*TERM PROJECT:*

*DEVELOPING AN ANDROID APP TO MANAGE THE WORKOUT OF THE PLAYERS IN A TEAM*

*CARMEN VILLALOBOS GARCIA*

*CIS 470*

*PF. WENBING ZHAO*

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# INTRODUCTION

For the term project, I implemented an app with a user management with login and user registration, data persistency with MySQL Lite and 5 different activities. The idea of this project is to have a platform for basketball teams where coaches and players could register and keep track of their stats when they work out.

The app starts displaying an activity where a user can login or sign up. Depending on if the user is a coach or a player another activity will be display after the login is successfully done. If it’s a coach a list of players will be display so they can look at the details of each player and their stats. If a player login they can start the workout and an activity will be displayed with two buttons made or miss so whey they get back to the details their stats will be displayed.

# ACTIVITIES

## MAINACTIVITY

The **MainActivity** is the first activity that appears when the user opens the app. It contains two text for the user to enter their username and password, and two buttons, one for login and one for registration. The login button has an onClickListener that queries the database to check if the entered username exists and if the entered password matches the password associated with that username. If the user's credentials are correct, then the activity navigates to one of two other activities depending on the user's role. If the user's role is p of a player, then the activity navigates to ContactDetail activity. If the user's role is c of a coach, then the activity navigates to PlayerList activity. The sign up button has an onClickListener that navigates to SecondActivity, which allows the user to create a new account.

## SECONDACTIVITY

The first time that you enter the app you need to register. When you register the MainActivity call the SecondActivity. The **SecondActivity** has an edittext and textviews for each attribute the name, phone, email, username, password and role which will be added to the database. It is very important to appropriately sign up as a player or as a coach, because depending on that a different activity will be opened.

The onCreate method initializes the activity's views and requests focus for the name field. The goMainAct method is called when the user clicks the add button. It reads the values from the edittext views and creates a new Contact object with those values, adds it to the list of contacts, and inserts the new contact into the SQLite database using the DBAdapter instance. Once we are done, the adapter.notifyDataSetChanged() method is called to notify the ListView that the data set has changed, so it should refresh the to display the new contact.

## PLAYERLISTACTIVITY

If we are a coach, after we login, the **Playerlist** activity is opened. The playerlist is where we can see the list of the players. The activity uses a uses a custom ContactListAdapter to populate a ListView with Contact objects obtained from a SQLite database through the DBAdapter class. The onResume() method simply calls readList() to update the list of players when the activity resumes from the background. The readList() method clears the contactos list, opens a database connection, retrieves all contacts from the database, and adds them to the contactos list. Each Contact object is created using information from the database, and added to the contactos list. The method closes the database connection when done. In the onCreate() method, the activity sets its layout and initializes the contactos list and the ContactListAdapter. It sets up an OnItemClickListener for the ListView to handle clicks on a player and launch a new activity ContactDetail to display detailed information about the selected player. Finally, it calls readList() to populate the ListView with the initial list of players.

## CONTACTDETAILACTIVITY

In the **ContactDetail** activity, it extends the AppCompatActivity and renders the player details screen. is an activity that uses a list of objects and a SQLite database to display contact details and update user statistics after an application trigger activity completes. This activity contains a list of objects and a custom list adapter called ContactListAdapter. Also, use a DBAdapter object to interact with a SQLite database to store and retrieve contact data. In the onCreate() method, the UI views are initialized and the contact details of the intent that started this activity are retrieved. Then, the data was established in the corresponding views. There is also an exit button that closes the activity when clicked. The class also has a callShoot() method that launches another activity called Shoot via the launch() method of an ActivityResultLauncher object that is registered in the onCreate() method. This object is used to handle the response of the started activity.

## SHOOTACTIVITY

From the Shoot activity a player can start the workout and an intent will get the stats from there and put it back in the contact detail. The activity has two instance variables madeshots and missshots, both initialized to 0. The activity has two buttons, one to record a successful shot and the other to record a missed shot.

