TooBo, application météo

développée en Java pour Android

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API et technologies utilisées

- OpenWeatherMap API
 Firebase (NoSQL)
 - - Android Studio
 - Postman
 - Github

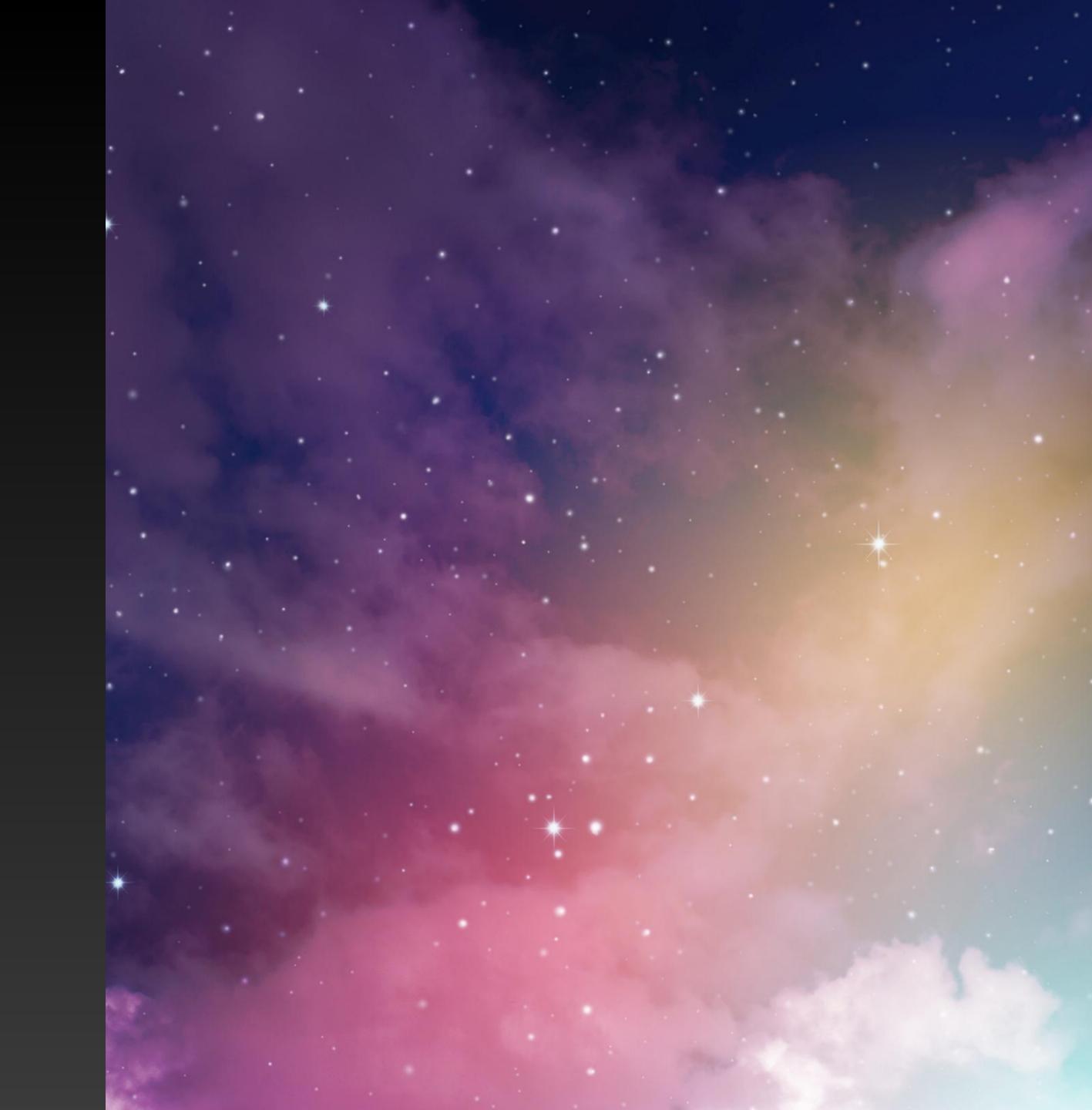


Diagramme de classe 1ère version

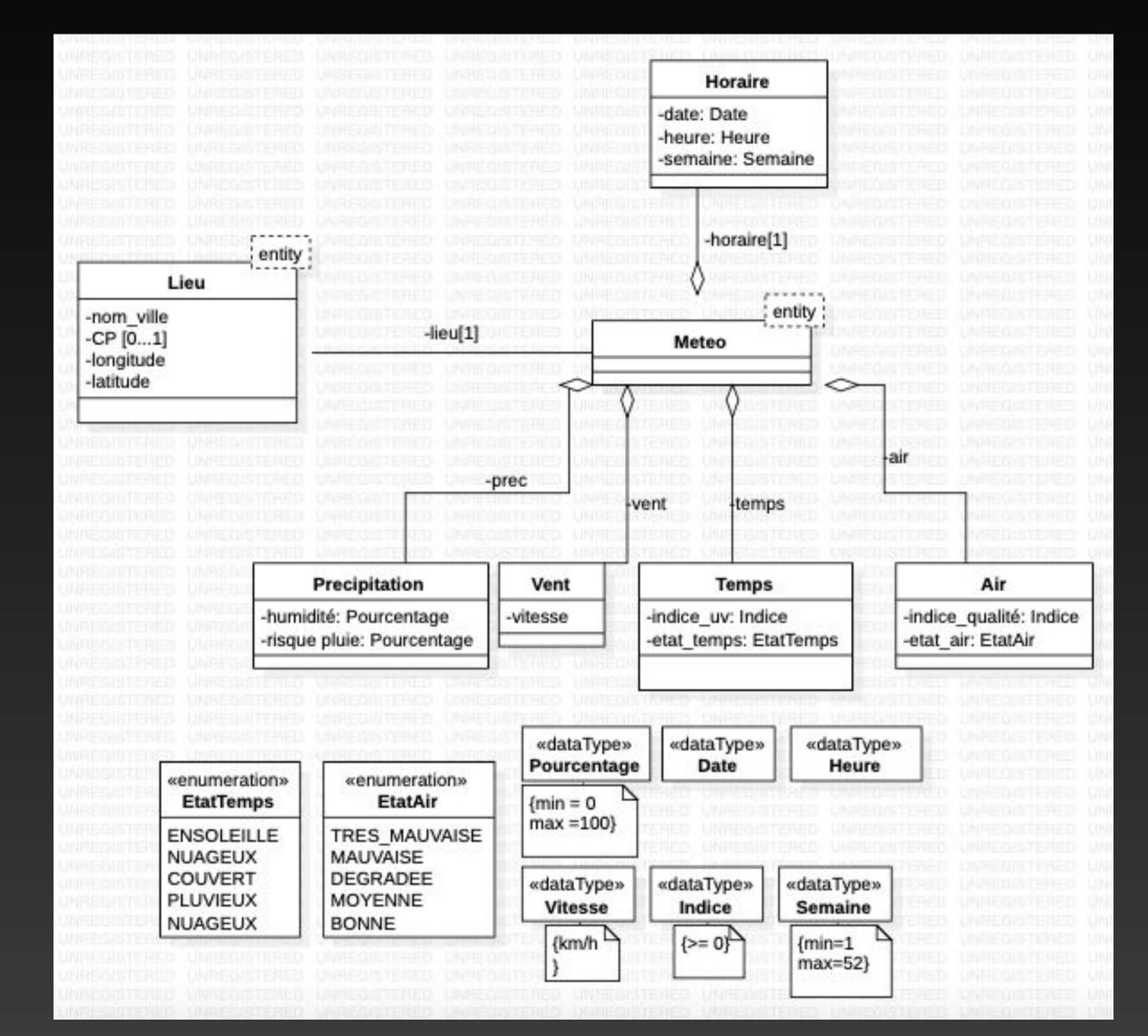
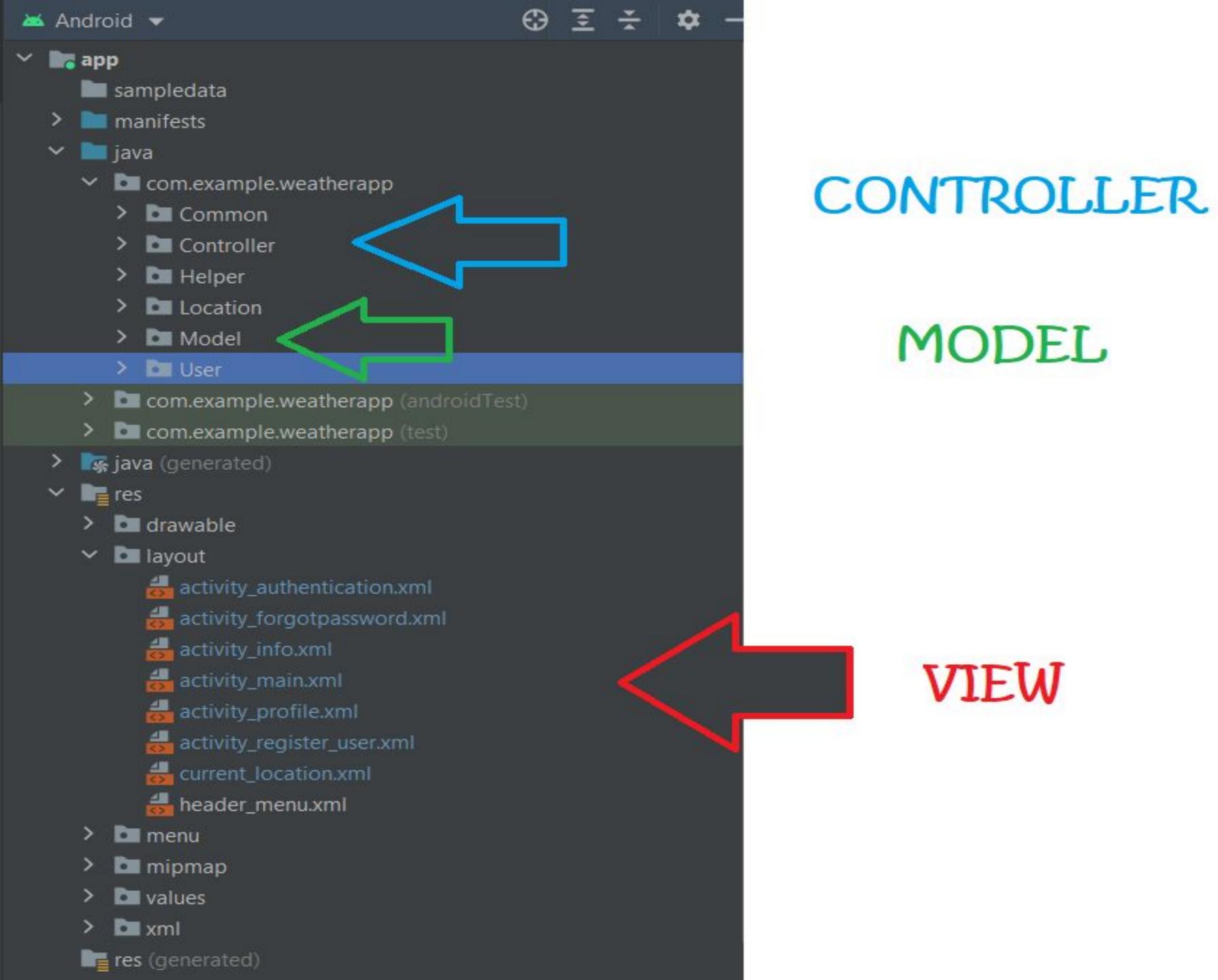


