

CMP309: SOFTWARE DEVELOPMENT FOR MOBILE DEVICES

JORDAN GRIBBEN, 1701775, NIGHT OUT COMPANION



INTRODUCTION

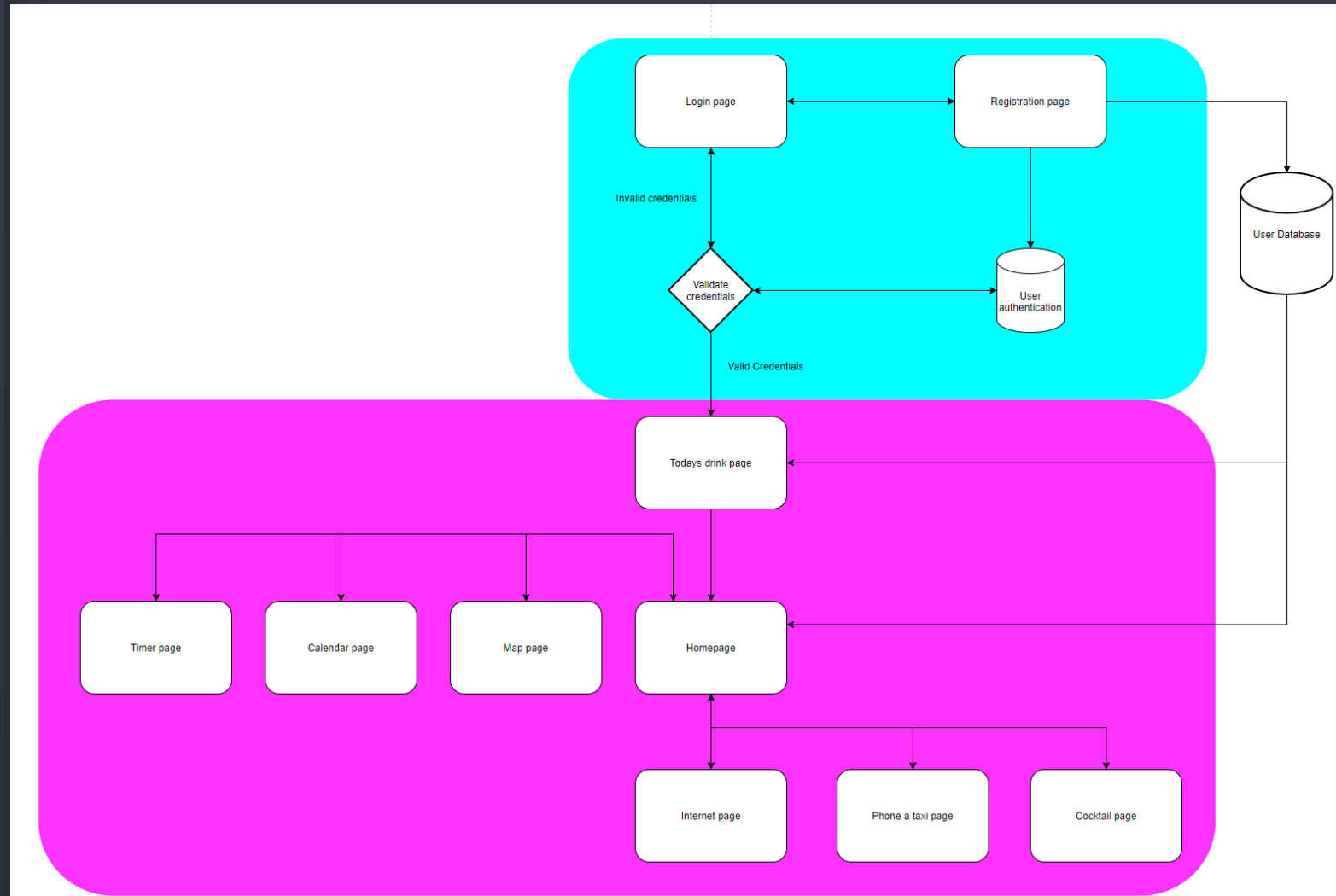
- Night out companion app
- Recommended bars
- Keep track of nights out
- Time spent in each bar



