**MUSIC PLAYER - A Music Application**

***Project Submitted to Jyoti Nivas College Autonomous affiliated to Bangalore University in partial fulfilment of the requirements for the award of the degree of***

**Master of Computer Applications**

****

**Mobile Application Development Lab**

***Submitted by***

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**CERTIFICATE**

This is to certify that **Gudiya Kumari** has satisfactorily completed the project in Mobile App Development on **“MUSIC PLAYER- A Music Application”** for the I-year (II semester) MCA course in the year 2020- 2021

Staff-in-Charge Head of the Department

**Examiners:**

1. **…………………………….**
2. **…………………………….**

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**SYNOPSIS**

Android phones we are using daily due to its features like GPS, Computing ability and internet connection. Now-a-days there are many application of android which helps user to provide solutions to many problems related to their day to day life. We propose Android based music player application for android mobile system that is able to provide audio player information to the mobile user conveniently.

This project is about the mp3 music player application development using Android.

The main idea behind the project is to develop an android application which will allows to listen all the songs which is available in the phone.

The MusicPlayer App can be used to play all songs available in our phone. A smartphone is required, no Internet connection is required to use this application.

The biggest difference between the music player and existing applications is that it is completely free for users to use.

In this When the user starts the application, they can need to sign up or login if the user already exists. And they can play all the songs available in the list also if user forget their password they can reset their password using their mail id.

**INTRODUCTION**

**1. INTRODUCTION TO ANDROID**

Android is a Linux based operating system it is designed primarily for touch screen mobile devices such as smart phones and tablet computers. The operating system have developed a lot in last 15 years starting from black and white phones to recent smart phones or mini computers. One of the most widely used mobile OS these days is android. The android is software that was founded in Palo Alto of California in 2003.

The Android is a powerful operating system and it supports large number of applications in Smartphones. These applications are more comfortable and advanced for the users. The hardware that supports android software is based on ARM architecture platform. The android is an open source operating system means that it’s free and any one can use it. The android has got millions of apps available that can help you managing your life one or other way and it is available low cost in market at that reasons android is very popular.

As the world's most popular mobile platform, Android powers hundreds of millions of mobile devices in more than 190 countries around the world. It has the largest installed base of any mobile platform and is still growing fast. Every day another million users power up their Android devices for the first time and start looking for apps, games, and other digital content. Android provides a touch-screen user interface (UI) for interacting with apps. Android's user interface is mainly based on direct manipulation, using touch gestures such as swiping, tapping and pinching to manipulate on-screen objects. In addition to the keyboard, there’s a customizable virtual keyboard for text input. Android can also support game controllers and full-size physical keyboards connected by Bluetooth or USB.

**1.1 Android Studio**

Android is a mobile operating system that is based on a modified version of Linux. It was originally developed by a start-up of the same name, Android, Inc. In 2005, as part of its strategy to enter the mobile space, Google purchased Android and took over its development work (as well as its development team).

Google wanted Android to be open and free; hence, most of the Android code was released under the open source Apache License, which means that anyone who wants to use Android can do so by downloading the full Android source code. Moreover, vendors (typically hardware manufacturers) can add their own proprietary extensions to Android and customize Android to differentiate their products from others. This simple development model makes Android very attractive and has thus piqued the interest of many vendors. This has been especially true for companies affected by the phenomenon of Apple’s IPhone, a hugely successful product that revolutionized the smart phone industry. Such companies include Motorola and Sony Ericsson, which for many years have been developing their own mobile operating systems. When the IPhone was launched, many of these manufacturers had to scramble to find new ways of revitalizing their products. These manufacturers see Android as a solution and they will continue to design their own hardware and use Android as the operating system that powers it.

The main advantage of adopting Android is that it offers a unified approach to application development. Developers need only develop for Android, and their applications should be able to run on numerous different devices, as long as the devices are powered using Android. In the world of smart phones, applications are the most important part of the success chain. Device manufacturers therefore see Android as their best hope to challenge the onslaught of the IPhone, which already commands a large base of applications.

**Android**

Android has gone through quite a number of updates since its first release.

∙ Alpha

∙ Beta

∙ Cupcake (1.5)

∙ Donut (1.6)

∙ Eclair (2.0–2.1)

∙ Froyo (2.2–2.2.3)

∙ Gingerbread (2.3–2.3.7)

∙ Honeycomb (3.0–3.2.6)[a]

∙ Ice Cream Sandwich (4.0–4.0.4)

∙ Jelly Bean (4.1–4.3.1)

∙ KitKat (4.4–4.4.4, 4.4W–4.4W.2)

∙ Lollipop (5.0–5.1.1)

∙ Marshmallow (6.0)

∙ Nougat (7.1)

∙ Oreo (8.1)

∙ API 28

Applications written for versions of Android prior to 3.0 are compatible with Android 3.0 devices, and they run without modifications. Android 3.0 tablet applications that make use of the newer features available in 3.0, however, will not be able to run on older devices. To ensure that an Android tablet application can run on all versions of devices, you must programmatically ensure that you only make use of features that are supported in specific versions of Android.

In October 2011, Google released Android 4.0, a version that brought all the features introduced in Android 3.0 to smart phones, along with some new features such as facial recognition unlock, data usage monitoring and control, Near Field Communication (NFC), and more.

**Features of Android**

Because Android is open source and freely available to manufacturers for Customization, there are no fixed hardware or software configurations. However, Android itself supports the following features:

∙ **Storage** - Uses SQLite, a lightweight relational database, for data storage.

∙ **Connectivity** - Supports GSM/EDGE, IDEN, CDMA, EV-DO, UMTS, Bluetooth (includes A2DP and AVRCP), Wi-Fi, LTE, and WiMAX.

∙ **Messaging** - supports both SMS and MMS.

∙ **Web browser** - Based on the open source Web Kit, together with Chrome’s V8 JavaScript engine**.**

∙ **Media support** - Includes support for the following media: H.263, H.264 (In 3GP or MP4container), MPEG-4 SP, AMR, AMR-WB (in 3GP container), AAC, HE-AAC (in MP4or3GP container), MP3, MIDI, OggVorbis, WAV, JPEG, PNG, GIF, and BMP.

∙ **Hardware support** - Accelerometer Sensor, Camera, Digital Compass, Proximity Sensor and GPS**.**

∙ **Multi-touch** - Supports multi-touch screens.

∙ **Multi-tasking** - Supports multi-tasking applications.

∙ **Flash support** - Android 2.3 supports Flash 10.1.

∙ **Tethering** - supports sharing of Internet connections as a wired/wireless hotspot.

**Architecture of Android**

The Android OS is roughly divided into five sections in four main layers:

∙ **Linux kernel:** This is the kernel on which Android is based. This layer contains all the low level device drivers for the various hardware components of an Android device.

∙ **Libraries:** These contain all the code that provides the main features of an Android OS. For example, the SQLite library provides database support so that an application can use it for Data storage. The Web Kit library provides functionalities for web browsing.

∙ **Android runtime:** At the same layer as the libraries, the Android runtime provides a set of core libraries that enable developers to write Android apps using the Java programming language. The Android runtime also includes the Dalvik virtual machine, which enables every Android application to run in its own process, with its own instance of the Dalvik virtual machine (Android applications are compiled into Dalvik executable). Dalvik is a specialized Virtual machine designed specifically for Android and optimized for battery

Powered mobile Devices with limited memory and CPU.

∙ **Application framework:** Exposes the various capabilities of the Android OS to application developers so that they can make use of them in their applications.

∙ **Applications:** At this top layer, you will find applications that ship with the Android device (Such as Phone, Contacts, Browser, etc.), as well as applications that you download and install from the Android Market. Any applications that you write are located at this layer.

**1.2 Introduction on Android SQLite Database**

The Android SQLite Database requires very little memory (around 250kb), which is available on all android devices. Every device has an inbuilt support for SQLite database, which is automatically managed on android right from its creation, execution to querying up process.

SQLite is an open source database, available on every android database. It supports standard relations database features, like SQL syntax, transactions & SQL statements. SQLite is considerably, the lighter version of SQL database, where most of the SQL commands don’t run on SQLite database. Once SQLite is in place, it is important to ensure that a feature or command is available in SQLite; only then can it be executed.

The Basic Advantages of SQLite:

∙ it’s a light weight database

∙ requires very little memory

∙ An Automatically managed database

The SQLite supports only 3 Data types:

∙ Text (like string) – for storing data type store

∙ Integer (like int) – for storing integer primary key

∙ Real (like double) - for storing long values

Basically SQLite does not validate data types by itself. In other words, whatever data types are used, they are termed as valid.

For example, in this case, the database of a cable operator has been discussed. Here, a new table is added with ‘text’ in the name field and fieldname box carrying ‘textfield’. A random value data type has been created. The end result is a test table with an invalid data type, which shows that SQLite doesn’t validate data type.

**ENVIRONMENT SPECIFICATION**

**2. ENVIRONMENT SPECIFICATION**

We have implemented the project in this environment.

**2.1 HARDWARE REQUIREMENTS**

| ∙ MONITOR **:** LCD Monitor  ∙ PROCESSOR **:** Intel® Core™ i5  ∙ RAM **:** 8.00 GB  ∙ HARD DISK **:** 64 GB or more  ∙ MOUSE **:** Logitech Compatible |
| --- |

**2.2 SOFTWARE REQUIREMENTS**

| ∙ OPERATING SYSTEM **:** Windows 10  ∙ FRONT END **:** Android  ∙ CODING LANGUAGE **:** Java  ∙ BACK END **:** SQLite |
| --- |

**SYSTEM ANALYSIS**

**3.1 Existing System**

In existing system, if a phone is lost we have to file a complaint in police station and only then they will track your phones location. It is a big procedure to file complaint and get permission to track our phone. In this method time, effort and manual work is required.

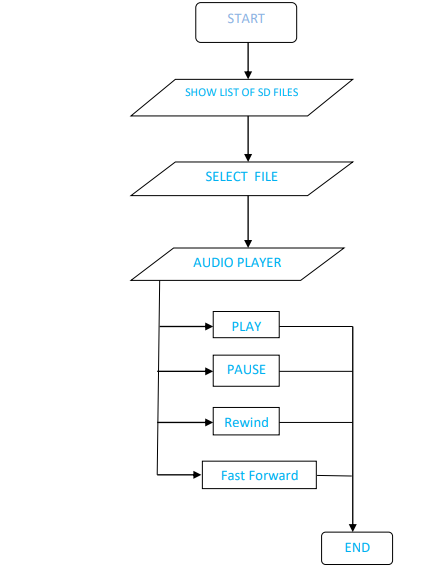
**3.2 Proposed System**

The proposed system presents a technique to improve Anti-Theft Application for android based mobile phones by using different services likes Tracking the location, sending SMS, automatically converts RINGING mode to SILENT mode and Camera features. This Application is installed in user’s android mobile. If the phone is stolen and the SIM card is changed, our Application which works in the background of the mobile will Track the SIM Card ID and it will send the new number, IMEI number to the alternate phone number.