In the onCreate method, the two buttons are assigned click listeners that increment the instance variables madeshots and missshots respectively. When the Shoot activity is completed, the ContactDetail class receives a result in the onActivityResult() method.

In this method, the user's stats in the database are updated and the value in the textstats view is updated. For a coach, a player list will be open and he will be able to see all the players. He can click on them to look at their information and stats.

# SCREENSHOTS OF THE ACTIVITIES:

Graphical user interface, application

Description automatically generated

Graphical user interface, application

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Graphical user interface, application

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Graphical user interface, application, Teams

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Graphical user interface, application

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# SOURCE CODE

## 4.1 JAVA CODE

### 4.1.2 MainActivity

**package** com.example.termproj;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.database.Cursor;  
**import** android.os.Bundle;  
**import** android.util.Log;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** java.util.ArrayList;  
**import** java.util.List;  
  
**public class** MainActivity **extends** AppCompatActivity {  
 **private** List<Contact> contactos;  
 **private** ContactListAdapter adapter;  
  
 **private** DBAdapter db;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 db = **new** DBAdapter(**this**);  
 contactos = **new** ArrayList<>();  
 adapter = **new** ContactListAdapter(**this**, contactos);  
  
 Button loginbutton = findViewById(R.id.Login);  
 loginbutton.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 TextView user = findViewById(R.id.usernameedit);  
 String text1 = user.getText().toString();  
 TextView pass = findViewById(R.id.passwordedit);  
 String text2 = pass.getText().toString();  
  
 db.open();  
 Cursor c = db.getUser(text1);  
 Log.d(**"TAG"**, **"çsdd"** + c.getCount());  
 **boolean** found = **false**;  
 String passdb = **""**, role = **""**, name = **""**, email = **""**, phone = **""**;  
 **int** stats= 0;  
 **if** (c.moveToFirst()) {  
 role = c.getString(6).toString();  
 passdb = c.getString(5).toString();  
 name = c.getString(1);  
 email = c.getString(2);  
 phone = c.getString(3);  
 stats = c.getInt(7);  
 }  
 db.close();  
 **if** (text2.equals(passdb)) {  
 Log.d(**"TAG"**,**"FOUND"**);  
 Log.d(**"TAG"**,role + **"role"**);  
 String st = Integer.*toString*(stats);  
 **if** (role.equals(**"p"**)) {  
 Intent intent = **new** Intent(MainActivity.**this**, ContactDetail.**class**);  
 intent.putExtra(**"name"**, name);  
 intent.putExtra(**"phone"**, phone);  
 intent.putExtra(**"email"**, email);  
 intent.putExtra(**"role"**, role);  
 intent.putExtra(**"user"**, text1);  
 intent.putExtra(**"stats"**, st);  
 Log.*d*(**"TAG"**, **"stadis"** + stats);  
  
 startActivity(intent);  
 }  
 **else if** (role.equals(**"c"**)) {  
 Log.*d*(**"TAG"**,**"COACH"**);  
 Intent intent = **new** Intent(MainActivity.**this**, PlayerList.**class**);  
  
 startActivity(intent);  
 }  
  
 }  
 **else** Log.d(**"TAG"**,**"NOT FOUND"**);  
 }  
 });  
  
 Button registerbutton = findViewById(R.id.signup);  
 registerbutton.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 Intent intent = **new** Intent(MainActivity.**this**, SecondActivity.**class**);  
 startActivity(intent);  
 }  
 });  
  
  
  
  
 }  
}

### 4.1.2 SecondActivity

**package** com.example.termproj;  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
**import** android.view.View;  
  
**import** android.widget.EditText;  
  
**import** java.util.ArrayList;  
**import** java.util.List;  
  
**public class** SecondActivity **extends** AppCompatActivity {  
 **private** List<Contact> **contactos**;  
 **private** ContactListAdapter **adapter**;  
  
 **private** DBAdapter **db**;  
  
 **public** SecondActivity() {  
 }  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_second***);  
 **db** = **new** DBAdapter(**this**);  
 **contactos** = **new** ArrayList<>();  
 **adapter** = **new** ContactListAdapter(**this**, **contactos**);  
 EditText textname = (EditText) findViewById(R.id.***varname2***);  
 textname.requestFocus();  
 }  
  