Night Out
Companion



FLOW DIAGRAM



Initial login Process

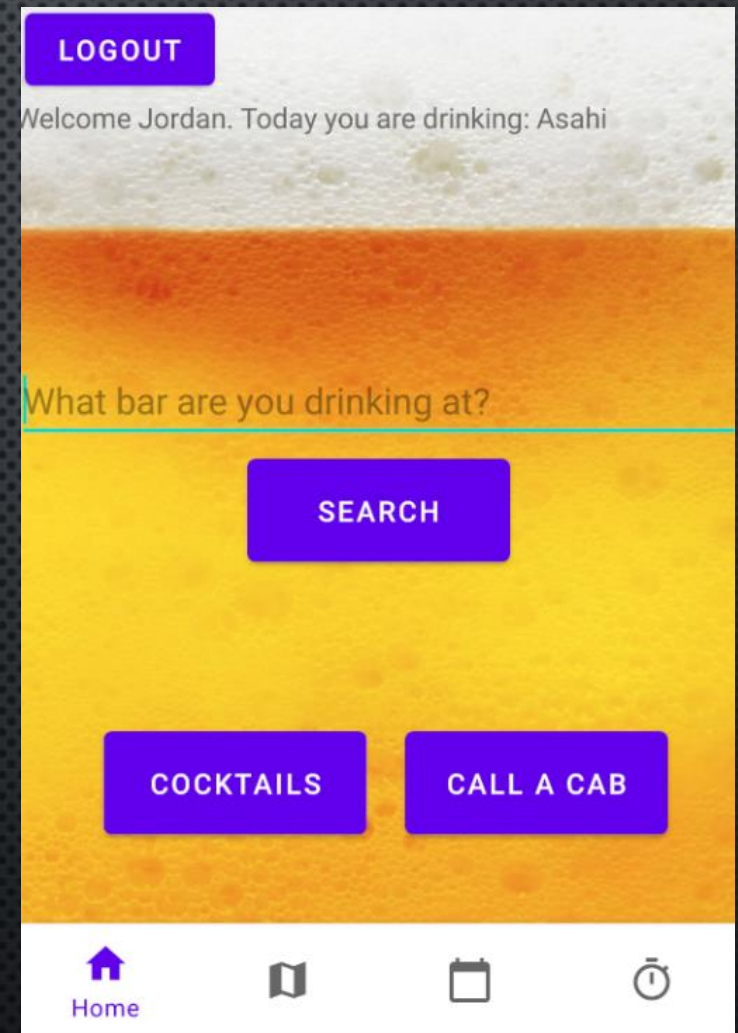


Main app



USER INTERFACE

- ACCESSIBILITY
-
- SIMPLICITY
- NAVBAR




APPLICATION FEATURES



LOGIN SYSTEM

- FIREBASE EMAIL AUTHENTICATION
- FIREBASE DATABASE
- PASSWORDS ARE HASHED AND SALTED
- PASSWORDS NOT SAVED ON THE DATABASE FOR SECURITY



Username


email

email

Password

REGISTER

REGISTER LOGIN

Identifier	Providers	Created	Signed In	User UID ↑
1701775@uad.ac.uk		May 8, 2021	May 10, 2021	OzAdFb6tuXRT2fCvrK3wkmww4e...

corseworkapp-default-rtdb



Users



OzAdFb6tuXRT2fCvrK3wkmww4e33

Demial: "1701775@uad.ac.uk"

Dusername: "Jordan"



SAMPLE CODE – CREATE ACCOUNT

- CREATES A USER WITH EMAIL AUTHENTICATION
- REQUIRES USERNAME SO IT CAN UPLOAD TO THE DATABASE

```
mAuth.createUserWithEmailAndPassword(EmailToRegister, PasswordToRegister)  
    .addOnCompleteListener( activity: this, new OnCompleteListener<AuthResult>()
```

```
User UserD = new User(UsernameToRegister, EmailToRegister);  
FirebaseDatabase.getInstance("https://conseworkapp-default-rtdb.europe-west1.firebaseio.com").getReference( path: "Users").child(FirebaseAuth.getInstance().getCurrentUser().getUid()).setValue(UserD).addOnCompleteListener(new OnCompleteListener<Void>()
```