Diagramme de classe 2ème version

+setAll()

+onLocationChanged()

toobo_class_diagram.mdj — StarUML (UNREGISTERED) Main temp: double temp_min: double entity: ForgotPassword InfoActivity temp_max: double speed: doubl ProfileActivity -pressure: double WeatherApp deg: double emailEditText: EditText names emails citys: EditText user: FirebaseUser humidity: int resetPasswordButton: Button updates: Button #bxtCity bxtLastUpdate txtHumidity bxtDeg bxtDescription bxtTemp_min bxtTemp_max bxtSunrise bxtSunrise bxtWind bxtPressure: TextView getSpeed() reference: DatabaseReference progressBar: ProgressBar user: FirebaseUser enumeration #imageView: ImageView +getTemp() +setSpeed() userID: String #auth: FirebaseAuth reference: DatabaseReference Temp #usernameHeader emailHeader: TextView +setTemp() +getDeg() userID: String #locationManager: LocationManager tonCreate() +setDeg() +getTemp_min() METRIC #onCreate() -onCancelled() #provider: String +setTemp_min() Rain IMPERIAL resetPassword() #onCreate() -getTemp_max user: FirebaseUser -setTemp_max(-mAuth: FirebaseAuth reference: DatabaseReference -getPressure() +setPressure() -userID: String #drawerLayout: DrawerLayout +getHumidity() Weather #navigationView: NavigationView +setHumidity() id: int #actionBarDrawerToggle: ActionBarDrawerToggle main: String main +onOptionsItemSelected() description: String -wind +onCreate() icon: String +updateNavHeader() OpenWeatherMap +onPause() weather: List<Weather: +setId() +onResume() base: String +getMain() +onLocationChanged() -dt: int +setMain() +onProviderEnabled() RegisterUser +onProviderDisabled() -getDescription() -banner registerUser bannerDescription: TextView name: String -setDescription() editTextFullName editTextCity editTextEmail editTextPassword: EditText cod: int -getloon() -progressBar: ProgressBar +set(con() AsyncTask +getCoord() -mAuth: FirebaseAuth +setCoord() #onCreate() +getWeather() +onClick() +setWeather() Coord -registerUser() +getBase() +setBase() -lat: double #openWeatherMap GetWeather AppCompatActivit getMain() -lon: double -coord #pd: ProgressDiialo GetWeather setMain() +getLat() LocationListener -getWind() #onPreExecute() #pd: ProcessDialog +setLat() +setWind() #doInBackground() +getLon() -getRain() #onPreExecute() +setLon() email +setRain() #doinBackground() #onPostExecute() +getSnow() +setSnow() Sys getClouds() +setClouds() type: int View.OnClickListener -getDt() id: double #opeqWeatherMap +setDt() country: String +getSys() survise: doub fullName city email: String +setSys() sunset: double +getFullName() getid() +getType() +setid() +setFullName() +setType() +getName() +getCity() +setName() +setCity() +setId() +getCod() MainActivity +getEmail() CurrentLocation +getCountry() +setCod() +setEmail() register forgotPassword: TextView +setCountry(#txtCity txtLastUpdate txtHumidity txtDeg bttDescription txtTemp_min btTemp_max_txtSunrise txtSunrise txtWind bttPressure: TextView editTextEmail editTextPassword: EditText Snow +getSurvise(#imageView: ImageView -signIn: Button setSunrise #usernameHeader: TextView -mAuth: FirebaseAuth -getSunset() #emailHeader: TextView -progressBar: ProgressBar -setSunset() #locationManager: LocationManager #provider: String #onCreate() +onClick() #drawerLayout: DrawerLayout #navigationView: NavigationView -userLogin() #actionBarDrawerToggle: ActionBarDrawerToggle Clouds all: int. #onCreate() #onPause() +getAll() #onResume()