 **public void** goMainAct(View view1) {  
 EditText textuser = (EditText) findViewById(R.id.***username2***);  
 EditText textpass = (EditText) findViewById(R.id.***passwordedit2***);  
 EditText textname = (EditText) findViewById(R.id.***varname2***);  
 EditText textphone = (EditText) findViewById(R.id.***varphone2***);  
 EditText textemail = (EditText) findViewById(R.id.***varemail2***);  
 EditText textrole = (EditText) findViewById(R.id.***varrole2***);  
  
 String name = textname.getText().toString();  
 String phone = textphone.getText().toString();  
 String email = textemail.getText().toString();  
 String user = textuser.getText().toString();  
 String pass = textpass.getText().toString();  
 String role = textrole.getText().toString();  
  
  
  
 **contactos**.add(**new** Contact(name,phone,email,user,pass,role,0));  
 **db**.open();  
 **db**.insertContact(name,email,phone,user,pass,role,0);  
 **db**.close();  
 **adapter**.notifyDataSetChanged();  
  
 finish();  
 }  
}

### 4.1.3 PlayerList

**package** com.example.termproj;  
  
 **import** androidx.activity.result.ActivityResult;  
 **import** androidx.activity.result.ActivityResultCallback;  
 **import** androidx.activity.result.ActivityResultLauncher;  
 **import** androidx.activity.result.contract.ActivityResultContracts;  
 **import** androidx.appcompat.app.AppCompatActivity;  
  
 **import** android.content.Intent;  
 **import** android.database.Cursor;  
 **import** android.os.Bundle;  
 **import** android.util.Log;  
 **import** android.view.View;  
 **import** android.widget.AdapterView;  
 **import** android.widget.Button;  
 **import** android.widget.ListView;  
 **import** android.widget.TextView;  
  
 **import** java.util.ArrayList;  
 **import** java.util.List;  
  
**public class** PlayerList **extends** AppCompatActivity {  
 **private** List<Contact> **contactos**;  
 **private** ContactListAdapter **adapter**;  
  
 **private** DBAdapter **db**;  
  
  
 **public void** readList() {  
 **contactos**.clear();  
 **db** = **new** DBAdapter(**this**);  
  
 **db**.open();  
  
 Cursor c = **db**.getAllContacts();  
 Log.*d*(**"TAG"**, c.getCount() + **" adjsadak"**);  
 **if** (c.moveToFirst())  
 {  
 **do** {  
 String name = c.getString(1);  
 String email = c.getString(2);  
 String phone = c.getString(3);  
 String user = c.getString(4);  
 String pass = c.getString(5);  
 String role = c.getString(6);  
 Integer stats = c.getInt(7);  
 Log.*d*(**"TAG"**, user + **"userarao"**);  
 **contactos**.add(**new** Contact(name,phone,email,user,pass,role,stats));  
 } **while** (c.moveToNext());  
 }  
 **db**.close();  
 }  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_player\_list***);  
 **contactos** = **new** ArrayList<>();  
  
 **adapter** = **new** ContactListAdapter(**this**, **contactos**);  
  
 ListView listViewContacts = findViewById(R.id.***listViewContacts***);  
 listViewContacts.setAdapter(**adapter**);  
 listViewContacts.setOnItemClickListener(**new** AdapterView.OnItemClickListener() {  
 @Override  
 **public void** onItemClick(AdapterView<?> parent, View view, **int** position, **long** id) {  
 Contact contact = (Contact) parent.getItemAtPosition(position);  
 Intent intent = **new** Intent(PlayerList.**this**, ContactDetail.**class**);  
 intent.putExtra(**"name"**, contact.getName());  
 intent.putExtra(**"phone"**, contact.getPhone());  
 intent.putExtra(**"email"**, contact.getEmail());  
 intent.putExtra(**"stats"**, contact.getStats().toString());  
 intent.putExtra(**"user"**, contact.getUser());  
 startActivity(intent);  
 }  
 });  
  
 readList();  
 }  
  
 @Override  
 **protected void** onResume() {  
 **super**.onResume();  
 readList();  
 }  
  