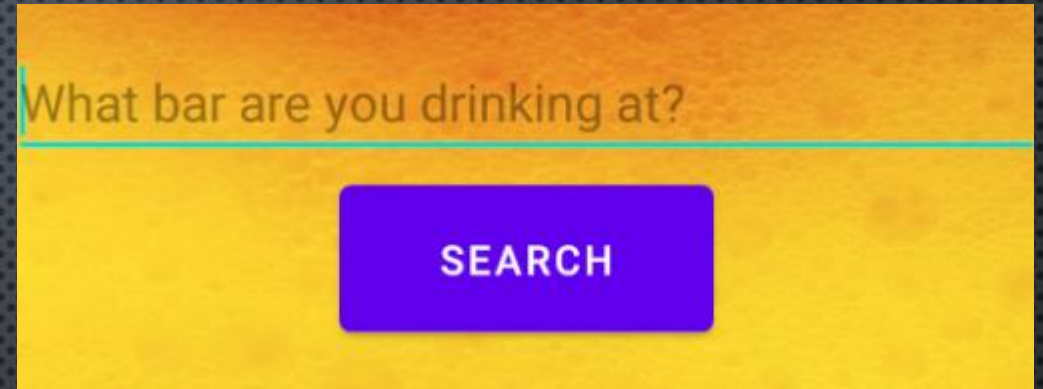
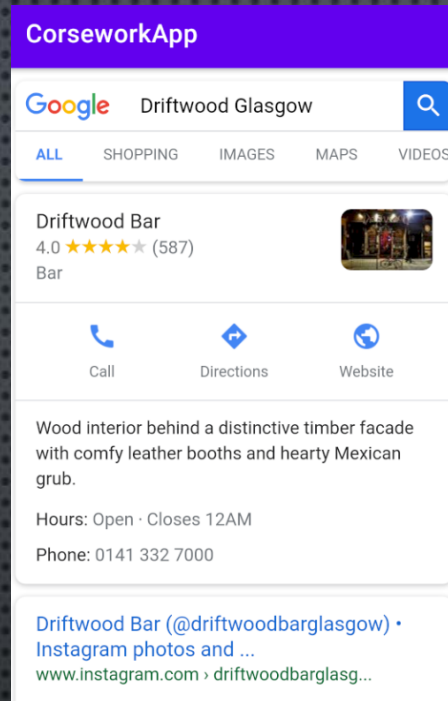
SAMPLE CODE – SIGN IN

```
if(UserEmail.length() > 0 && UserPassword.length() >0) {  
    mAuth.signInWithEmailAndPassword(EmailLogin, PasswordLogin).addOnCompleteListener( activity: this, new OnCompleteListener<AuthResult>() {  
        @Override  
        public void onComplete(@NonNull Task<AuthResult> task)  
        {  
            if (task.isSuccessful())  
            {  
                UserEmail.getText().clear();  
                UserPassword.getText().clear();  
                FirebaseUser user = mAuth.getCurrentUser();  
                Intent LoggedIn = new Intent( packageContext: MainActivity.this, TodaysDrink.class);  
                startActivity(LoggedIn);  
            }  
        }  
    })  
}
```