This will trigger the Camera automatically and the image of the invalid user is captured. These images captured by the Application is automatically saved to google photos as well as SMS Alert to his/her alternate registered mobile phone. The Application will continuously track the location of the invalid user and it will automatically send the current location of the invalid user. It is very cost effective as it forwards the images to google photos directly.

**SYSTEM DESIGN**

**4.1 FLOWCHART**



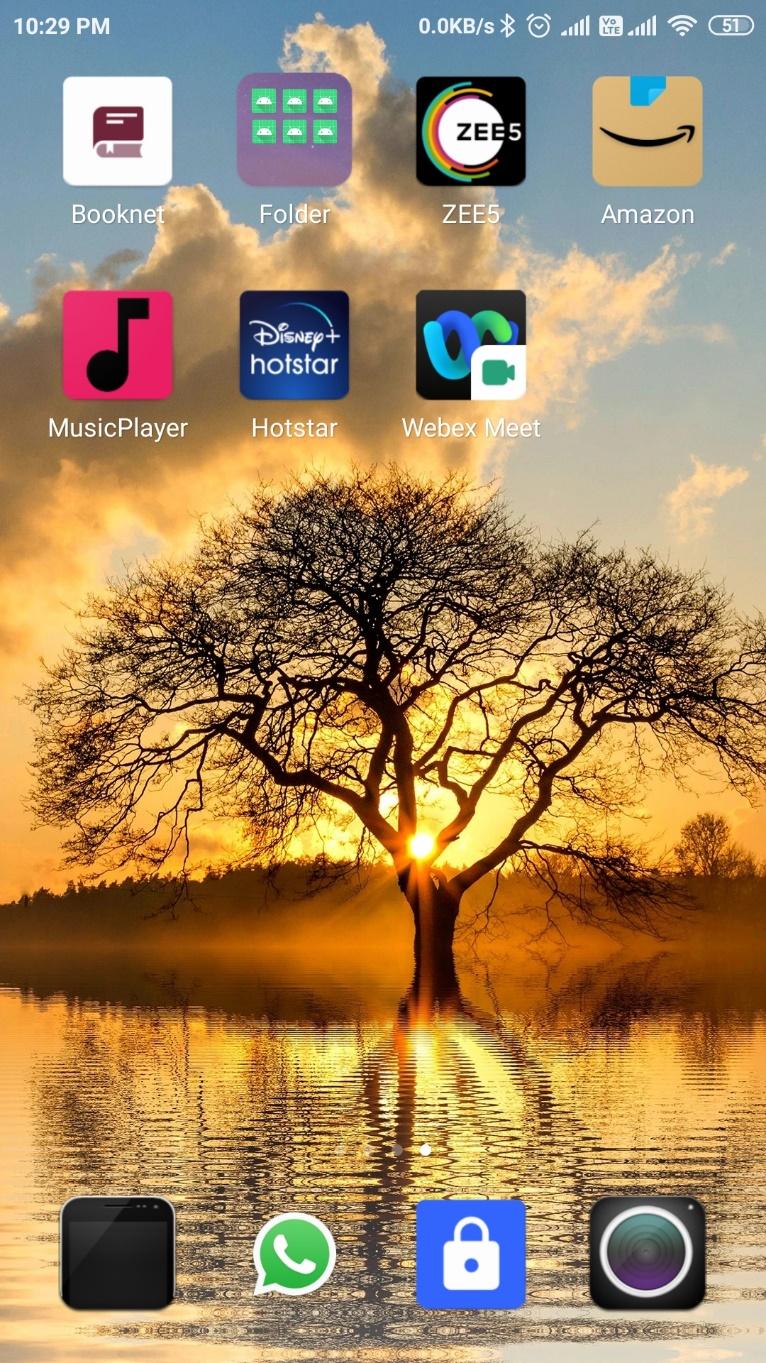
**4.2 Database Design**

Database design is the process of producing a detailed data model of database. This data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

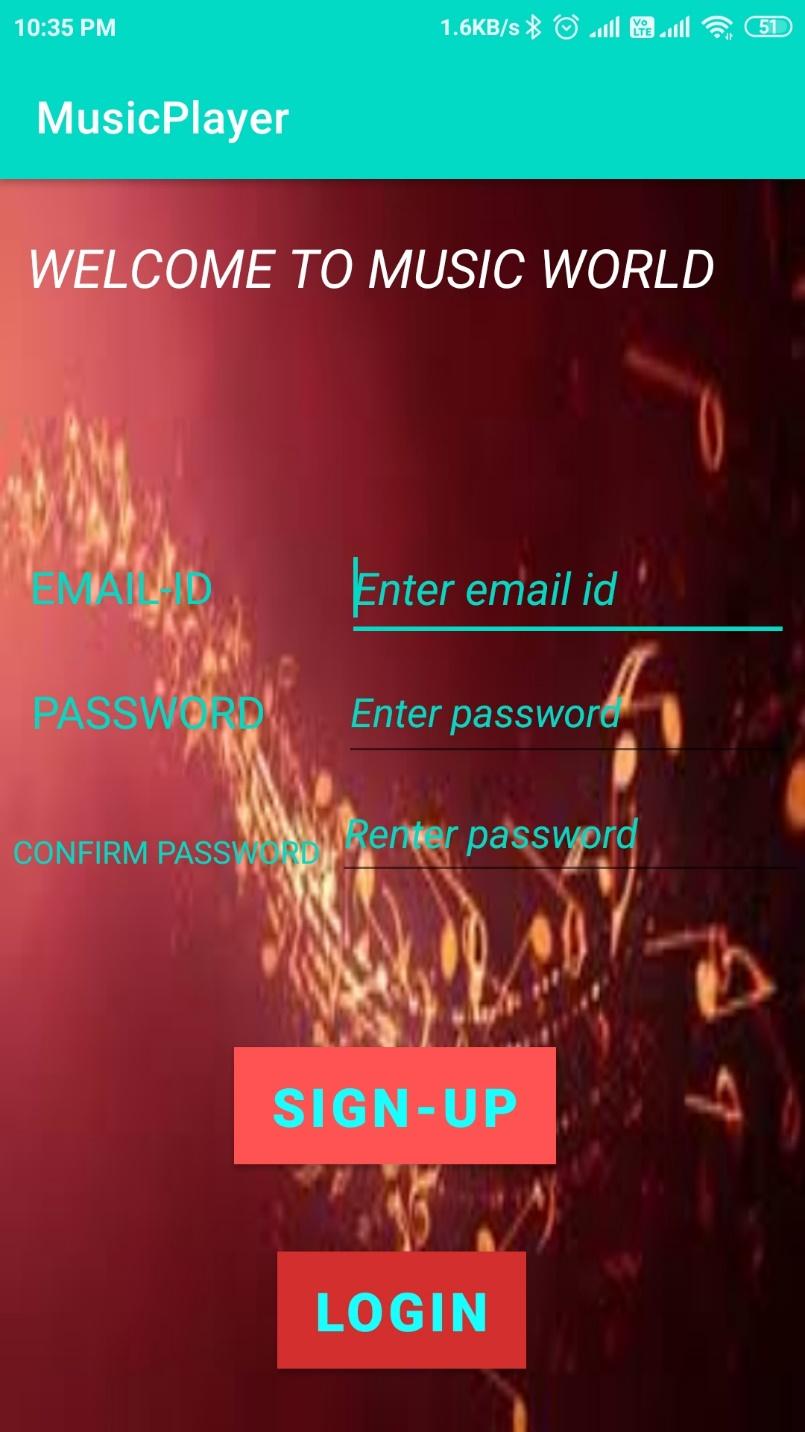
**User Registration**

| **Field Name** | **Data Type** | **Constraints** |
| --- | --- | --- |
| Email Id | TEXT | NOT NULL |
| Password | TEXT | NOT NULL |