  
}

### 4.1.4 ContacDetail

**package** com.example.termproj;  
  
  
**import** androidx.activity.result.ActivityResult;  
**import** androidx.activity.result.ActivityResultCallback;  
**import** androidx.activity.result.ActivityResultLauncher;  
**import** androidx.activity.result.contract.ActivityResultContracts;  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.annotation.SuppressLint;  
**import** android.content.Intent;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.TextView;  
  
**import** java.util.ArrayList;  
**import** java.util.List;  
  
**public class** ContactDetail **extends** AppCompatActivity {  
 **private** TextView **showname**;  
 **private** TextView **showphone**;  
 **private** TextView **showemail**;  
  
 **private** List<Contact> **contactos**;  
 **private** ContactListAdapter **adapter**;  
  
 **private** DBAdapter **db**;  
  
 String **user** = **""**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_contact\_detail***);  
  
 **db** = **new** DBAdapter(**this**);  
 **contactos** = **new** ArrayList<>();  
 **adapter** = **new** ContactListAdapter(**this**, **contactos**);  
  
 TextView textstats = findViewById(R.id.***textstats***);  
  
 **showname** = findViewById(R.id.***showname***);  
 **showphone** = findViewById(R.id.***showphone***);  
 **showemail** = findViewById(R.id.***showemail***);  
  
 Intent intent = getIntent();  
 String name = intent.getStringExtra(**"name"**);  
 String phone = intent.getStringExtra(**"phone"**);  
 String email = intent.getStringExtra(**"email"**);  
 String st = intent.getStringExtra(**"stats"**);  
 **user** = intent.getStringExtra(**"user"**);  
  
 textstats.setText(st);  
  
 **showname**.setText(name);  
 **showphone**.setText(phone);  
 **showemail**.setText(email);  
  
 Button exitButton = findViewById(R.id.***exitButton***);  
 exitButton.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 finish();  
 }  
 });  
  
 }  
  
 ActivityResultLauncher<Intent> **gotocallShoot**= registerForActivityResult(**new** ActivityResultContracts.StartActivityForResult(),  
 **new** ActivityResultCallback<ActivityResult>() {  
 @Override  
 **public void** onActivityResult(ActivityResult result) {  
 **if** (result.getResultCode() == ***RESULT\_OK***) {  
 Intent data = result.getData();  
 Double stats = data.getDoubleExtra(**"stats"**, 0.0);  
 TextView textstats = findViewById(R.id.***textstats***);  
 textstats.setText(String.*valueOf*(stats));  
 **db**.open();  
 **db**.updateStats(**user**,Double.*valueOf*(stats).intValue());  
 **db**.close();  
 }  
 }  
 });  
  
 **public void** callShoot(View view) {  
 Intent intent2 = **new** Intent(**this**, Shoot.**class**);  
 **gotocallShoot**.launch(intent2);  
 }  
  
}

### 4.1.5 Shoot

**package** com.example.termproj;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
  
**public class** Shoot **extends** AppCompatActivity {  
 **int madeshots** = 0;  
 **int missshots** = 0;  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_shoot***);  
  
 Button made = (Button) findViewById(R.id.***made***);  
 made.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 **madeshots**++;  
 }  
 });  
  
 Button miss = (Button) findViewById(R.id.***miss***);  
 miss.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 **missshots**++;  
 }  
 });  
  
 }  
  
 **public void** goContactDetailAct(View view1) {  
 **double** totalshots = **madeshots**+**missshots**;  
 **double** stats = (**double**)(**madeshots**)/(totalshots);  
 stats= stats\*100;  
 Intent intent2 = **new** Intent();  
 intent2.putExtra(**"stats"**, stats);  
 setResult(***RESULT\_OK***, intent2);  
 finish();  
 }  
}

### 4.1.6 AUXILIAR CLASSES

#### 4.1.6.1 DBADAPTER

**package** com.example.termproj;  
  
  
  