INTERNET

- GOOGLE SEARCH
- BAR RESEARCH
- INTERNET PERMISSIONS



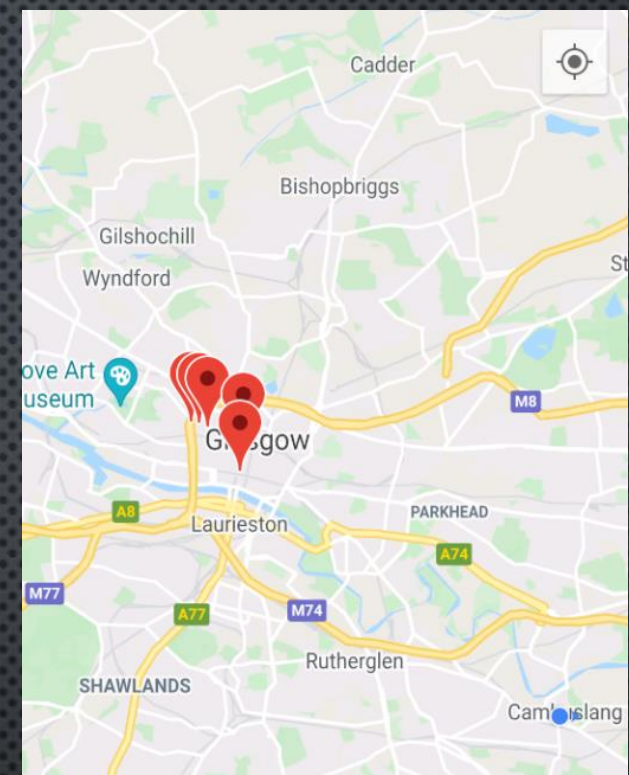
```
SearchTerm = getIntent().getStringExtra( name: "BarName");

webView = findViewById(R.id.webview);
webView.setWebViewClient(new WebViewClient());
webView.loadUrl("https://www.google.com/search?q=" + SearchTerm);
```



MAPS

- LOCATION PERMISSIONS
- MARKERS ON APP'S "PREFERRED" BARS
- ALLOWS USERS TO GET DIRECTIONS

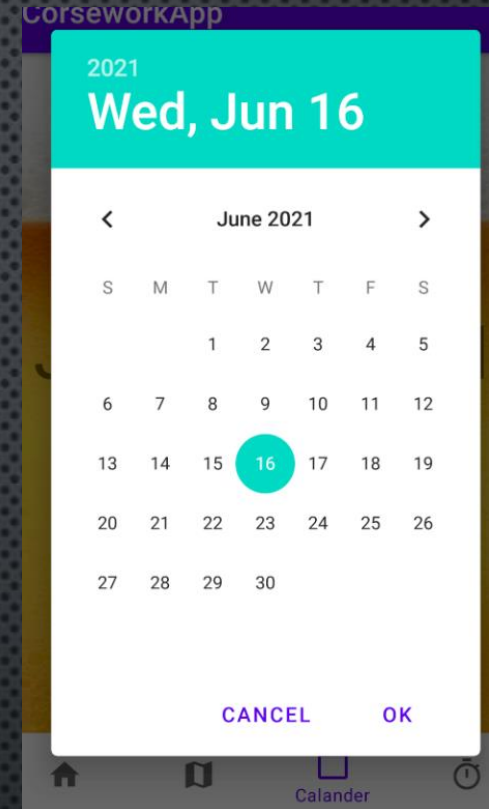
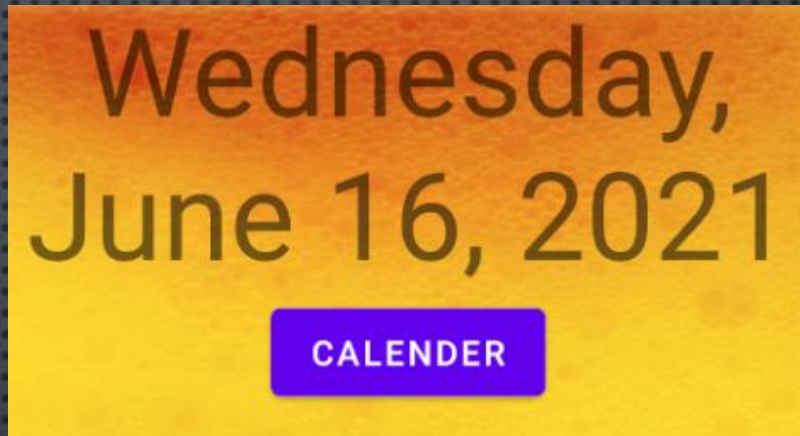


```
mFusedLocationClient = LocationServices.getFusedLocationProviderClient( activity: this);  
try {  
    if (LocationPermissionsConfirmed == true) {  
        Task location = mFusedLocationClient.getLastLocation();  
        location.addOnCompleteListener(new OnCompleteListener() {  
            @Override  
            public void onComplete(@NonNull Task task) {  
                if (task.isSuccessful()) {  
                    Location CurLoc = (Location) task.getResult();  
                    CameraMove(new LatLng(CurLoc.getLatitude(), CurLoc.getLongitude()), ZoomIn);  
                }  
            }  
        });  
    }  
}
```



