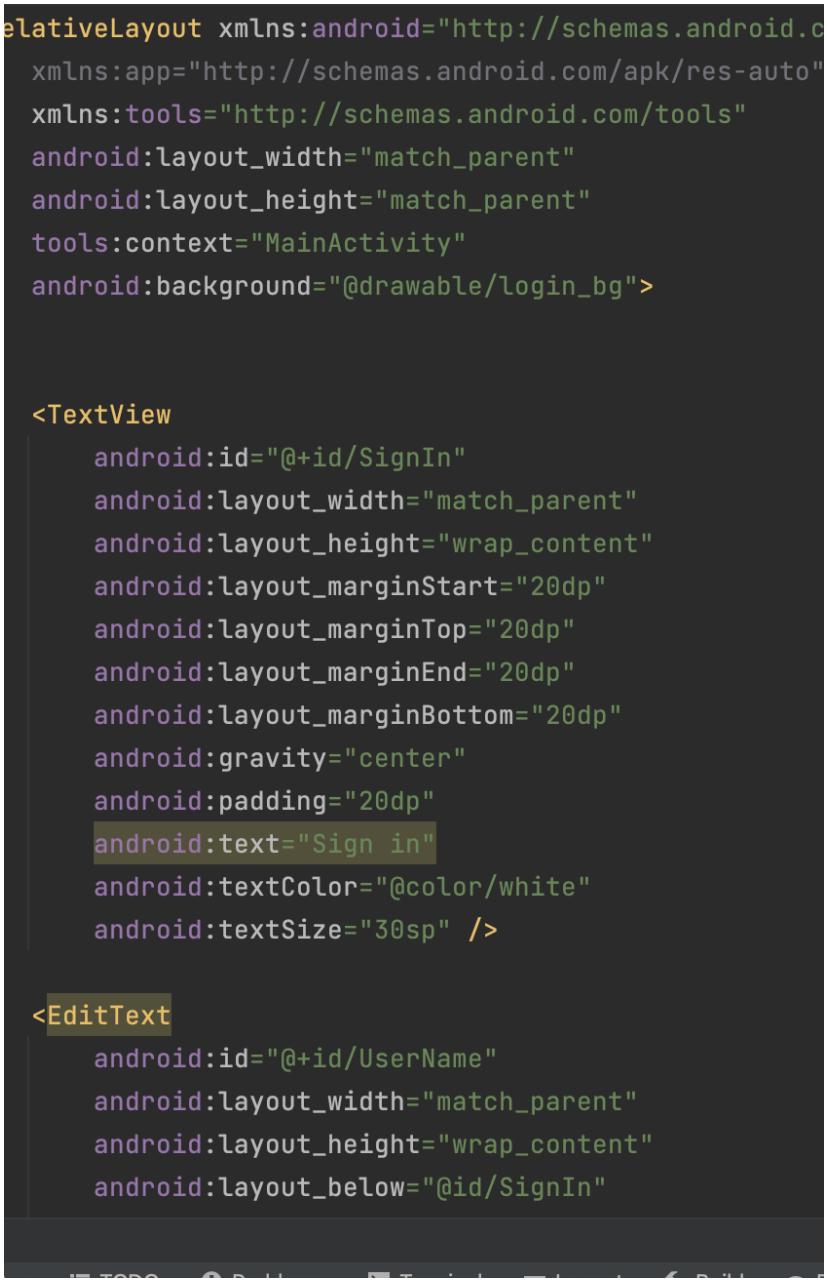
Back to Login

When clicking on the logout button it redirects to the sign in page.



Welcome.java Error on Sign in

If the user did not put in the correct information in the sign in page. The page will say that it has an incorrect username or password.



activity_main.xml

```
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".Welcome"
android:background="@drawable/login_bg">

<TextView
    android:id="@+id/Welcome"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginStart="20dp"
    android:layout_marginTop="20dp"
    android:layout_marginEnd="20dp"
    android:layout_marginBottom="20dp"
    android:gravity="center"
    android:padding="20dp"
    android:text="Welcome"
    android:textSize="40dp"
    android:textColor="@color/white"/>

<Button
    android:id="@+id/button"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/Welcome"
    android:gravity="center"
    android:padding="20dp"
    android:text="Logout"
    android:backgroundTint="@color/black"
   />
```

activity_welcome.xml