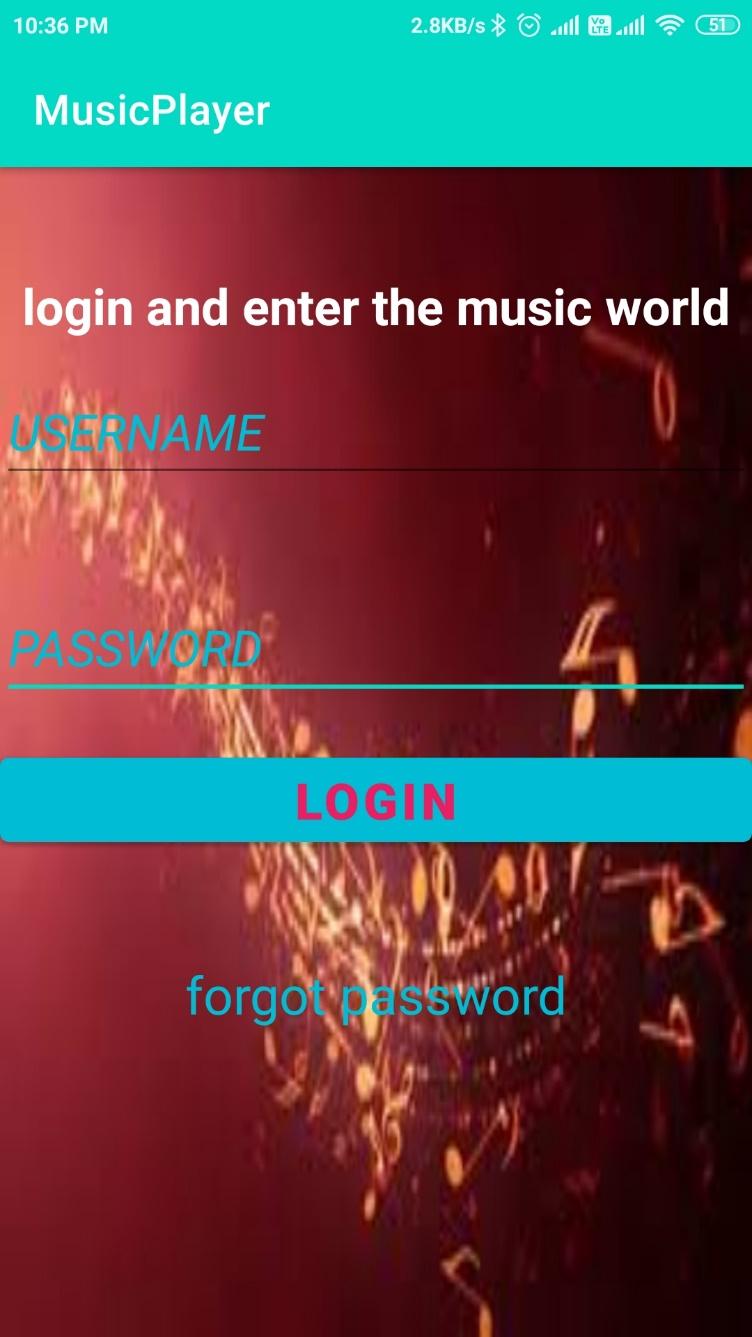
**Icons Launcher (MusicPlayer)**

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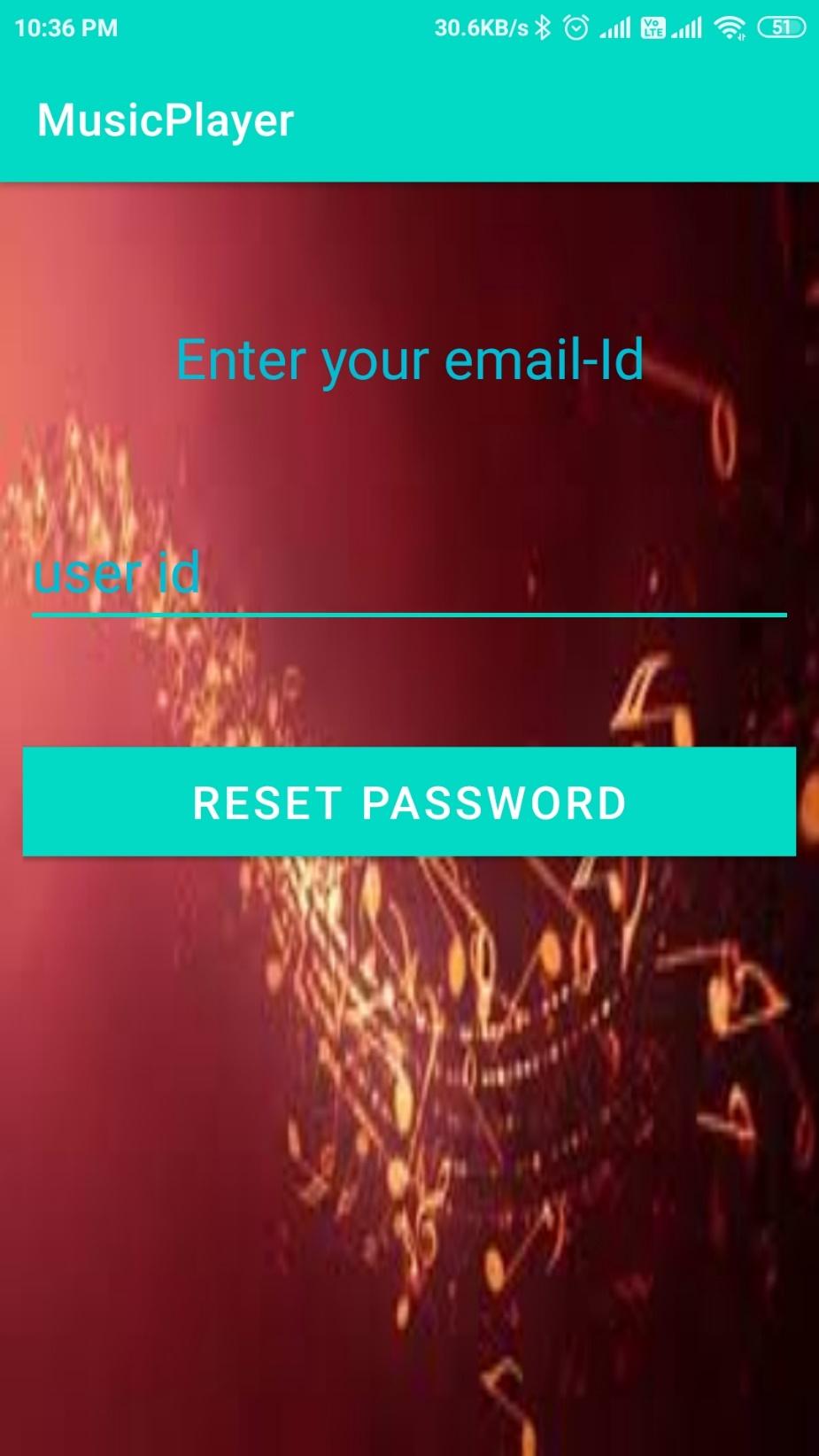
**Home Page Registration Page**