DATE PICKER

- SAVES DATE FOR DISPLAY
- USES DATE PICKER
- SHARED PREFERENCES



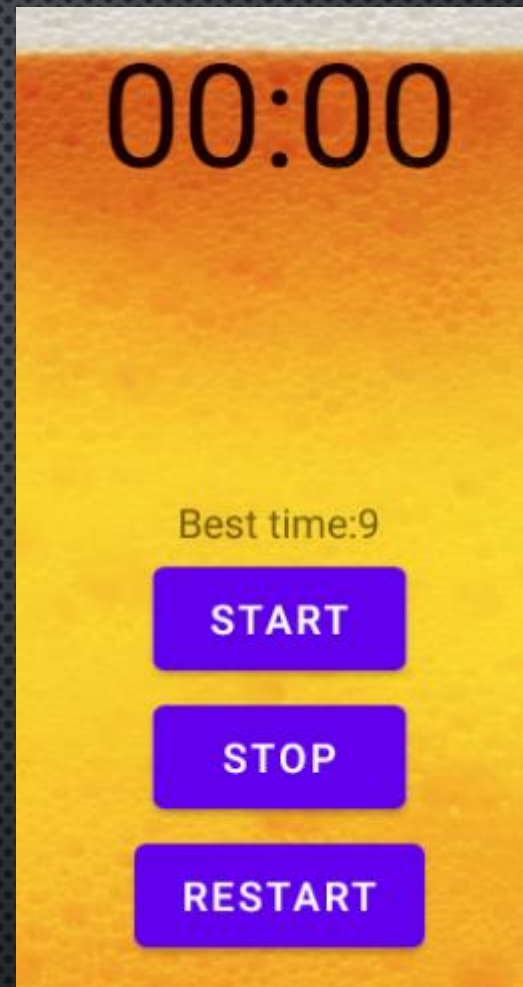
```
public void SaveDate()
{
    TextView DisplayDate = findViewById(R.id.CalendarTextView);
    SharedPreferences sharedPreferences = getSharedPreferences(SHARED_PREFS, MODE_PRIVATE);
    SharedPreferences.Editor editor = sharedPreferences.edit();

    editor.putString(TEXT, DisplayDate.getText().toString());
    editor.commit();
}
```



STOPWATCH

- CHRONOMETER
- SAVES QUICKEST TIME ON STOP

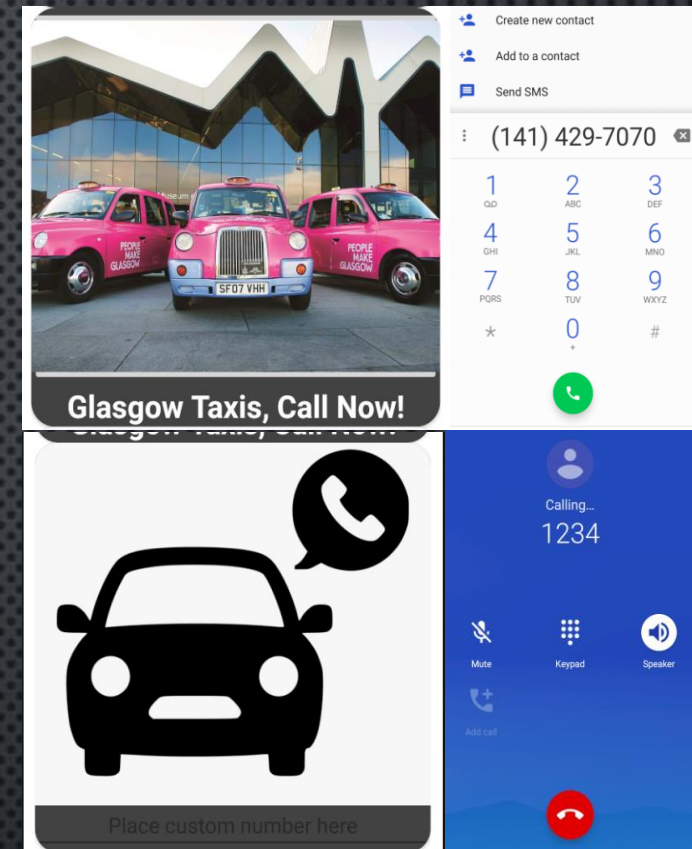


```
public void StartTime(View view)
{
    if (TimerStatus == false)
    {
        TimerStatus = true;
        DrinkingTimer.setBase(SystemClock.elapsedRealtime() - pause); //fixes resume time
        DrinkingTimer.start();
    }
}
```