**import** android.content.ContentValues;  
**import** android.content.Context;  
**import** android.database.Cursor;  
**import** android.database.SQLException;  
**import** android.database.sqlite.SQLiteDatabase;  
**import** android.database.sqlite.SQLiteOpenHelper;  
**import** android.util.Log;  
**import** android.widget.Toast;  
  
**public class** DBAdapter {  
 **static final** String ***KEY\_ROWID*** = **"\_id"**;  
 **static final** String ***KEY\_NAME*** = **"name"**;  
 **static final** String ***KEY\_EMAIL*** = **"email"**;  
  
 **static final** String ***KEY\_PHONE*** = **"phone"**;  
  
 **static final** String ***KEY\_USER*** = **"user"**;  
  
 **static final** String ***KEY\_ROLE*** = **"role"**;  
  
 **static final** String ***KEY\_STATS*** = **"stats"**;  
 **static final** String ***KEY\_PASSWORD*** = **"password"**;  
 **static final** String ***TAG*** = **"DBAdapter"**;  
 **static final** String ***DATABASE\_NAME*** = **"MyDB"**;  
 **static final** String ***DATABASE\_TABLE*** = **"players"**;  
  
 **static final int *DATABASE\_VERSION*** = 1;  
 **static final** String ***TABLE\_CREATE*** = **"create table players (\_id integer primary key autoincrement, "** + **"name text not null, email text not null,phone text not null,user text not null, password text not null, role text not null, stats integer not null);"**;  
 **static final** String ***INDEX\_CREATE*** = **"CREATE UNIQUE INDEX idx\_user ON players(user);"**;  
 **final** Context **context**;  
 DatabaseHelper **DBHelper**;  
 SQLiteDatabase **db**;  
 **public** DBAdapter(Context ctx) {  
 *//ctx.deleteDatabase(DATABASE\_NAME);* **this**.**context** = ctx;  
 **DBHelper** = **new** DatabaseHelper(**context**);  
 }  
  
  
 **private static class** DatabaseHelper **extends** SQLiteOpenHelper  
 {  
 DatabaseHelper(Context context)  
 {  
 **super**(context, ***DATABASE\_NAME***, **null**, ***DATABASE\_VERSION***);  
 }  
 @Override  
 **public void** onCreate(SQLiteDatabase db)  
 {  
 **try** {  
 db.execSQL(***TABLE\_CREATE***);  
 db.execSQL(***INDEX\_CREATE***);  
 } **catch** (SQLException e) { e.printStackTrace(); }  
 }  
 @Override  
 **public void** onUpgrade(SQLiteDatabase db, **int** oldVersion, **int** newVersion)  
 {  
 Log.*w*(***TAG***, **"Upgrading database from version "** + oldVersion + **" to "** + newVersion + **", which will destroy all old data"**);  
 onCreate(db);  
 }  
 }  
 *//---opens the database---* **public** DBAdapter open() **throws** SQLException  
 {  
 **db** = **DBHelper**.getWritableDatabase();  
 **return this**;  
 }  
 *//---closes the database---* **public void** close()  
 {  
 **DBHelper**.close();  
 }  
  
 **public long** insertContact(String name, String email, String phone, String user,  
 String password, String role, Integer stats)  
 {  
 ContentValues initialValues = **new** ContentValues();  
 initialValues.put(***KEY\_NAME***, name);  
 initialValues.put(***KEY\_EMAIL***, email);  
 initialValues.put(***KEY\_PHONE***, phone);  
 initialValues.put(***KEY\_USER***, user);  
 initialValues.put(***KEY\_PASSWORD***, password);  
 initialValues.put(***KEY\_ROLE***, role);  
 initialValues.put(***KEY\_STATS***, stats);  
 **return db**.insert(***DATABASE\_TABLE***, **null**, initialValues);  
 }  
 **public boolean** deleteContact(**long** rowId)  
 {  
 **return db**.delete(***DATABASE\_TABLE***, ***KEY\_ROWID*** + **"="** + rowId, **null**) > 0;  
 }  
 **public** Cursor getAllContacts()  
 {  
 **return db**.query(***DATABASE\_TABLE***, **new** String[] {***KEY\_ROWID***, ***KEY\_NAME***,  
 ***KEY\_EMAIL***,***KEY\_PHONE***,***KEY\_USER***, ***KEY\_PASSWORD***, ***KEY\_ROLE***, ***KEY\_STATS***,***KEY\_STATS***},  
 **null**, **null**, **null**, **null**, **null**);  
 }  
  