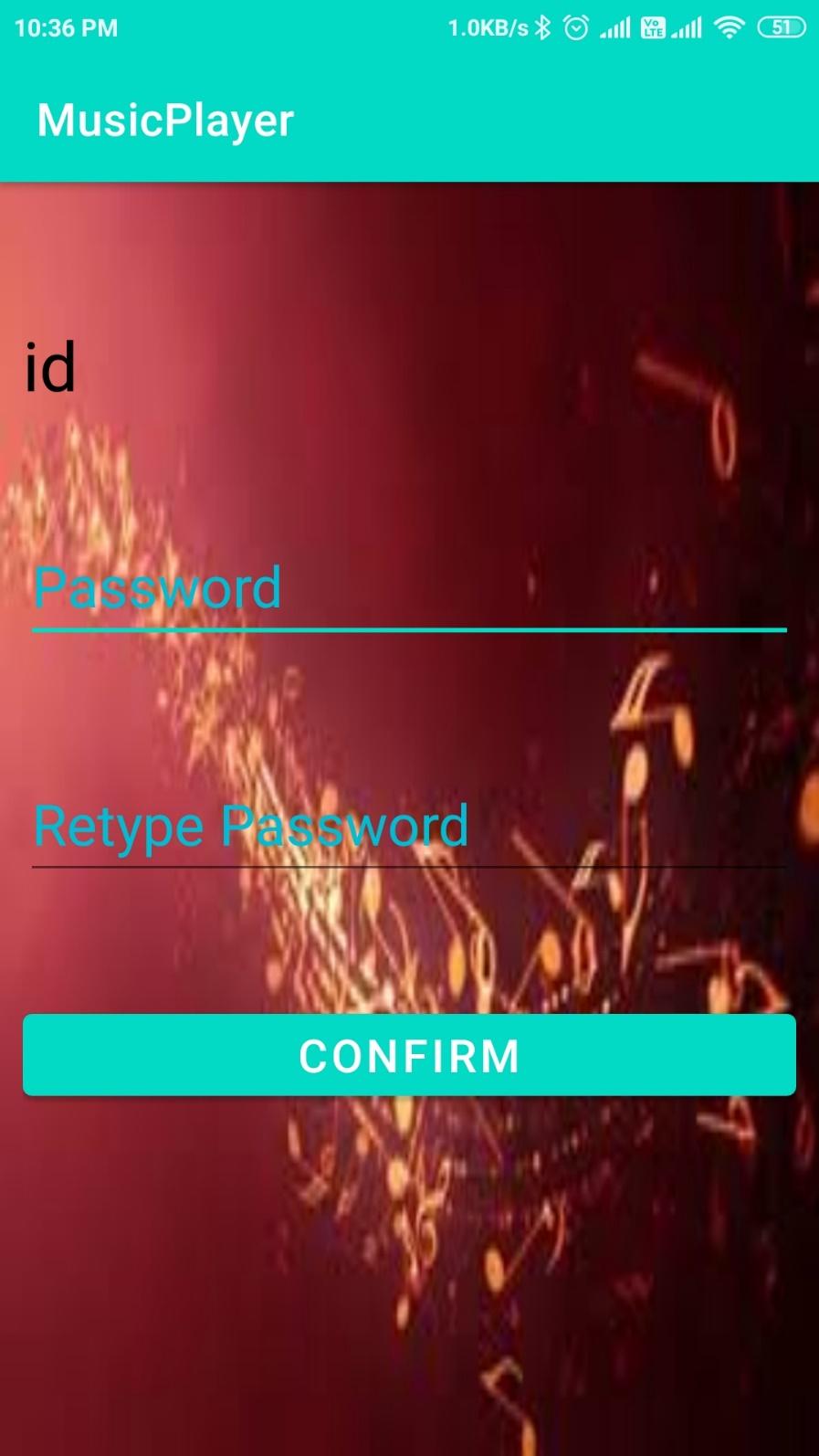
****

**Login page**

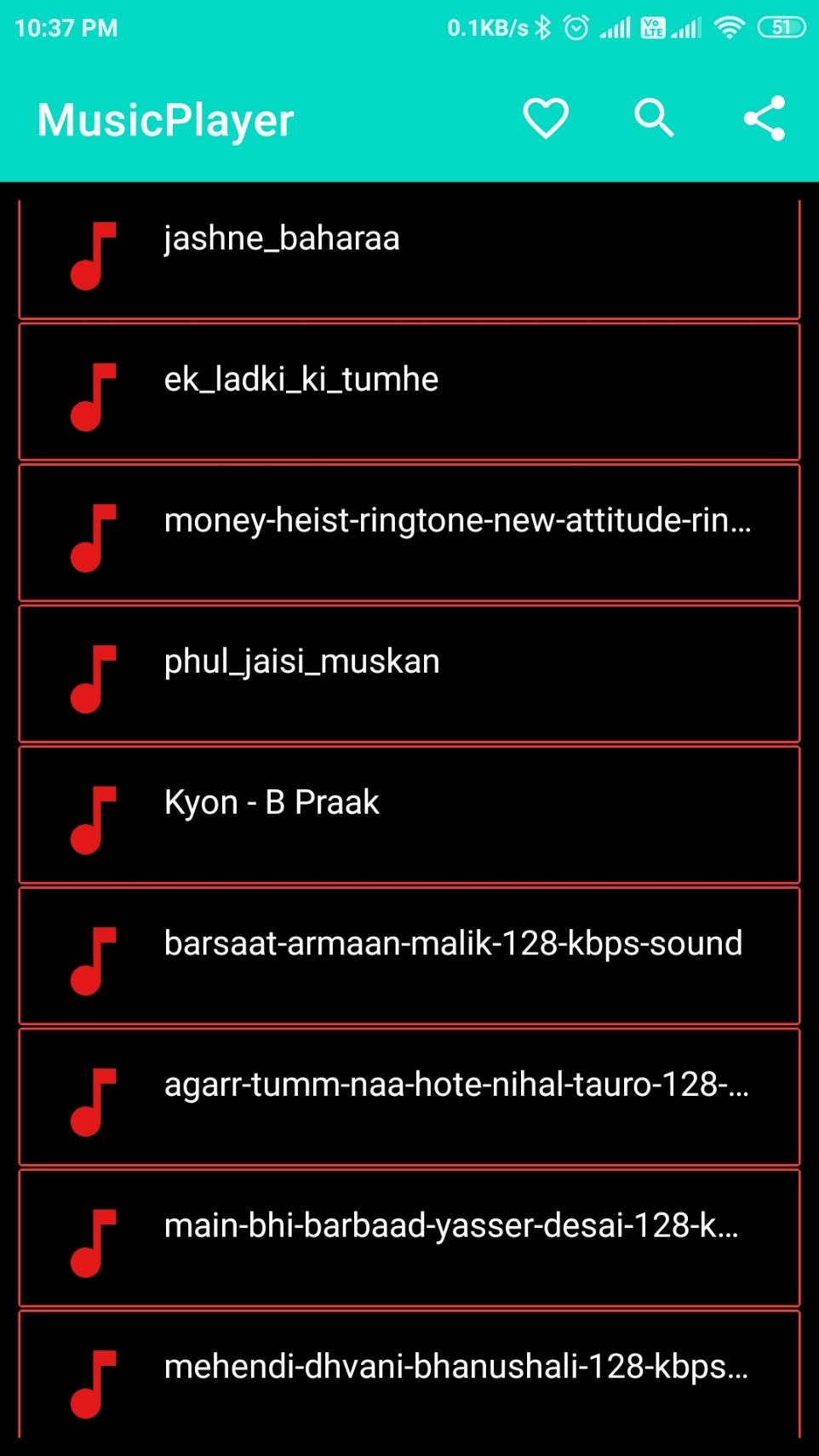
****

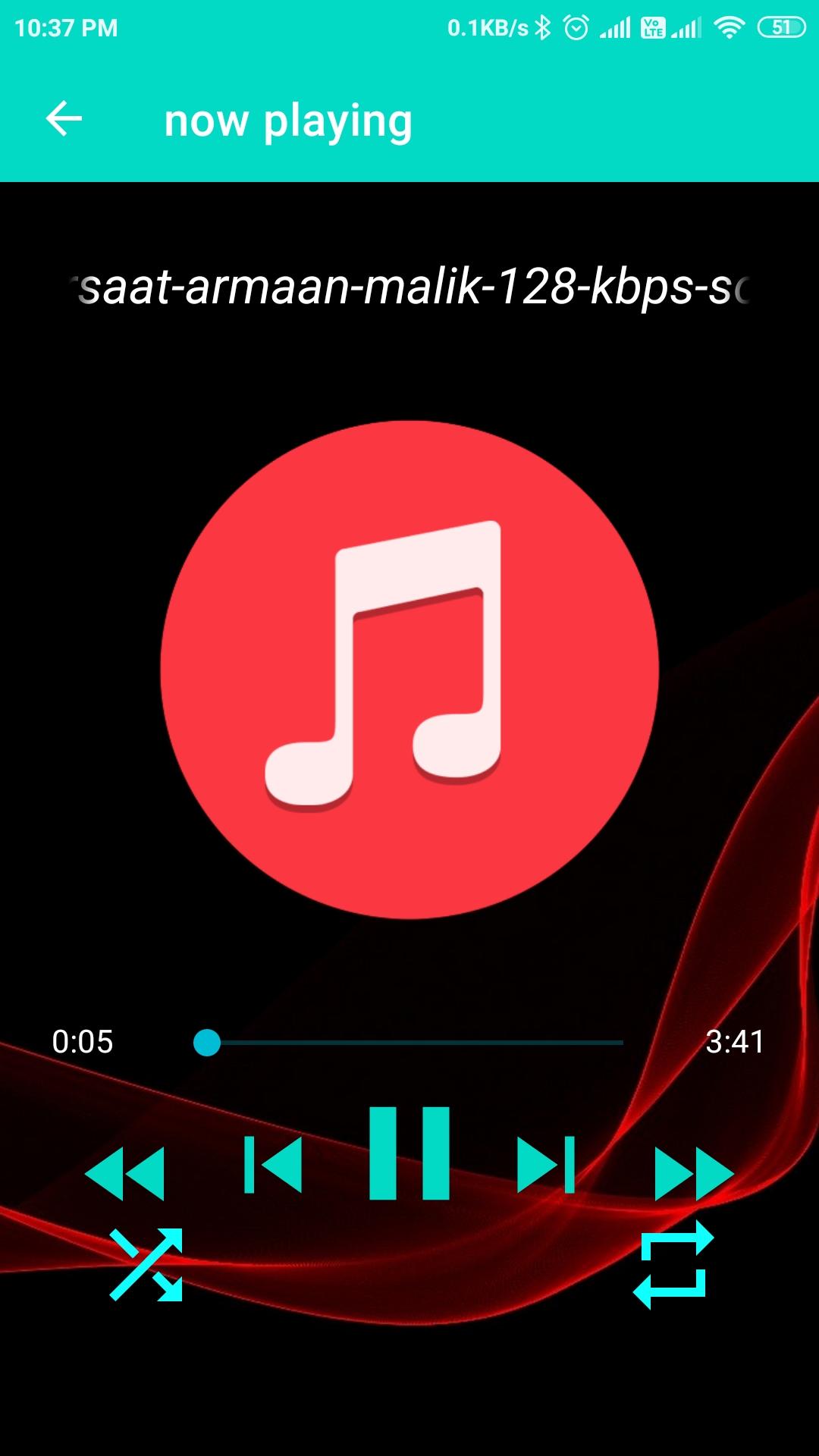
**Password change page**

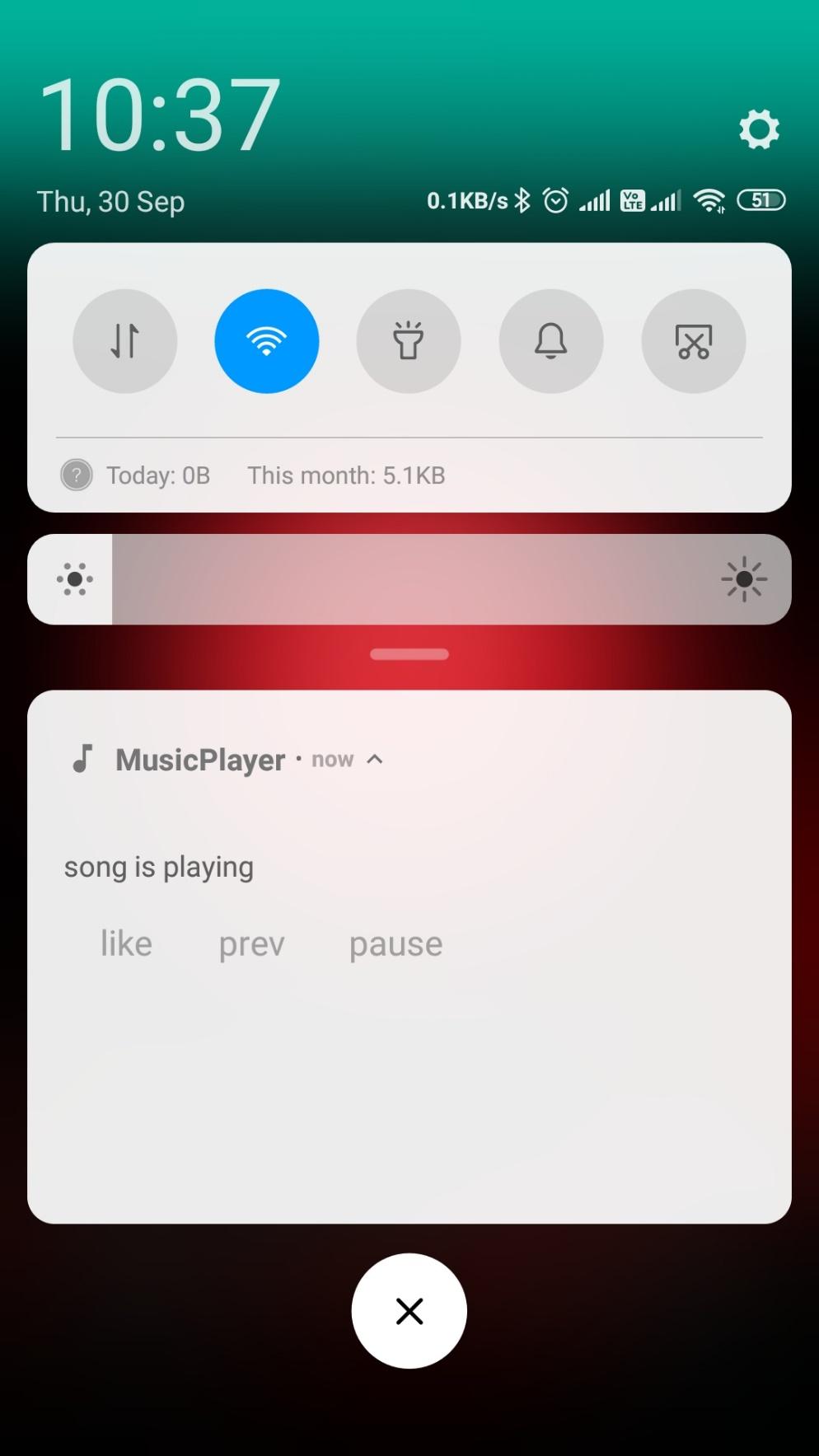
****

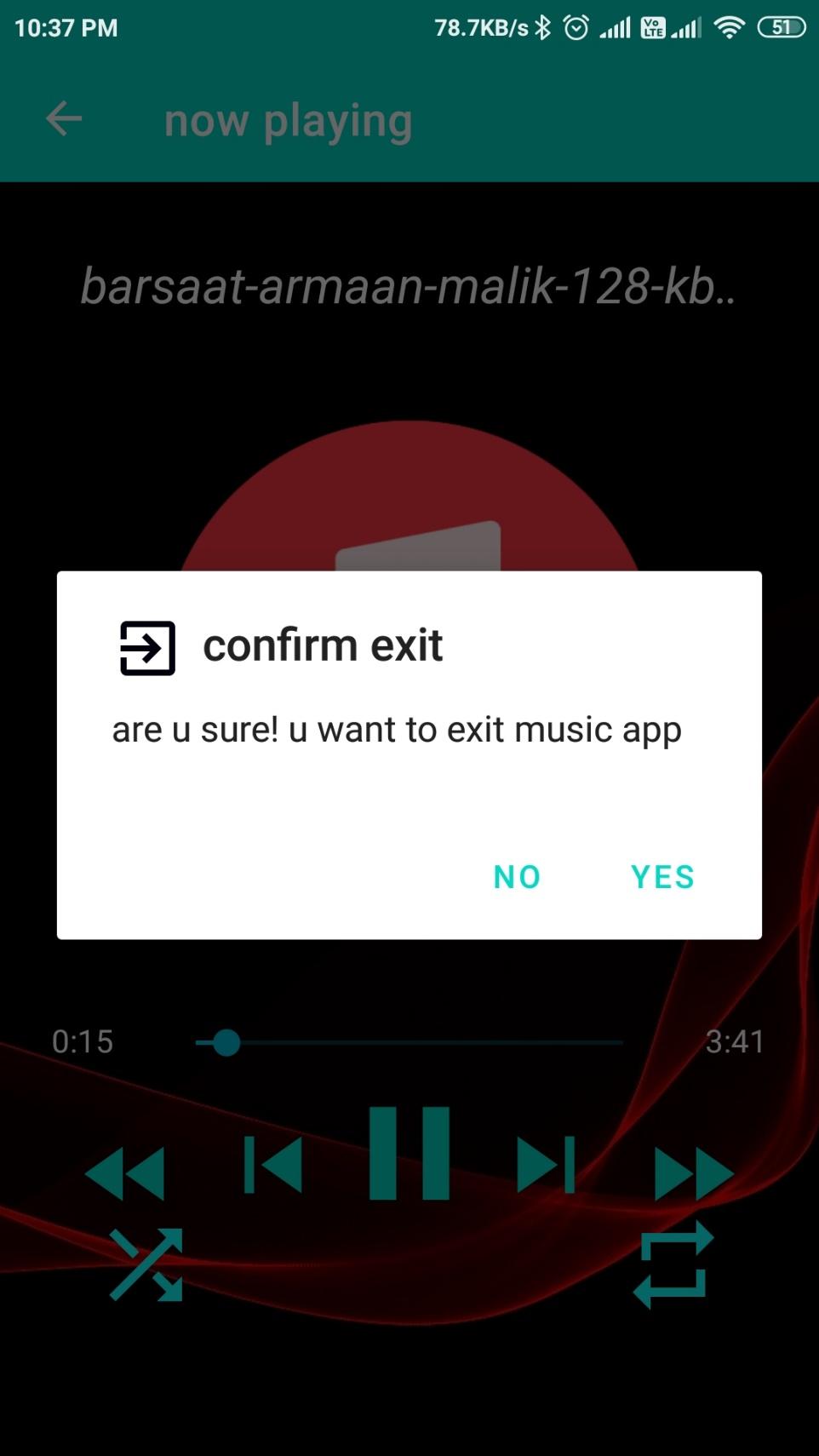
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**Song list page**

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**PROJECT DESCRIPTION**

**5. PROJECT DESCRIPTION**

Maturing mobile communication technology makes mobile phones become more powerful. The latest mobile phones such as android based mobile phones, called smart phones are changing the way we live our lives and has become a very important part of our life.