La structure de notre app

USER

```
O User.java X
       package com.example.weatherapp.User;
       public class User {
           public String fullName, city, email;
           public User(){
           public User(String fullName, String city, String email){
               this.fullName = fullName;
               this.city = city;
               this.email = email;
     Ħ
           public String getFullName() { return fullName; }
           public void setFullName(String fullName) { this.fullName = fullName; }
20
           public String getCity() { return city; }
           public void setCity(String city) { this.city = city; }
    public String getEmail() { return email; }
           public void setEmail(String email) { this.email = email; }
```



```
auth-ac9ef-default-rtdb

Users

3FyMU5vF44XnmFG7JpRtRs5kok93

VRwkaA4leATVsxhh8EqsS93wZX42

VkLj7RSF1CcOOxvl32r0FuVrU9A3

WanWTwlELBWxzEdeDEHb6gtRwvA2

ZZKwyTnx4dXUUdhUlmvWVTz6FB82

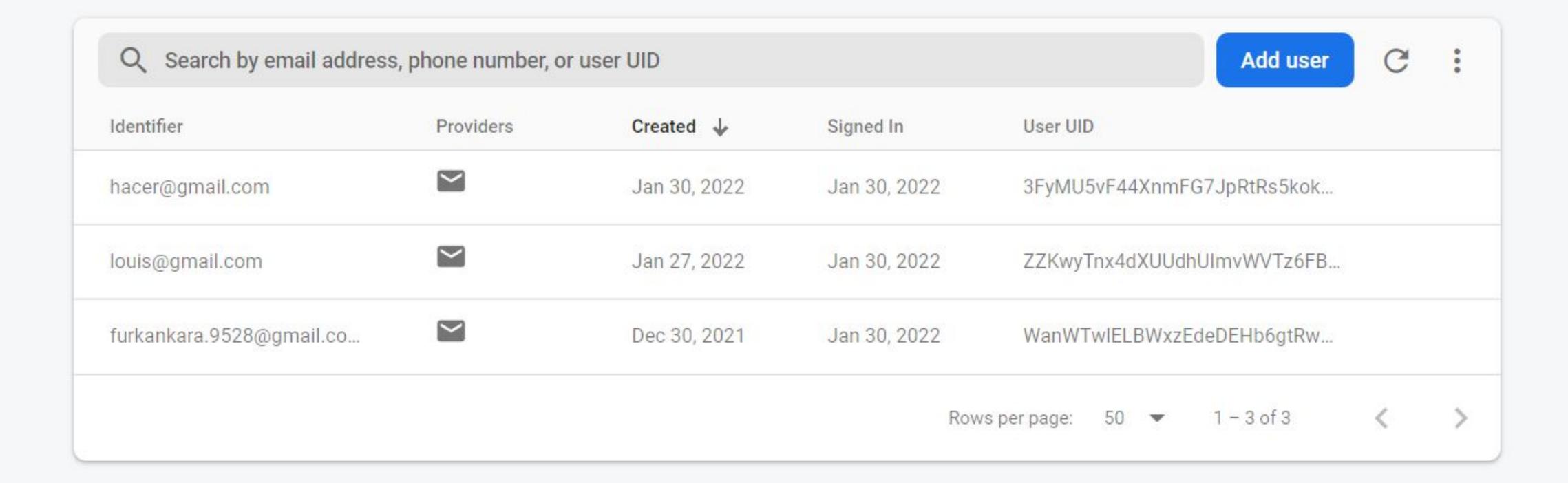
city: "Istanbul"

email: "louis@gmail.com"

fullName: "Louis de funes"
```