  
  
 **public** Cursor getUser(String user1) **throws** SQLException  
 {  
 Cursor mCursor = **db**.query(**true**, ***DATABASE\_TABLE***, **new** String[] {  
 ***KEY\_ROWID***, ***KEY\_NAME***, ***KEY\_EMAIL***, ***KEY\_PHONE***, ***KEY\_USER***, ***KEY\_PASSWORD***, ***KEY\_ROLE***, ***KEY\_STATS***}, ***KEY\_USER*** + **" = "** + **"\'"** + user1 + **"\'"**,**null**, **null**, **null**, **null**, **null**);  
  
 **if** (mCursor != **null**) { mCursor.moveToFirst(); }  
 **return** mCursor;  
 }  
  
 **public boolean** updateStats(String user, Integer stats1)  
 {  
 ContentValues args = **new** ContentValues();  
 args.put(***KEY\_STATS***, stats1);  
 **return db**.update(***DATABASE\_TABLE***, args, ***KEY\_USER*** + **"="** + **"\'"** +user + **"\'"**, **null**) > 0;  
 }  
}

#### 4.1.6.2 CONTACLISTADPATER

**package** com.example.termproj;  
  
  
**import** android.content.Context;  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
**import** android.widget.ArrayAdapter;  
**import** android.widget.TextView;  
  
**import** java.util.List;  
  
**public class** ContactListAdapter **extends** ArrayAdapter<Contact> {  
  
 **public** ContactListAdapter(Context context, List<Contact> contacts) {  
 **super**(context, 0, contacts);  
 }  
  
 @Override  
 **public** View getView(**int** position, View convertView, ViewGroup parent) {  
  
 Contact contact = getItem(position);  
  
 **if** (convertView == **null**) {  
 convertView = LayoutInflater.*from*(getContext()).inflate(R.layout.***activity\_contact\_list\_adpater***, parent, **false**);  
 }  
  
 TextView textViewName = convertView.findViewById(R.id.***contact\_name***);  
  
 textViewName.setText(contact.getName());  
  
 **return** convertView;  
 }  
}

#### 4.1.6.3 CONTACT

**package** com.example.termproj;  
  
**public class** Contact {  
 **private** String **name**;  
 **private** String **phone**;  
 **private** String **email**;  
  
 **private** String **user**;  
  
 **private** String **pass**;  
  
 **private** String **role**;  
  
 **private** Integer **stats**;  
  
  
 **public** Contact(String name, String phone, String email, String user, String pass, String role, Integer stats) {  
 **this**.**name** = name;  
 **this**.**phone** = phone;  
 **this**.**email** = email;  
 **this**.**user** = user;  
 **this**.**pass** = pass;  
 **this**.**role** = role;  
 **this**.**stats** = stats;  
 }  
  
 **public** String getName() {  
 **return name**;  
 }  
  
 **public** String getPhone() {  
 **return phone**;  
 }  
  
 **public** String getEmail() {  
 **return email**;  
 }  
  
 **public** String getUser() {  
 **return user**;  
 }  
  
 **public** String getPass() {  
 **return pass**;  
 }  
  
 **public** String getRole() {  
 **return role**;  
 }  
  
 **public** Integer getStats() {  
 **return stats**;  
 }  
  
  
  