The MusicPlayer App can be used to play all songs available in our phone. A smartphone is required, no Internet connection is required to use this application.

The biggest difference between the music player and existing applications is that it is completely free for users to use.

In this When the user starts the application, they can need to sign up or login if the user already exists. And they can play all the songs available in the list also if user forget their password they can reset their password using their mail id.

**FUTURE ENHANCEMENT**

**6. FUTURE ENHANCEMENT**

The Music-Player Mobile App is flexible enough to incorporate new features and modules as per the user requirements. Our project is developed with a main purpose of keeping it user friendly for the user to track the phone immediately, and get the current location, SIM state change and also captures photo and sends it to google photos. With the same intention, some of the future enhancements that can be done to this project like enabling the application to work on other platforms. The application will not work if the lost phone gets switched off. So additional work can be done to switch on the phone after certain period of time and thus helps in efficient tracking of the lost phone.

**CONCLUSION**

**7. CONCLUSION**

Development of music player on Android platform, we get a clear understanding of overall process of the system. The core part of the music player is mainly composed of main interface, file browsing and song listing, Grasping the development of the music player has had the preliminary scale small features. Music player system realized the basic function of player: play, pause, rewind and fast forward a, volume adjustment is performed through the Android System Itself, play mode, song search, seekbar, This development implicated the popular mobile terminal development technology. This is the combination management of Java language in the open source mobile platform based on Linux system configuration file. The system realized the music player programming. This design of music player based on Android system requires elaborate design of the music player framework, by adopting ANDROID STUDIO + Java language as technical support of this system, with the Android plug-in tools, and combination of Latest Android SDK version lead to the comprehensive and smoothly design and development of the mobile terminal.

**APPENDIX (SOURCE CODE)**

**8. SOURCE CODE**

**1. AndroidManifest.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 package="com.example.musicplayer">  
  
 <uses-permission android:name="android.permission.READ\_EXTERNAL\_STORAGE" />  
 <uses-permission android:name="android.permission.RECORD\_AUDIO" />  
  
 <application  
 android:allowBackup="true"  
 android:name=".App"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.MusicPlayer">  
 <activity  
 android:name=".playerActivity"  
 android:exported="true" />  
 <activity  
 android:name=".ResetActivity"  
 android:exported="true" />  
 <activity  
 android:name=".passwordActivity"  
 android:exported="true" />  
 <activity  
 android:name=".HomeActivity"  
 android:exported="true" />  
 <activity  
 android:name=".signIN"  
 android:exported="true" />  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 </application>  
  
</manifest>

**2.Mainactivity.java**

package com.example.musicplayer;  
  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.DialogInterface;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
  
 EditText username,password,repassword;  
 Button btnsignin,btnsignup;  
 DBhelper db;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 username=(EditText)findViewById(R.id.*edit\_id*);  
 password=(EditText)findViewById(R.id.*ediy\_password*);  
 repassword=(EditText)findViewById(R.id.*edit\_cpassword*);  
  
  
  
 btnsignup=(Button)findViewById(R.id.*btn\_signup*);  
 btnsignin=(Button)findViewById(R.id.*btn\_login*);  
  
 db=new DBhelper(this);  
  
 btnsignup.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String user=username.getText().toString();  
 String pass=password.getText().toString();  
 String repass=repassword.getText().toString();  
  
 if (user.equals("") || repass.equals("")|| pass.equals(""))  
 {  
 Toast.*makeText*(MainActivity.this,"fill all the details",Toast.*LENGTH\_LONG*).show();  
 }  
 if (pass.length() < 6)  
 {  
 Toast.*makeText*(MainActivity.this, "password length should be minimum 6 character", Toast.*LENGTH\_SHORT*).show();  
 }  
 if (pass.equals(repass))  
 {  
 Boolean usercheckResult= db.Checkusername(user);  
 if (usercheckResult==false)  
 {  
 Boolean regResult= db.InsertData(user,pass);  
  
 if (regResult==true)  
 {  
 Toast.*makeText*(MainActivity.this,"Registration successfull ",Toast.*LENGTH\_LONG*).show();  
  
 Intent intent=new Intent(getApplicationContext(),signIN.class);  
 startActivity(intent);  
 }  
 else  
 {  
  
 Toast.*makeText*(MainActivity.this,"Registration failed",Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 else  
 {  
 Toast.*makeText*(MainActivity.this,"user already exist\n please sign in",Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 else  
 {  
 Toast.*makeText*(MainActivity.this,"password not match",Toast.*LENGTH\_LONG*).show();  
 }  
  
 btnsignin.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
  
 Intent intent=new Intent(getApplicationContext(),signIN.class);  
 startActivity(intent);  
  
 }  
 });  
 }  
 });  
 }  
  
 *//alert dialogbox* public void onBackPressed()  
 {  
 AlertDialog.Builder alertDialogBuilder=new AlertDialog.Builder(this);  
  
 alertDialogBuilder.setTitle("confirm exit");  
  
 alertDialogBuilder.setIcon(R.drawable.*ic\_exit*);  
  
 alertDialogBuilder.setMessage("are u sure! u want to exit music app");  
  
 alertDialogBuilder.setCancelable(false);  
  
 alertDialogBuilder.setPositiveButton("yes", new DialogInterface.OnClickListener() {  
  
 @Override  
 public void onClick(DialogInterface dialogInterface, int i) {  
 finish();  
 }  
 });  
  
 alertDialogBuilder.setNegativeButton("no", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialogInterface, int i) {  
  
 Toast.*makeText*(MainActivity.this, "thank u! please signup", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
  
 AlertDialog alertDialog=alertDialogBuilder.create();  
  
 alertDialog.show();  
 }  
  
 public void onClick(View view) {  
 }  
}

**3.activity\_main.xml**

*<?*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"  
 android:background="@drawable/i"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="389dp"  
 android:layout\_height="52dp"  
 android:text="WELCOME TO MUSIC WORLD"  
 android:textColor="#fff"  
 android:textSize="24sp"  
 android:textStyle="italic"  
 android:textAlignment="center"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="1.0"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.045"  
 android:gravity="center\_horizontal" />  
  
 <TextView  
 android:id="@+id/textView2"  
 android:layout\_width="98dp"  
 android:layout\_height="38dp"  
 android:text="EMAIL-ID"  
 android:textColor="#FF03DAC5"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.051"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.323"  
 />  
  
 <TextView  
 android:id="@+id/textView3"  
 android:layout\_width="112dp"  
 android:layout\_height="37dp"  
 android:text="PASSWORD"  
 android:textColor="#FF03DAC5"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.056"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.429" />  
  
 <EditText  
 android:id="@+id/edit\_id"  
 android:layout\_width="200dp"  
 android:layout\_height="52dp"  
 android:ems="10"  
 android:hint="Enter email id"  
 android:inputType="textEmailAddress"  
 android:text=""  
 android:textColor="#FF03DAC5"  
 android:textColorHint="#FF03DAC5"  
 android:textSize="20sp"  
 android:textStyle="italic"  
  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.962"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.309" />  
  
 <EditText  
 android:id="@+id/ediy\_password"  
 android:layout\_width="201dp"  
 android:layout\_height="50dp"  
 android:ems="10"  
 android:hint="Enter password"  
 android:inputType="textPassword"  
 android:textColor="#FF03DAC5"  
 android:textColorHint="#FF03DAC5"  
 android:textStyle="italic"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.961"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.418" />  
  
 <Button  
 android:id="@+id/btn\_login"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:background="#388E3C"  
 android:text="LOGIN"  
 android:textColor="#18FFFF"  
 android:textSize="24sp"  
 android:textStyle="bold"  
 app:backgroundTint="#D32F2F"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.498"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.944" />  
  
 <Button  
 android:id="@+id/btn\_signup"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:background="#7C4DFF"  
 android:text="SIGN-UP"  
 android:textColor="#18FFFF"  
 android:textSize="24sp"  
 android:onClick="onClick"  
 android:textStyle="bold"  
 app:backgroundTint="#FF5252"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.484"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.764" />  
  
  
 <TextView  
 android:id="@+id/textView4"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="CONFIRM PASSWORD"  
 android:textColor="#FF03DAC5"  
 android:textSize="14sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.025"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.538" />  
  
 <EditText  
 android:id="@+id/edit\_cpassword"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:hint="Renter password"  
 android:inputType="textPassword"  
 android:minHeight="48dp"  
 android:textColor="#FF03DAC5"  
 android:textColorHint="#FF03DAC5"  
 android:textStyle="italic"  
 android:textSize="18sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="1.0"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.524" />  
</androidx.constraintlayout.widget.ConstraintLayout>

**4.signIN.java**

package com.example.musicplayer;  
  
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;  
import android.widget.TextView;  
import android.widget.Toast;  
  
public class signIN extends AppCompatActivity {  
 EditText username,password;  
 Button btnLogin;  
 DBhelper myDB;  
 TextView forgot;  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_sign\_in*);  
  
 username=(EditText)findViewById(R.id.*edit\_user*);  
 password=(EditText) findViewById(R.id.*edit\_pasword*);  
 btnLogin=(Button)findViewById(R.id.*btn\_loginpage*);  
  
 forgot=(TextView)findViewById(R.id.*btnforgot*);  
  
  
 myDB =new DBhelper(this);  
 btnLogin.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String user=username.getText().toString();  
 String pass=password.getText().toString();  
  
 if (pass.length() < 6)  
 {  
 Toast.*makeText*(signIN.this, "password length should be minimum 6 character", Toast.*LENGTH\_SHORT*).show();  
 }  
  
 if (user.equals("") || pass.equals(""))  
 {  
 Toast.*makeText*(signIN.this, "Please enter credential", Toast.*LENGTH\_SHORT*).show();  
 }  
 else  
 {  
 Boolean result= myDB.checkusernamepassword(user,pass);  
  
 if (result==true)  
 {  
 Intent intent=new Intent(getApplicationContext(),HomeActivity.class);  
 startActivity(intent);  
  