PHONE CALLS

- PHONE CALL PERMISSIONS
- PRE-SAVED NUMBERS
- CALL PERSONAL NUMBERS



```
String callnumber = PhoneNum.getText().toString();
if (callnumber.trim().length() > 0)
{
    if(ContextCompat.checkSelfPermission( context: PhoneTaxiPage.this, Manifest.permission.CALL_PHONE)!= PackageManager.PERMISSION_GRANTED)
    {
        ActivityCompat.requestPermissions( activity: PhoneTaxiPage.this, new String[] {Manifest.permission.CALL_PHONE}, CallPermission);
    }
    else
    {
        String calling = "tel:" + callnumber;
        startActivity(new Intent(Intent.ACTION_CALL, Uri.parse(calling)));
    }
}
else
{
    Toast.makeText( context: PhoneTaxiPage.this, text: "Please enter a number", Toast.LENGTH_SHORT).show();
}
```



SAVING DATA

- SAVES INTERNALLY
- DRINK NAME
- DRINK RECIPE

```
public void save (View v)
{
    String text = editText.getText().toString();
    FileOutputStream FileOutput = null;
    if(v.getId() == R.id.SaveCocktail) {
        try {
            FileOutput = openFileOutput(NameOfFile, MODE_PRIVATE);
            FileOutput.write(text.getBytes());

            editText.getText().clear();
        } catch (FileNotFoundException e) {
            e.printStackTrace();
        } catch (IOException e) {
            e.printStackTrace();
        } finally {
            if (FileOutput != null) {
                try {
                    FileOutput.close();
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        }
    }
}
```

Create your Own!

SAVE NAME

SAVE RECIPE

COCKTAIL NAME

COCKTAIL RECIPE

Create your Own!