}

## 4.2 XML CODE

### 4.2.1 Mainxml

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"**>  
  
  
 <**TextView  
 android:id="@+id/usernametext"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginEnd="15dp"  
 android:layout\_marginBottom="44dp"  
 android:text="USERNAME:"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toTopOf="@+id/passwordedit"  
 app:layout\_constraintEnd\_toStartOf="@+id/passwordedit"  
 app:layout\_constraintHorizontal\_bias="0.529"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**TextView  
 android:id="@+id/passwordtext"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="44dp"  
 android:text="PASSWORD:"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toStartOf="@+id/passwordedit"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 tools:ignore="HardcodedText"** />  
  
  
 <**EditText  
 android:id="@+id/usernameedit"  
 android:layout\_width="0dp"  
 android:layout\_height="48dp"  
 android:layout\_marginStart="32dp"  
 android:hint="name"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toBottomOf="@+id/usernametext"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.0"  
 app:layout\_constraintStart\_toEndOf="@+id/usernametext"** />  
  
 <**EditText  
 android:id="@+id/passwordedit"  
 android:layout\_width="105dp"  
 android:layout\_height="55dp"  
 android:layout\_marginEnd="48dp"  
 android:hint="password"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toBottomOf="@+id/passwordtext"  
 app:layout\_constraintEnd\_toEndOf="parent"** />  
  
 <**Button  
 android:id="@+id/Login"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="59dp"  
 android:layout\_marginTop="116dp"  
 android:text="LOGIN"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.498"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 tools:ignore="HardcodedText,TextSizeCheck"** />  
  
 <**Button  
 android:id="@+id/signup"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="59dp"  
 android:text="SIGN UP"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.498"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/Login"  
 tools:ignore="HardcodedText,TextSizeCheck"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

### 4.2.2 ActivitySecondxml

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".SecondActivity"**>  
  
  
 <**TextView  
 android:id="@+id/usernametext"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="64dp"  
 android:text="USERNAME:"  
 app:layout\_constraintBottom\_toTopOf="@+id/passwordtext"  
 app:layout\_constraintEnd\_toStartOf="@+id/username2"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**TextView  
 android:id="@+id/passwordtext"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="60dp"  
 android:text="PASSWORD:"  
 app:layout\_constraintBottom\_toTopOf="@+id/NAME2"  
 app:layout\_constraintEnd\_toStartOf="@+id/passwordedit2"  
 app:layout\_constraintHorizontal\_bias="0.174"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**EditText  
 android:id="@+id/varname2"  
 android:layout\_width="168dp"  
 android:layout\_height="45dp"  
 android:layout\_marginEnd="68dp"  
 android:layout\_marginBottom="36dp"  
 android:hint="name"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/varemail2"  
 app:layout\_constraintEnd\_toEndOf="parent"** />  
  
  
 <**EditText  
 android:id="@+id/passwordedit2"  
 android:layout\_width="105dp"  
 android:layout\_height="55dp"  
 android:layout\_marginEnd="120dp"  
 android:layout\_marginBottom="32dp"  
 android:hint="password"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/varname2"  
 app:layout\_constraintEnd\_toEndOf="parent"** />  
  
 <**TextView  
 android:id="@+id/EMAILADDRESS2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="96dp"  
 android:text="EMAIL ADDRESS"  
 app:layout\_constraintBottom\_toTopOf="@+id/PHONE2"  
 app:layout\_constraintEnd\_toStartOf="@+id/varemail2"  
 app:layout\_constraintHorizontal\_bias="0.238"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**TextView  
 android:id="@+id/PHONE2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="76dp"  
 android:text="PHONE NUMBER"  
 app:layout\_constraintBottom\_toTopOf="@+id/role"  
 app:layout\_constraintEnd\_toStartOf="@+id/varphone2"  
 app:layout\_constraintHorizontal\_bias="0.266"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**TextView  
 android:id="@+id/NAME2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="68dp"  
 android:text="NAME"  
 app:layout\_constraintBottom\_toTopOf="@+id/EMAILADDRESS2"  
 app:layout\_constraintEnd\_toStartOf="@+id/username2"  
 app:layout\_constraintHorizontal\_bias="0.118"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**TextView  
 android:id="@+id/role"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="44dp"  
 android:layout\_marginBottom="32dp"  
 android:text="ROLE"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toStartOf="@+id/varrole2"  
 app:layout\_constraintHorizontal\_bias="0.042"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**EditText  
 android:id="@+id/username2"  
 android:layout\_width="128dp"  
 android:layout\_height="47dp"  
 android:layout\_marginEnd="108dp"  
 android:hint="username"  
 android:inputType="textPersonName"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/passwordedit2"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/button2"  
 tools:ignore="HardcodedText"** />  
  