 }  
 else  
 {  
 Toast.*makeText*(signIN.this, "Invalid credential", Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
  
  
 }  
 });  
  
 forgot.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent intent=new Intent(getApplicationContext(),passwordActivity.class);  
 startActivity(intent);  
  
 }  
 });  
  
 }  
}

**5.Activity\_sign\_in.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout 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=".signIN"  
 android:background="@drawable/i"  
 >  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="login and enter the music world"  
 android:gravity="center"  
 android:textColor="@color/white"  
 android:textSize="24dp"  
 android:textStyle="bold"  
 android:layout\_marginTop="50dp" >

</TextView>  
  
 <EditText  
 android:id="@+id/edit\_pasword"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edit\_user"  
 android:layout\_marginTop="50dp"  
 android:ems="10"  
 android:hint="PASSWORD"

android:inputType="textPassword"  
 android:textColor="#03A9F4"  
 android:textColorHint="#00BCD4"  
 android:textSize="24sp"  
 android:textStyle="italic" />  
  
 <EditText  
 android:id="@+id/edit\_user"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="100dp"  
 android:ems="10"  
 android:hint="USERNAME"  
 android:inputType="textEmailAddress"  
 android:textColor="#009688"  
 android:textColorHint="#00BCD4"  
 android:textSize="24sp"  
 android:textStyle="italic" />  
  
 <Button  
 android:id="@+id/btn\_loginpage"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/edit\_pasword"  
 android:layout\_marginTop="20dp"  
 android:ems="10"  
 android:text="LOGIN"  
 android:textColor="#E91E63"  
 android:textSize="24sp"  
 android:textStyle="bold"  
 app:backgroundTint="#00BCD4" />  
  
 <TextView  
 android:id="@+id/btnforgot"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/btn\_loginpage"  
 android:gravity="center"  
 android:layout\_marginTop="50dp"  
 android:text="forgot password"  
 android:textColor="#00BCD4"  
 android:textSize="25dp"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
  
</RelativeLayout>

**PasswordActivity.java**

package com.example.musicplayer;  
  
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;  
import android.widget.Toast;  
  
public class passwordActivity extends AppCompatActivity {  
 EditText userid;  
 Button reset;  
 DBhelper DB;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_password*);  
  
  
 userid=(EditText) findViewById(R.id.*userId\_reset*);  
 reset=(Button) findViewById(R.id.*btnreset*);  
  
 DB=new DBhelper(this);  
  
 reset.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String user=userid.getText().toString();  
  
 Boolean checkuser=DB.Checkusername(user);  
  
 if (checkuser==true)  
 {  
 Intent intent=new Intent(getApplicationContext(),ResetActivity.class);  
 intent.putExtra("username",user);  
 startActivity(intent);  
 }  
 else  
 {  
 Toast.*makeText*(passwordActivity.this, "user does not exits", Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
 }); }  
}

**activity\_password.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout 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"  
 android:padding="10dp"  
 android:background="@drawable/i"  
 tools:context=".passwordActivity">  
  
 <TextView  
 android:id="@+id/text"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Enter your email-Id"  
 android:textSize="25dp"  
 android:layout\_marginTop="50dp"  
 android:gravity="center"  
 android:textColor="#00BCD4"  
 />  
  
 <EditText  
 android:id="@+id/userId\_reset"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/text"  
 android:layout\_marginTop="50dp"  
 android:hint="user id"  
 android:textSize="25dp"  
 android:textColor="#00BCD4"  
 android:textColorHint="#00BCD4"  
 android:inputType="textEmailAddress"  
  
 />  
 <Button  
 android:id="@+id/btnreset"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/userId\_reset"  
 android:layout\_marginTop="50dp"  
 android:background="#00BCD4"  
 android:text="Reset Password"  
 android:textColor="@color/white"  
 android:textSize="20dp" />  
  
  
</RelativeLayout>

**ResetActivity.java**

package com.example.musicplayer;  
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;  
import android.widget.TextView;  
import android.widget.Toast;  
  
public class ResetActivity extends AppCompatActivity {  
 TextView userid;  
 EditText pass,repass;  
 Button confirm;  
 DBhelper DB;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_reset*);  
  
 userid=(TextView) findViewById(R.id.*userid\_reset\_text*);  
 pass=(EditText) findViewById(R.id.*password\_reset*);  
 repass=(EditText) findViewById(R.id.*repassword\_reset*);  
 confirm=(Button) findViewById(R.id.*btnconfirm*);  
  
 DB=new DBhelper(this);  
  
 Intent intent=getIntent();  
 userid.setText(intent.getStringExtra("username"));  
  
 confirm.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String user=userid.getText().toString();  
 String password=pass.getText().toString();  
 String repassword=repass.getText().toString();  
  
 if (pass.length() < 6)  
 {  
 Toast.*makeText*(ResetActivity.this, "password length should be minimum 6 character", Toast.*LENGTH\_SHORT*).show();  
 }  
  
  
 if (password.equals(repassword)) {  
  
 Boolean checkpasswordupdate = DB.Updatepassword(user, password);  
  
 if (checkpasswordupdate == true) {  
 Intent intent = new Intent(getApplicationContext(), signIN.class);  
 startActivity(intent);  
  
 Toast.*makeText*(ResetActivity.this, "password updated successfully", Toast.*LENGTH\_SHORT*).show();  
 } else {  
 Toast.*makeText*(ResetActivity.this, "password not updated ", Toast.*LENGTH\_SHORT*).show();  
  
 }  
 }  
 else  
 {  
 Toast.*makeText*(ResetActivity.this, "password not matching", Toast.*LENGTH\_SHORT*).show();  
 }  
  
 }  
 });  
 }  
}

**Activity\_reset.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout 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"  
 android:padding="10dp"  
 android:background="@drawable/i"  
 tools:context=".ResetActivity">  
  
 <TextView  
 android:id="@+id/userid\_reset\_text"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="50dp"  
 android:hint="id"  
 android:textColor="#00BCD4"  
 android:textColorHint="@color/black"  
 android:textSize="30dp"/>  
  
 <EditText  
 android:id="@+id/password\_reset"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/userid\_reset\_text"  
 android:layout\_marginTop="50dp"  
 android:hint="Password"  
 android:inputType="textPassword"  
 android:minHeight="48dp"  
 android:textColor="#00BCD4"  
 android:textColorHint="#00BCD4"  
 android:textSize="25dp"/>  
  
 <EditText  
 android:id="@+id/repassword\_reset"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/password\_reset"  
 android:layout\_marginTop="50dp"  
 android:hint="Retype Password"  
 android:textColor="#00BCD4"  
 android:textSize="25dp"  
 android:inputType="textPassword"  
 android:textColorHint="#00BCD4"  
 android:minHeight="48dp" />  
  
 <Button  
 android:id="@+id/btnconfirm"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Confirm"  
 android:textColor="@color/white"  
 android:textSize="20dp"  
 android:layout\_marginTop="50dp"  
 android:layout\_below="@+id/repassword\_reset"  
 />  
  
</RelativeLayout>

**HomeActivity.java**

package com.example.musicplayer;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.appcompat.widget.SearchView;  
  
import android.Manifest;  
import android.content.Intent;  
import android.os.Bundle;  
import android.os.Environment;  
import android.view.Menu;  
import android.view.MenuInflater;  
import android.view.MenuItem;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.AdapterView;  
import android.widget.BaseAdapter;  
import android.widget.ListView;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import com.karumi.dexter.Dexter;  
import com.karumi.dexter.MultiplePermissionsReport;  
import com.karumi.dexter.PermissionToken;  
import com.karumi.dexter.listener.PermissionRequest;  
import com.karumi.dexter.listener.multi.MultiplePermissionsListener;  
  
import java.io.File;  
import java.util.ArrayList;  
import java.util.List;  
  
public class HomeActivity extends AppCompatActivity {  
 ListView listView;  
 String[] items;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_home*);  
  
 listView=findViewById(R.id.*listviewSong*);  
  
 runtimePermission();  
 }  
  
 *//menu* @Override  
 public boolean onCreateOptionsMenu(Menu menu) {  
 MenuInflater inflater=getMenuInflater();  
 inflater.inflate(R.menu.*menu*,menu);  
  
 MenuItem.OnActionExpandListener onActionExpandListener=new MenuItem.OnActionExpandListener() {  
 @Override  
 public boolean onMenuItemActionExpand(MenuItem menuItem) {  
 Toast.*makeText*(HomeActivity.this, "search is expanded", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 }  
  
 @Override  
 public boolean onMenuItemActionCollapse(MenuItem item) {  
 Toast.*makeText*(HomeActivity.this, "search is collapse", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 }  
 };  
  
 menu.findItem(R.id.*search*).setOnActionExpandListener(onActionExpandListener);  
 SearchView searchView=(SearchView) menu.findItem(R.id.*search*).getActionView();  
 searchView.setQueryHint("search data here...");  
  
 return true;  
 }  
  
 public void runtimePermission() {  
 Dexter.*withContext*(this).withPermissions(Manifest.permission.*READ\_EXTERNAL\_STORAGE*,Manifest.permission.*RECORD\_AUDIO*)  
 .withListener(new MultiplePermissionsListener() {  
 @Override  
 public void onPermissionsChecked(MultiplePermissionsReport multiplePermissionsReport) {  
 displaySong();  
 }  
  
 @Override  
 public void onPermissionRationaleShouldBeShown(List<PermissionRequest> list, PermissionToken permissionToken) {  
 permissionToken.continuePermissionRequest();  
 }  
 } ).check();  
  
 }  
  
 public ArrayList<File> findSong(File file) {  
 ArrayList<File> arrayList = new ArrayList<>();  
 File[] files = file.listFiles();  
 for (File singlefile : files) {  
 if (singlefile.isDirectory() && !singlefile.isHidden()) {  
 arrayList.addAll(findSong(singlefile));  
 } else {  
 if (singlefile.getName().endsWith(".mp3") || singlefile.getName().endsWith(".wav")) {  
 arrayList.add(singlefile);  
 }  
 }  
 }  
 return arrayList;  
 }  
  
 void displaySong() {  
  
 final ArrayList<File> mySongs = findSong(Environment.*getExternalStorageDirectory*());  
 items=new String[mySongs.size()];  
 for (int i=0;i<mySongs.size();i++)  
 {  
 items[i]=mySongs.get(i).getName().toString().replace(".mp3","").replace(".wav","");  
 }  
 */\*ArrayAdapter<String> myAdapter=new ArrayAdapter<String>(this, android.R.layout.simple\_list\_item\_1,items);  
 listView.setAdapter(myAdapter);\*/* customAdapter customAdapter=new customAdapter();  
 listView.setAdapter(customAdapter);  
  
 listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
 @Override  
 public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {  
 String songName=(String) listView.getItemAtPosition(i);  
 startActivity(new Intent(getApplicationContext(),playerActivity.class)  
 .putExtra("songs",mySongs)  
 .putExtra("songname",songName)  
 .putExtra("pos",i));  
  