SAVE NAME

SAVE RECIPE

COCKTAIL NAME

COCKTAIL RECIPE

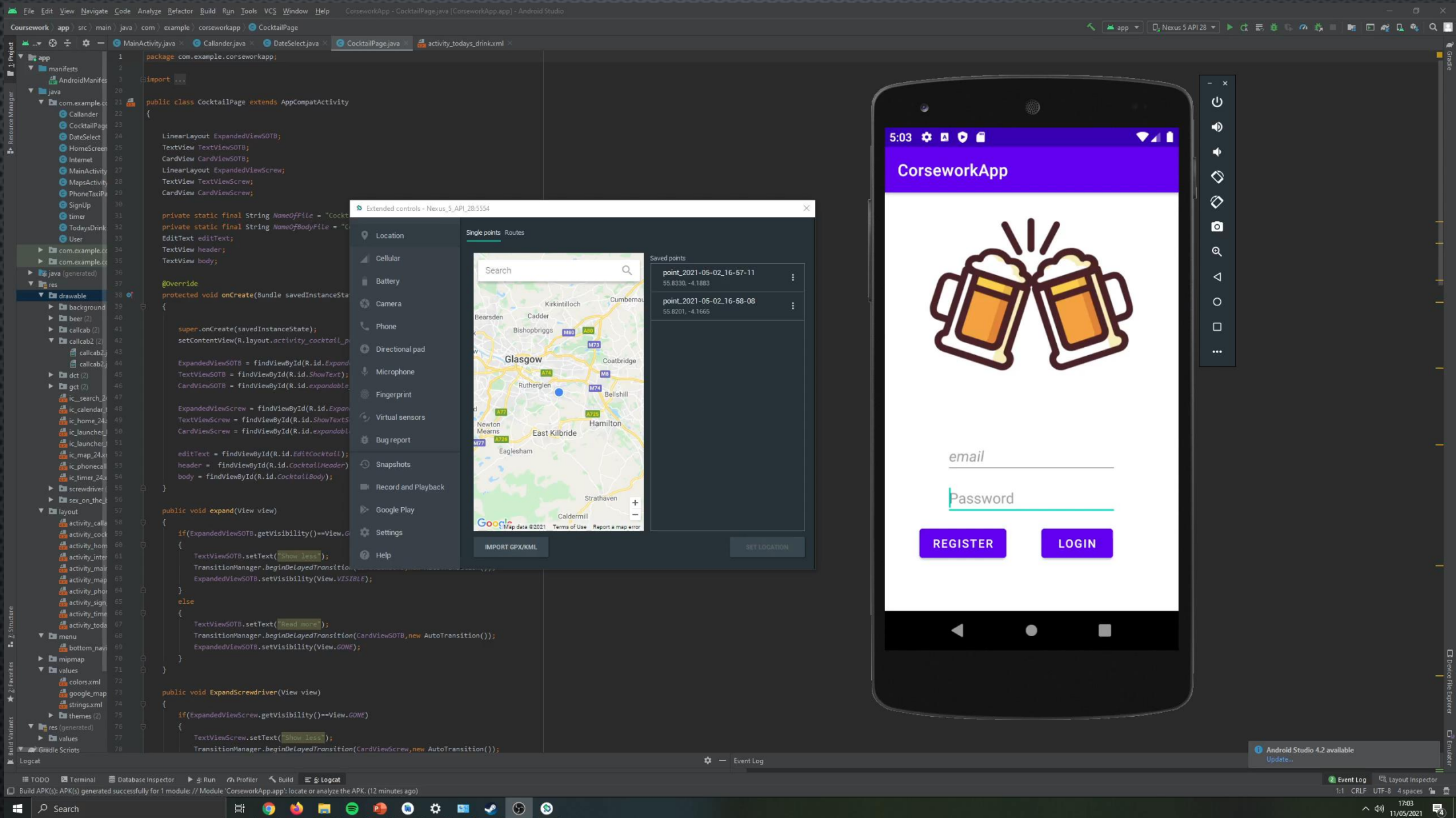
Pornstar Martini

2 Passion Fruit,
75ml vanilla vodka,
30ml Passoa,
1tsb Lime Juice,
1tsb Sugar Syrup,
Prosecco



APP DEMO





SECURITY ISSUES

- DATA STORAGE



CRITICAL EVALUATION

- ACCESSIBLE
- ORIENTATION LOCK
- RELEVANT FEATURES
- SECURE



FUTURE WORK

- PARTNER WITH BARS
- ONCLICK ADDED TO THE MAP
- MAP SEARCH
- FAVOURITES SECTION



REFERENCES

Bibliography

Google, 2021. *Get Started with Firebase Authentication on Android*. [Online]

Available at: <https://firebase.google.com/docs/auth/android/start>

[Accessed 10 April 2021].

Google, 2021. *Get the last known location*. [Online]

Available at: <https://developer.android.com/training/location/retrieve-current>

[Accessed 5 April 2021].

Google, 2021. *Quickstart - Adding a Map*. [Online]

Available at: <https://developers.google.com/maps/documentation/android-sdk/start>

[Accessed 5 April 2021].

Google, 2021. *Using API Keys*. [Online]

Available at: <https://developers.google.com/maps/documentation/android-sdk/get-api-key>

[Accessed 5 April 2021].

Material Design, 2021. *Bottom navigation*. [Online]

Available at: <https://material.io/components/bottom-navigation#usage>

[Accessed 20 April 2021].

Tutorials point, 2021. *Android - Shared Preferences*. [Online]

Available at: https://www.tutorialspoint.com/android/android_shared_preferences.htm

[Accessed 15 April 2021].