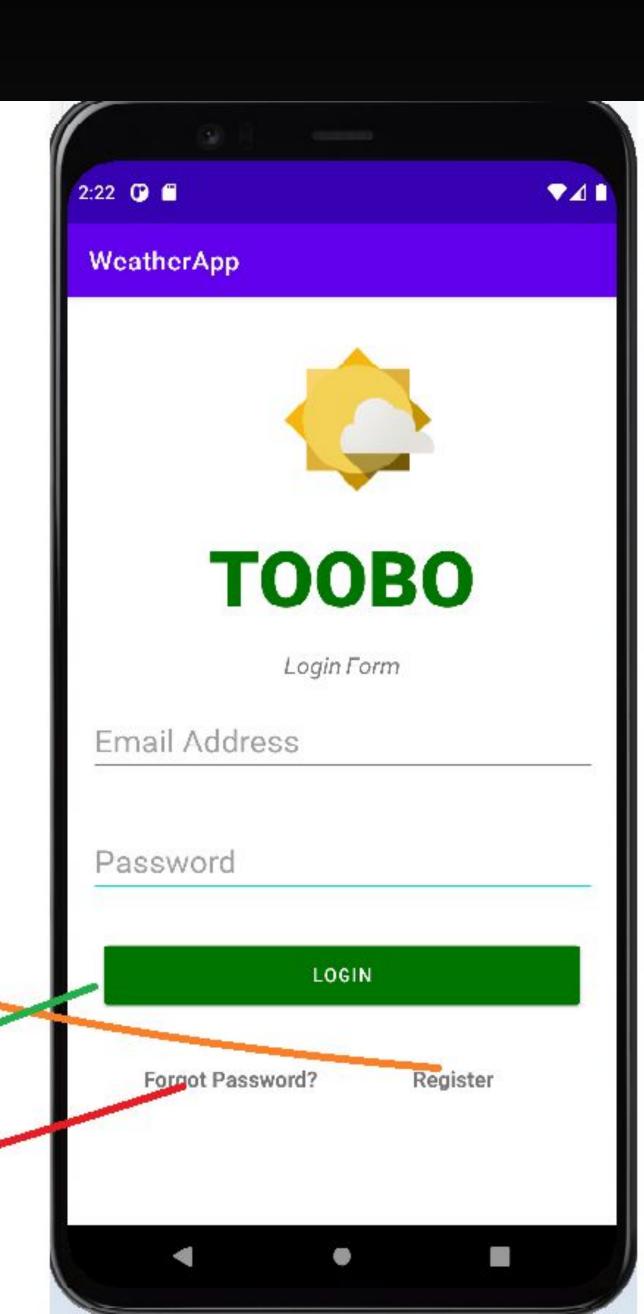
Base de données





MainActivity

```
MainActivity.java ×
         public class MainActivity extends AppCompatActivity implements View.OnClickListener {
             private TextView register, forgotPassword;
             private EditText editTextEmail, editTextPassword;
             private Button signIn;
             private FirebaseAuth mAuth;
             private ProgressBar progressBar;
             @Override
34 0
             protected void onCreate(Bundle savedInstanceState) {...}
             @Override
             public void onClick(View v){
64 9 @
                 switch(v.getId()){
                     case R.id.register:
                         startActivity(new Intent( packageContext: this, RegisterUser.class));
                         break;
                     case R.id.signIn:___
                         userLogin();
                         break;
                     case R.id.forgotPassword:
                         startActivity(new Intent( packageContext this, ForgotPassword.class));
                         break;
76
             private void userLogin() {...}
```