 }  
 });  
 }  
  
 class customAdapter extends BaseAdapter  
 {  
  
 @Override  
 public int getCount() {  
 return items.length;  
 }  
  
 @Override  
 public Object getItem(int i) {  
 return null;  
 }  
  
 @Override  
 public long getItemId(int i) {  
 return 0;  
 }  
  
 @Override  
 public View getView(int i, View view, ViewGroup viewGroup) {  
 View myview=getLayoutInflater().inflate(R.layout.*list\_item*,null);  
 TextView textsong=myview.findViewById(R.id.*txtsongname*);  
 textsong.setSelected(true);  
 textsong.setText(items[i]);  
  
 return myview;  
 }  
 }  
  
}

**activity\_home.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout 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"  
 android:background="#000"  
 tools:context=".HomeActivity">  
  
  
 <ListView  
 android:id="@+id/listviewSong"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:padding="8dp" />  
</RelativeLayout>

**List\_item.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.cardview.widget.CardView  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_height="wrap\_content"  
 android:layout\_width="match\_parent"  
 android:layout\_marginEnd="8dp"  
 android:layout\_marginTop="8dp"  
 android:layout\_marginStart="8dp">  
  
 <RelativeLayout  
 android:padding="8dp"  
 android:background="@drawable/list\_bg"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <ImageView  
 android:id="@+id/imgsong"  
 android:layout\_alignParentTop="true"  
 android:layout\_marginStart="5dp"  
 android:layout\_marginTop="5dp"  
 android:layout\_width="40dp"  
 android:src="@drawable/ic\_baseline\_music"  
 android:layout\_height="40dp"  
 android:layout\_marginLeft="5dp" >  
 </ImageView>  
  
 <TextView  
 android:id="@+id/txtsongname"  
 android:layout\_alignParentEnd="true"  
 android:layout\_marginStart="5dp"  
 android:layout\_marginEnd="5dp"  
 android:layout\_toStartOf="@+id/menumore"  
 android:layout\_toEndOf="@+id/imgsong"  
 android:padding="6dp"  
 android:text="Song Name"  
 android:textColor="#fff"  
 android:textSize="15dp"  
 android:singleLine="true"  
 android:marqueeRepeatLimit="marquee\_forever"  
 android:scrollHorizontally="true"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="40dp"  
 android:layout\_alignParentRight="true"  
 android:layout\_toRightOf="@+id/imgsong"  
 android:layout\_toLeftOf="@+id/menumore">  
 </TextView>  
</RelativeLayout>  
</androidx.cardview.widget.CardView>

**playerActivity.java**

package com.example.musicplayer;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.RequiresApi;  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.app.NotificationCompat;  
import androidx.core.app.NotificationManagerCompat;  
import androidx.core.content.ContextCompat;  
  
import android.animation.AnimatorSet;  
import android.animation.ObjectAnimator;  
import android.app.Notification;  
import android.app.NotificationChannel;  
import android.app.NotificationManager;  
import android.content.Context;  
import android.content.DialogInterface;  
import android.content.Intent;  
import android.graphics.Bitmap;  
import android.graphics.BitmapFactory;  
import android.graphics.PorterDuff;  
import android.media.MediaPlayer;  
import android.net.Uri;  
import android.os.Build;  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.MenuItem;  
import android.view.View;  
import android.view.animation.Animation;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.ImageView;  
import android.widget.SeekBar;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import java.io.File;  
import java.util.ArrayList;  
import java.util.Random;  
  
public class playerActivity extends AppCompatActivity {  
 Button btnplay, btnnext, btnprev, btnff, btnfr;  
 TextView txtsname, txtsstart, txtsstop;  
 SeekBar seekmusic;  
 private Button button;  
 private static final String *CHANNEL\_ID\_1* = "";  
 private NotificationManagerCompat mNotificationManagerCompat;  
  
  
 ImageView imageView;  
 String sname;  
 public static final String *EXTRA\_NAME*="song\_name";  
 static MediaPlayer *mediaPlayer*;  
 int position;  
 ArrayList<File> mySongs;  
 Thread updateseekbar;  
  
 @Override  
 public boolean onOptionsItemSelected(@NonNull MenuItem item) {  
 if (item.getItemId() == android.R.id.*home*) {  
 onBackPressed();  
 }  
 return super.onOptionsItemSelected(item);  
  
 }  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_player*);  
  
 getSupportActionBar().setTitle("now playing");  
 getSupportActionBar().setDisplayHomeAsUpEnabled(true);  
 getSupportActionBar().setDisplayShowHomeEnabled(true);  
  
 btnprev = findViewById(R.id.*btnprev*);  
 btnnext = findViewById(R.id.*btnnext*);  
 btnplay = findViewById(R.id.*playbtn*);  
 btnff = findViewById(R.id.*btnff*);  
 btnfr = findViewById(R.id.*btnfr*);  
  
 txtsname = findViewById(R.id.*txtsn*);  
 txtsstart = findViewById(R.id.*txtsstart*);  
 txtsstop = findViewById(R.id.*txtsstop*);  
 seekmusic = findViewById(R.id.*seekbar*);  
*//no* mNotificationManagerCompat=NotificationManagerCompat.*from*(this);  
  
 if (*mediaPlayer* != null) {  
 *mediaPlayer*.stop();  
 *mediaPlayer*.release();  
  
 }  
 Intent i = getIntent();  
 Bundle bundle = i.getExtras();  
  
 mySongs = (ArrayList) bundle.getParcelableArrayList("songs");  
  
 String songName = i.getStringExtra("songname");  
  
 position = bundle.getInt("pos", 0);  
  
 txtsname.setSelected(true);  
  
 Uri uri = Uri.*parse*(mySongs.get(position).toString());  
  
 sname = mySongs.get(position).getName();  
 txtsname.setText(sname);  
  
 *mediaPlayer* = MediaPlayer.*create*(getApplicationContext(), uri);  
  
 *mediaPlayer*.start();  
  
 btnplay.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 if (*mediaPlayer*.isPlaying()) {  
 btnplay.setBackgroundResource(R.drawable.*ic\_play*);  
 *mediaPlayer*.pause();  
 } else {  
 btnplay.setBackgroundResource(R.drawable.*ic\_pause*);  
 *mediaPlayer*.start();  
 }  
 }  
 });  
  
  
 updateseekbar = new Thread() {  
 @Override  
 public void run() {  
 int totalDuration = *mediaPlayer*.getDuration();  
 int currentposition = 0;  
 while (currentposition < totalDuration) {  
 try {  
 *sleep*(500);  
 currentposition = *mediaPlayer*.getCurrentPosition();  
 seekmusic.setProgress(currentposition);  
 } catch (InterruptedException | IllegalStateException e) {  
 e.printStackTrace();  
 }  
 }  
 }  
 };  
  
 seekmusic.setMax(*mediaPlayer*.getDuration());  
 updateseekbar.start();  
 seekmusic.getProgressDrawable().setColorFilter(getResources().getColor(R.color.*colorPrimary*), PorterDuff.Mode.*MULTIPLY*);  
 seekmusic.getThumb().setColorFilter(getResources().getColor(R.color.*colorPrimary*), PorterDuff.Mode.*SRC\_IN*);  
  
 seekmusic.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {  
 @Override  
 public void onProgressChanged(SeekBar seekBar, int progress, boolean b) {  
  
 }  
  
 @Override  
 public void onStartTrackingTouch(SeekBar seekBar) {  
  
 }  
  
 @Override  
 public void onStopTrackingTouch(SeekBar seekBar) {  
 *mediaPlayer*.seekTo(seekBar.getProgress());  
  
 }  
 });  
  
 String endTime = createTime(*mediaPlayer*.getDuration());  
 txtsstop.setText(endTime);  
 final Handler handler = new Handler();  
 final int delay = 1000;  
  
 handler.postDelayed(new Runnable() {  
 @Override  
 public void run() {  
 String currentTime = createTime(*mediaPlayer*.getCurrentPosition());  
 txtsstart.setText(currentTime);  
 handler.postDelayed(this, delay);  
  
 }  
 }, delay);  
  
  
 *//next listener  
 mediaPlayer*.setOnCompletionListener(new MediaPlayer.OnCompletionListener() {  
 @Override  
 public void onCompletion(MediaPlayer mp) {  
 btnnext.performClick();  
 }  
 });  
 btnnext.setOnClickListener(new View.OnClickListener() {  
  
 @Override  
 public void onClick(View v) {  
 *mediaPlayer*.stop();  
 *mediaPlayer*.release();  
  
  
 position = ((position + 1) % mySongs.size());  
  
  
 Uri u = Uri.*parse*(mySongs.get(position).toString());  
 *mediaPlayer* = MediaPlayer.*create*(getApplicationContext(), u);  
 sname = mySongs.get(position).getName();  
 txtsname.setText(sname);  
 *mediaPlayer*.start();  
 btnplay.setBackgroundResource(R.drawable.*ic\_pause*);  
 startAnimation(imageView);  
 }  
 });  
  
 btnprev.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 *mediaPlayer*.stop();  
 *mediaPlayer*.release();  
  
 position = ((position - 1) < 0) ? (mySongs.size() - 1) : (position - 1);  
  
  
 Uri u = Uri.*parse*(mySongs.get(position).toString());  
 *mediaPlayer* = MediaPlayer.*create*(getApplicationContext(), u);  
 sname = mySongs.get(position).getName();  
 txtsname.setText(sname);  
 *mediaPlayer*.start();  
 btnplay.setBackgroundResource(R.drawable.*ic\_pause*);  
 startAnimation(imageView);  
 }  
 });  
 btnff.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 if (*mediaPlayer*.isPlaying()) {  
 *mediaPlayer*.seekTo(*mediaPlayer*.getCurrentPosition() + 10000);  
 }  
 }  
 });  
  
 btnfr.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 if (*mediaPlayer*.isPlaying()) {  
 *mediaPlayer*.seekTo(*mediaPlayer*.getCurrentPosition() - 10000);  
 }  
 }  
 });  
}  
  
public void startAnimation(View view) {  
 ObjectAnimator animator = ObjectAnimator.*ofFloat*(imageView, "rotation", 0f, 360f);  
 animator.setDuration(1000);  
 AnimatorSet animatorSet = new AnimatorSet();  
 animatorSet.playTogether(animator);  
 animatorSet.start();  
 }  
  
 public String createTime(int duration) {  
 String time = "";  
 int min = duration / 1000 / 60;  
 int sec = duration / 1000 % 60;  
 time += min + ":";  
 if (sec < 10) {  
 time += "0";  
 }  
 time += sec;  
 return time;  
 }  
  