 <**EditText  
 android:id="@+id/varemail2"  
 android:layout\_width="202dp"  
 android:layout\_height="59dp"  
 android:layout\_marginEnd="36dp"  
 android:layout\_marginBottom="52dp"  
 android:hint="email"  
 android:inputType="textPersonName"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/varphone2"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**EditText  
 android:id="@+id/varphone2"  
 android:layout\_width="201dp"  
 android:layout\_height="52dp"  
 android:layout\_marginEnd="44dp"  
 android:layout\_marginBottom="48dp"  
 android:hint="phone number"  
 android:inputType="textPersonName"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/varrole2"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**EditText  
 android:id="@+id/varrole2"  
 android:layout\_width="146dp"  
 android:layout\_height="47dp"  
 android:layout\_marginEnd="92dp"  
 android:layout\_marginBottom="24dp"  
 android:hint="introduce c or p"  
 android:minHeight="25dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 tools:ignore="HardcodedText"** />  
  
 <**Button  
 android:id="@+id/button2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="88dp"  
 android:onClick="goMainAct"  
 android:text="Main Activity"  
 app:layout\_constraintBottom\_toTopOf="@+id/varname2"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.169"  
 tools:ignore="HardcodedText"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

### 4.2.3 Playerlistxml

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
xmlns:app="http://schemas.android.com/apk/res-auto"  
xmlns:tools="http://schemas.android.com/tools"  
android:layout\_width="match\_parent"  
android:layout\_height="match\_parent"  
tools:context=".PlayerList"**>  
  
<**ListView  
 android:id="@+id/listViewContacts"  
 android:layout\_width="match\_parent"  
 android:layout\_height="585dp"  
 android:layout\_marginTop="16dp"  
 tools:ignore="MissingConstraints"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

### 4.2.4 ContactDetailxml

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".ContactDetail"**>  
  
  
 <**TextView  
 android:id="@+id/showname"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="31dp"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
  
 <**TextView  
 android:id="@+id/showphone"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="16dp"  
 android:textSize="16sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/showname"** />  
  
  
 <**TextView  
 android:id="@+id/showemail"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="20dp"  
 android:textSize="16sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/showphone"** />  
  
 <**Button  
 android:id="@+id/exitButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginTop="56dp"  
 android:text="BACK TO MAIN"  
 app:layout\_constraintStart\_toStartOf="@+id/shoot"  
 app:layout\_constraintTop\_toBottomOf="@+id/shoot"** />  
  
 <**Button  
 android:id="@+id/shoot"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="256dp"  
 android:onClick="callShoot"  
 android:text="Start Workout"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 tools:ignore="MissingConstraints"** />  
  
 <**TextView  
 android:id="@+id/textstats"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="TextView"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toTopOf="@+id/shoot"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/showemail"** />  
  
 <**TextView  
 android:id="@+id/infostats"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="YOUR STATS ARE: "  
 app:layout\_constraintBottom\_toTopOf="@+id/textstats"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/showemail"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

#### 4.2.4.1 Contactlistadpterxml

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"**>  
  
 <**TextView  
 android:id="@+id/contact\_name"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="24sp"  
 android:textStyle="bold"**/>  
  
</**LinearLayout**>

### 4.2.5 Shootxml

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".Shoot"**>  
  
 <**Button  
 android:id="@+id/made"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="156dp"  
 android:layout\_marginTop="168dp"  
 android:text="MADE"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**Button  
 android:id="@+id/miss"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="MISS"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/made"** />  
  
 <**Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="100dp"  
 android:onClick="goContactDetailAct"  
 android:text="BACK"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/miss"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>