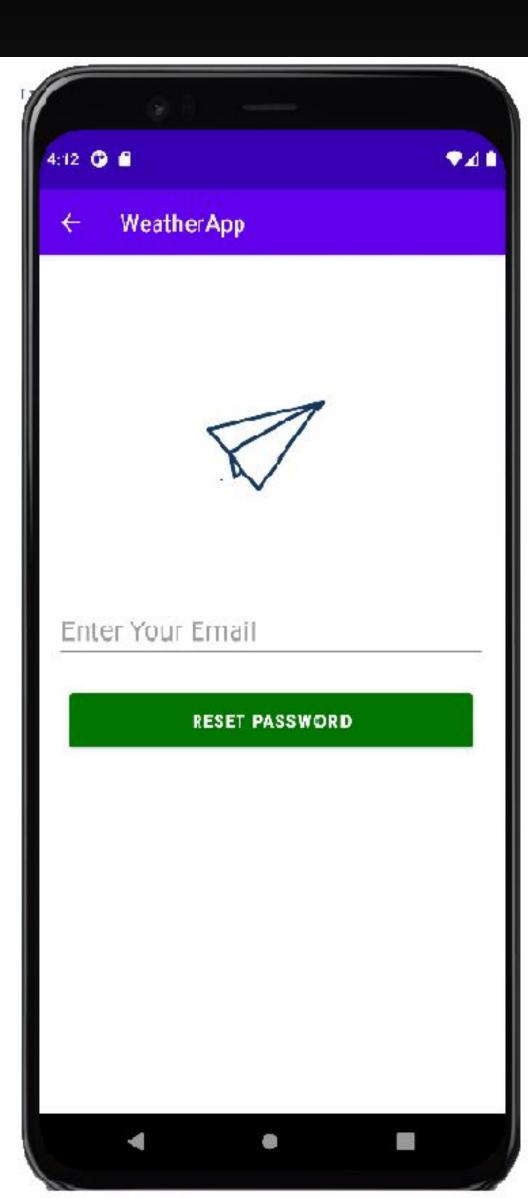


Common

```
public class Common {
                                                                                                  public enum Temp {
                                                                                                          METRIC,
           public static String API_KEY = "d293fd094ba23743cd8205c2ea54f25f";
                                                                                                                                                       Enumeration
           public static String API_LINK= "http://api.openweathermap.org/data/2.5/weather
                                                                                                          IMPERIAL;
        public static Main.Temp temp = Main.Temp.METRIC;
13
           @NonNull
           public static String apiRequest(String city){
                                                                                                              http://api.openweathermap.org/data/2.5/weather?q=r=rise units=imperial&appid=d293fd094ba23743cd8205c2ea54f25f
                                                                                                  GET
                StringBuilder sb= new StringBuilder(API_LINK);
                sb.append(String.format("?q=%s&appid=%s&units=%s",city,API_KEY,temp));
                                                                                                 Body
                return sb.toString();
                                                                                                   Pretty
                                                                                                                Preview Visualize
           public static String unixTimeStampToDateTime(double unixTimeStamp){
22 @
                                                                                                           "coord": {
                DateFormat dateFormat=new SimpleDateFormat( pattern: "HH:mm");
                                                                                                              "lon": 2.3488,
                                                                                                              "lat": 48.8534
                Date date=new Date();
                                                                                                           "weather": [
                date.setTime((long)unixTimeStamp*1000);
                return dateFormat.format(date);
                                                                                                                 "id": 803,
                                                                                                                 "main": "Clouds",
                                                                                                                 "description": "broken clouds",
                                                                                                    10
           public static String getImage(String icon){
28 @
                                                                                                                 "icon": "04d"
                                                                                                    11
                                                                                                    12
                return String.format("http://openweathermap.org/img/w/%s.png",icon);
                                                                                                    13
                                                                                                           "base": "stations",
                                                                                                    14
                                                                                                           "main": {
                                                                                                    15
           public static String getDateNow(){
                                                                                                              "temp": 49.33,
                                                                                                    16
                                                                                                                                                        POSTMAN
                                                                                                              "feels_like": 49.33,
                DateFormat dateFormat=new SimpleDateFormat( pattern: "dd MM yyyy HH:mm");
                                                                                                    17
                                                                                                              "temp_min": 46.99,
                                                                                                    18
                Date date=new Date();
                                                                                                              "temp_max": 51.96,
                                                                                                    19
                                                                                                              "pressure": 1030,
                                                                                                    20
                return dateFormat.format(date);
                                                                                                              "humidity": 67
                                                                                                    21
                                                                                                    22
```

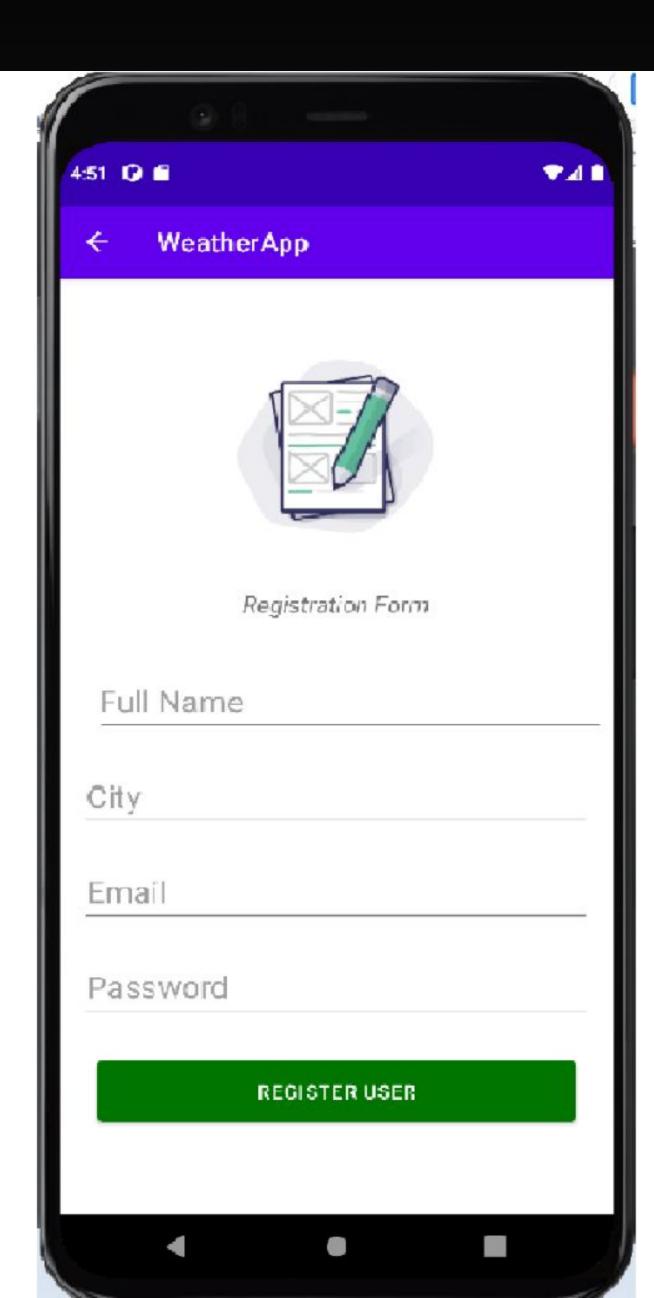
ForgotPassword

```
public class ForgotPassword extends AppCompatActivity {
                                                                                                   Reset your password for project-267324361753
    private EditText emailEditText;
    private Button resetPasswordButton;
                                                                                                   noreply@auth-ac9ef.firebaseapp.com
    private ProgressBar progressBar;
                                                                                                    FirebaseAuth auth;
    @Override
                                                                                                   Follow this link to reset your project-267324361753 password for your furkankara.9528(
    protected void onCreate(Bundle savedInstanceState){...}
                                                                                                   https://auth-ac9ef.firebaseapp.com/ /auth/action?mode=resetPassword&oobCode=zj3
    private void resetPassword(){
         String email = emailEditText.getText().toString().trim();
                                                                                                   If you didn't ask to reset your password, you can ignore this email
                                                                                                   Thanks
         if(email.isEmpty()){
                                                                                                   Your project-267324361753 team
             emailEditText.setError("Email is required");
             emailEditText.requestFocus();
             return;
         if(!Patterns.EMAIL_ADDRESS.matcher(email).matches()){
             emailEditText.setError("Please provide valid email!");
             emailEditText.requestFocus();
             return;
         progressBar.setVisibility(View.VISIBLE);
         auth.sendPasswordResetEmail(email).addOnCompleteListener(new OnCompleteListener<Void>() {
             public void onComplete(@NonNull Task<Void> task) {
                  if(task.isSuccessful()){
                      Toast.makeText( context: ForgotPassword.this, text: "Check your email to reset your password!", Toast.LENGTH_LONG).show()
                  }else{
                      Toast.makeText( context: ForgotPassword.this, text: "Try again! Something wrong happened!", Toast.LENGTH_LONG).show();
```



RegisterUser

```
mAuth.createUserWithEmailAndPassword(email,password)
        .addOnCompleteListener(new OnCompleteListener<AuthResult>() {
            @Override
            public void onComplete(@NonNull Task<AuthResult> task) {
                if(task.isSuccessful()){
                     User user = new User(<u>fullName</u>, <u>city</u>, <u>email</u>);
                     FirebaseDatabase.getInstance().getReference( path: "Users").child(FirebaseAuth.getInstance().get
                             .setValue(user).addOnCompleteListener(new OnCompleteListener<Void>() {
                         @Override
                         public void onComplete(@NonNull Task<Void> task) {
                             if(task.isSuccessful()){
                                 Toast.makeText( context: RegisterUser.this, text: "User has been registered succesfully
                                 progressBar.setVisibility(View.GONE);
                             }else{
                                  Toast.makeText( context: RegisterUser.this, text: "Failed to register!", Toast.LENGTH_LU
                                 progressBar.setVisibility(View.GONE);
                 } else{
                     Toast.makeText( context: RegisterUser.this, text: "Failed to register!", Toast.LENGTH_LONG).show();
                     progressBar.setVisibility(View.GONE);
```



WeatherApp

```
if(Common.temp == Main.Temp.METRIC) {
   txtCity.setText(String.format("%s,%s", openWeatherMap.getName(), openWeatherMap.getSys().getCountry()));
   txtLastUpdate.setText(String.format("%s", Common.getDateNow()));
   txtDescription.setText(String.format("%s", openWeatherMap.getWeather().get(0).getDescription()));
    txtHumidity.setText(String.format("%d %%", openWeatherMap.getMain().getHumidity()));
   txtSunrise.setText(String.format("%.7s AM", Common.unixTimeStampToDateTime(openWeatherMap.getSys().getSunrise())));
    txtSunset.setText(String.format("%.7s PM", Common.unixTimeStampToDateTime(openWeatherMap.getSys().getSunset())));
    txtDeg.setText(String.format("%.Of °C", openWeatherMap.getMain().getTemp()));
   txtTemp_min.setText(String.formαt("Min temp: %.2f °C", openWeatherMap.getMain().getTemp_min()));
   txtTemp_max.setText(String.formαt("Max temp: %.2f °C", openWeatherMap.getMain().getTemp_max()));
   txtWind.setText(String.format("%.2f km/h", openWeatherMap.getWind().getSpeed()));
   txtPressure.setText(String.format("%.1f hPa", openWeatherMap.getMain().getPressure()));
else{
   txtCity.setText(String.format("%s,%s",openWeatherMap.getName(),openWeatherMap.getSys().getCountry()));
   txtLastUpdate.setText(String.format("%s", Common.getDateNow()));
   txtDescription.setText(String.format("%s",openWeatherMap.getWeather().get(0).getDescription()));
   txtHumidity.setText(String.formαt("%d %%",openWeatherMap.getMain().getHumidity()));
   txtSunrise.setText(String.format("%.7s AM",Common.unixTimeStampToDateTime(openWeatherMap.getSys().getSunrise())));
   txtSunset.setText(String.format("%.7s PM",Common.unixTimeStampToDateTime(openWeatherMap.getSys().getSunset())));
    txtDeg.setText(String.format("%.Of °F",openWeatherMap.getMain().getTemp()));
   txtTemp_min.setText(String.format("Min temp: %.2f °F",openWeatherMap.getMain().getTemp_min()));
   txtTemp_max.setText(String.formαt("Max temp: %.2f °F",openWeatherMap.getMain().getTemp_max()));
   txtWind.setText(String.format("%.2f m/h",openWeatherMap.getWind().getSpeed()));
   txtPressure.setText(String.format("%.1f hPa",openWeatherMap.getMain().getPressure()));
```

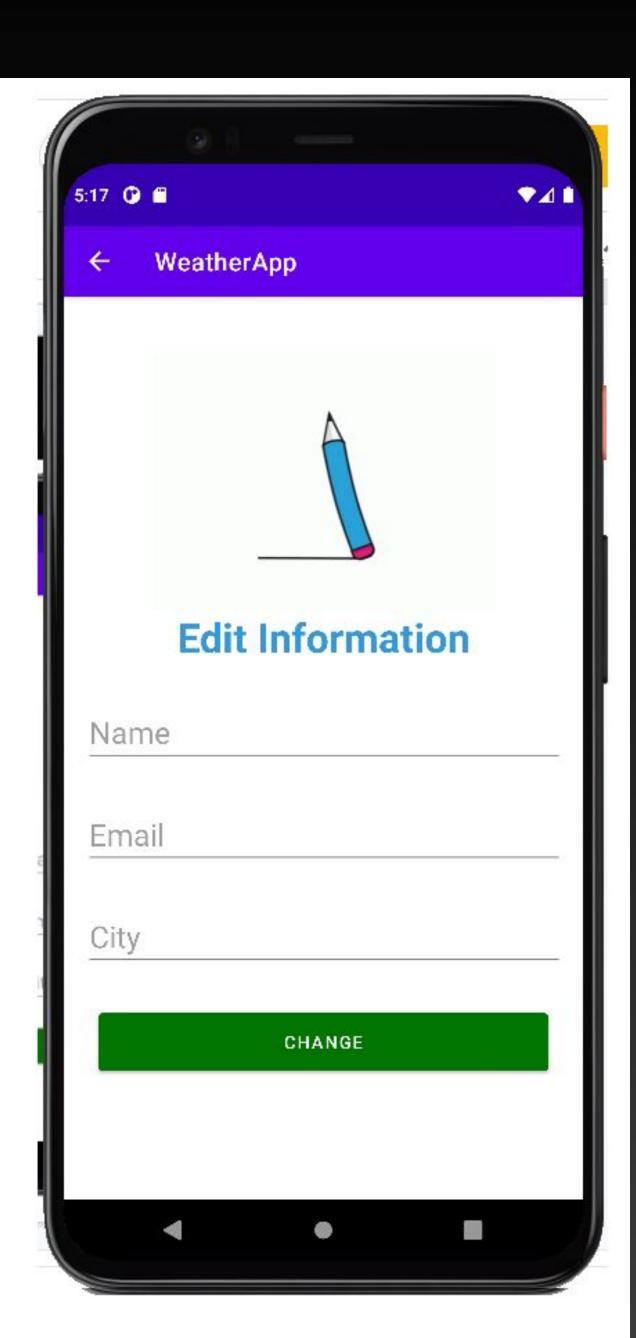


Main_menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
       <menu xmlns:android="http://schemas.android.com/apk/res/android">
                                                                                                                5:03 🗘 🖺
           <group android:checkableBehavior="single">
                                                                                                                     WeatherApp
                <item
                    android:id="@+id/nav_home"
                    android:icon="@drawable/ic_baseline_home_24"
                    android:title="Home" />
                <item
                    android:id="@+id/current_location"
                                                                                                                  louis@gmail.com
                    android:icon="@drawable/ic_baseline_location_on_24"
                    android:title="Current Location" />
                                                                                                                  ↑ Home
                <item
                    android:id="@+id/info"
                                                                                                                    Current Location
                    android:icon="@drawable/ic_baseline_info_24"
                    android:title="Info" />
                <item
                                                                                                                    Settings
                    android:id="@+id/settings"
                                                                                                                                        p: 6.15°C
                                                                                                                  Notifications
                    android:icon="@drawable/ic_baseline_settings_24"
                    android:title="Settings" />
                                                                                                                  →] Logout
                <item
                                                                                                                                          =
                    android:id="@+id/notifications"
                    android:icon="@drawable/ic_baseline_notifications_24"
                    android:title="Notifications" />
                <item
                    android:id="@+id/signOut"
                    android:icon="@drawable/ic_logout"
27 →
                    android:title="Logout" />
28
           </group>
```

InfoActivity

```
updates.setOnClickListener(new View.OnClickListener() {
   @Override
    public void onClick(View v) {
       String email = emails.getText().toString();
       String name = names.getText().toString();
       String city = citys.getText().toString();
        HashMap hashMap = new HashMap();
        hashMap.put("city",city);
        hashMap.put("email",email);
        hashMap.put("fullName",name);
        reference.child(userID).updateChildren(hashMap).addOnSuccessListener(new OnSuccessListener()
            @Override
            public void onSuccess(Object o) {
                Toast.makeText( context: InfoActivity.this, text: "Data is Successfully Updated", Toast.L
       });
```



Le lien Github

https://github.com/kbendo89/TooBo

Nos mails

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