*//alert dialogbox* public void onBackPressed()  
 {  
 AlertDialog.Builder alertDialogBuilder=new AlertDialog.Builder(this);  
  
 alertDialogBuilder.setTitle("confirm exit");  
  
 alertDialogBuilder.setIcon(R.drawable.*ic\_exit*);  
  
 alertDialogBuilder.setMessage("are u sure! u want to exit music app");  
  
 alertDialogBuilder.setCancelable(false);  
  
 alertDialogBuilder.setPositiveButton("yes", new DialogInterface.OnClickListener() {  
  
 @Override  
 public void onClick(DialogInterface dialogInterface, int i) {  
 finish();  
 }  
 });  
  
 alertDialogBuilder.setNegativeButton("no", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialogInterface, int i) {  
  
 Toast.*makeText*(playerActivity.this, "thank you! Enjoy your music", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
  
 AlertDialog alertDialog=alertDialogBuilder.create();  
  
 alertDialog.show();  
  
 }  
  
 *//notification* public void sendNotification(View view)  
 {  
 Bitmap largeImage= BitmapFactory.*decodeResource*(getResources(), R.drawable.*ic\_baseline\_music*);  
  
 Notification channel=new NotificationCompat.Builder(getApplicationContext(),*CHANNEL\_ID\_1*)  
 .setSmallIcon(R.drawable.*ic\_music1*)  
 .setContentTitle("")  
 .setContentText("song is playing ")  
 .setLargeIcon(largeImage)  
 .addAction(R.drawable.*ic\_like*,"like",null)  
 .addAction(R.drawable.*ic\_previous*,"prev",null)  
 .addAction(R.drawable.*ic\_pause*,"pause",null)  
 .addAction(R.drawable.*ic\_next*,"next",null)  
 .addAction(R.drawable.*ic\_dislike*,"dislike",null)  
   
 .setStyle(new android.support.v4.media.app.NotificationCompat.MediaStyle()  
 .setShowActionInCompatView(1,2,3) )  
 .build();  
 mNotificationManagerCompat.notify(1,channel);  
  
  
  
 }  
}

**player\_activity.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout 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"  
 android:background="@drawable/background\_img"  
 android:orientation="vertical"  
 android:weightSum="10"  
 tools:context=".playerActivity">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="7"  
 android:layout\_gravity="center"  
 android:orientation="vertical"  
 >  
 <TextView  
 android:id="@+id/txtsn"  
 android:layout\_margin="20dp"  
 android:ellipsize="marquee"  
 android:marqueeRepeatLimit="marquee\_forever"  
 android:padding="10dp"  
 android:singleLine="true"  
 android:text="song name"  
 android:textColor="#FFF"  
 android:textSize="22dp"  
 android:textAlignment="center"  
 android:textStyle="italic"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:gravity="center\_horizontal">  
  
  
 </TextView>  
  
 <ImageView  
 android:id="@+id/imageview"  
 android:layout\_marginBottom="8dp"  
 android:layout\_width="250dp"  
 android:layout\_gravity="center"  
 android:layout\_height="250dp"  
 android:src="@drawable/music">  
  
 </ImageView>  
  
  
 <RelativeLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="60dp"  
 >  
  
 <SeekBar  
 android:id="@+id/seekbar"  
 android:layout\_width="220dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentBottom="true"  
 android:layout\_centerInParent="true"  
 android:layout\_marginStart="20dp"  
 android:layout\_marginLeft="20dp"  
 android:layout\_marginTop="20dp"  
 android:layout\_marginEnd="20dp"  
 android:layout\_marginRight="20dp"  
 android:layout\_marginBottom="20dp">  
  
 </SeekBar>  
  
 <TextView  
 android:id="@+id/txtsstart"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentLeft="false"  
 android:layout\_centerInParent="true"  
 android:layout\_marginLeft="20dp"  
 android:layout\_toLeftOf="@id/seekbar"  
 android:text="0:10"  
 android:textColor="#FFF"  
 android:textSize="14dp">  
  
 </TextView>  
  
 <TextView  
 android:id="@+id/txtsstop"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentRight="false"  
 android:layout\_centerInParent="true"  
 android:layout\_marginRight="20dp"  
 android:layout\_toRightOf="@id/seekbar"  
 android:text="4:10"  
 android:textColor="#FFF"  
 android:textSize="14dp">  
  
 </TextView>  
  
 </RelativeLayout>  
  
 </LinearLayout>  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="3">  
  
 <RelativeLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent">  
  
 <Button  
 android:id="@+id/playbtn"  
 android:layout\_width="70dp"  
 android:layout\_height="70dp"  
 android:layout\_centerHorizontal="true"  
 android:background="@drawable/ic\_pause"  
 tools:ignore="SpeakableTextPresentCheck">  
  
 </Button>  
  
 <Button  
 android:id="@+id/btnnext"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginTop="15dp"  
 android:layout\_toRightOf="@+id/playbtn"  
 android:background="@drawable/ic\_next"  
 tools:ignore="SpeakableTextPresentCheck">  
  
 </Button>  
  
 <Button  
 android:id="@+id/btnprev"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginTop="15dp"  
 android:layout\_toLeftOf="@+id/playbtn"  
 android:background="@drawable/ic\_prev"  
 tools:ignore="SpeakableTextPresentCheck">  
  
 </Button>  
  
 <Button  
 android:id="@+id/btnff"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:layout\_marginLeft="15dp"  
 android:layout\_marginTop="20dp"  
 android:layout\_toRightOf="@+id/btnnext"  
 android:background="@drawable/ic\_fast\_forward"  
 tools:ignore="SpeakableTextPresentCheck">  
  
 </Button>  
  
 <Button  
 android:id="@+id/btnfr"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:layout\_marginTop="20dp"  
 android:layout\_marginRight="15dp"  
 android:layout\_toLeftOf="@+id/btnprev"  
 android:background="@drawable/ic\_fast\_rewind"  
 tools:ignore="SpeakableTextPresentCheck">  
 </Button>  
  
 <ImageView  
 android:id="@+id/shuffle\_off"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginStart="40dp"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginBottom="60dp"  
 android:contentDescription="@string/app\_name"  
 android:onClick="sendNotification"  
 android:src="@drawable/ic\_shuffle\_off" />  
  
 <ImageView  
 android:id="@+id/id\_shuffleon"  
 android:layout\_width="48dp"  
 android:layout\_height="48dp"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginEnd="40dp"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginBottom="60dp"  
 android:contentDescription="@string/app\_name"  
 android:onClick="sendNotification"  
 android:src="@drawable/ic\_suffleon" />  
</RelativeLayout>

</LinearLayout>  
  
  
</LinearLayout>

**DBHelper**

package com.example.musicplayer;  
  
import android.content.ContentValues;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
  
import androidx.annotation.Nullable;  
  
 public class DBhelper extends SQLiteOpenHelper {  
  
 public DBhelper( Context context) {  
 super(context,"Login.db",null,1);  
 }  
  
 @Override  
 public void onCreate(SQLiteDatabase db) {  
 db.execSQL("create table users(username Text primary key,password Text)");  
 }  
  
 @Override  
 public void onUpgrade(SQLiteDatabase db, int i, int i1) {  
 db.execSQL("drop Table if exists users");  
  
 }  
  
 public boolean InsertData(String username,String password)  
 {  
 SQLiteDatabase db=this.getWritableDatabase();  
 ContentValues contentValues=new ContentValues();  
 contentValues.put("username",username);  
 contentValues.put("password",password);  
  
 long result=db.insert("users",null,contentValues);  
  
 if(result==-1)  
  
 return false;  
  
 else  
  
 return true;  
  
 }  
  
 public boolean Updatepassword(String userid,String password)  
 {  
 SQLiteDatabase db=this.getWritableDatabase();  
 ContentValues contentValues=new ContentValues();  
 contentValues.put("password",password);  
  
 long result=db.update("users",contentValues,"username=?",new String[] {userid});  
  
 if(result==-1) return false;  
  
 else  
  
 return true;  
  
 }  
  
  
 public boolean Checkusername(String username)  
 {  
 SQLiteDatabase db=this.getWritableDatabase();  
 Cursor cursor=db.rawQuery("select \* from users where username=?",new String[]{username});  
 if(cursor.getCount()>0)  
 {  
 return true;  
 }  
 else  
 {  
 return false;  
 }  
 }  
  
 public boolean checkusernamepassword(String username,String password)  
 {  
 SQLiteDatabase db=this.getWritableDatabase();  
 Cursor cursor=db.rawQuery("select \* from users where username=? and password=?",new String[]{username,password});  
 if(cursor.getCount()>0)  
 {  
 return true;  
  
 }  
 else  
 {  
 return false;  
 }  
 }  
 }

**App.java**

package com.example.musicplayer;  
  
import android.app.Application;  
import android.app.Notification;  
import android.app.NotificationChannel;  
import android.app.NotificationManager;  
import android.os.Build;  
  
public class App extends Application {  
 private final String CHANNEL\_ID\_1 = " channel1";  
 private final String channel\_name\_1 = "firstchannel";  
  
 @Override  
 public void onCreate() {  
 super.onCreate();  
  
 createNotificationChannel();  
 }  
  
 private void createNotificationChannel() {  
 if (Build.VERSION.*SDK\_INT* >= Build.VERSION\_CODES.*O*) {  
 NotificationChannel channel1 = new NotificationChannel(  
 CHANNEL\_ID\_1,  
 channel\_name\_1,  
 NotificationManager.*IMPORTANCE\_HIGH* );  
 channel1.setLockscreenVisibility(Notification.*VISIBILITY\_PRIVATE*);  
 channel1.enableLights(true);  
  
 NotificationManager manager = getSystemService(NotificationManager.class);  
 manager.createNotificationChannel(channel1);  
  
 }  
  
 }  
}

**Menu.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<menu xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto">  
  
 <item android:title="favorite"  
 android:id="@+id/fav"  
 android:icon="@drawable/ic\_favorite"  
 app:showAsAction="ifRoom"/>  
  
 <item android:title="search"  
 android:id="@+id/search"  
 android:icon="@drawable/ic\_search"  
 app:showAsAction="ifRoom|collapseActionView"  
 app:actionViewClass="androidx.appcompat.widget.SearchView"  
 />  
  
  
  
 <item android:title="share"  
 android:id="@+id/share1"  
 android:icon="@drawable/ic\_share"  
 app:showAsAction="ifRoom"/>  
  
</menu>

**8. BIBLOGRAPHY**

https://developer.android.com

https://developer.github.com

youtube.com

**LAB PROGRAMS**

**1.Create an app to calculate the total marks and percentage of the student. Your activity must contain the title as Student Marksheet and add the following fields: Student Name, RegNo, Class, Subject (at least 3), Marks. Add two buttons to calculate total marks and percentage and display in edit text boxes.**

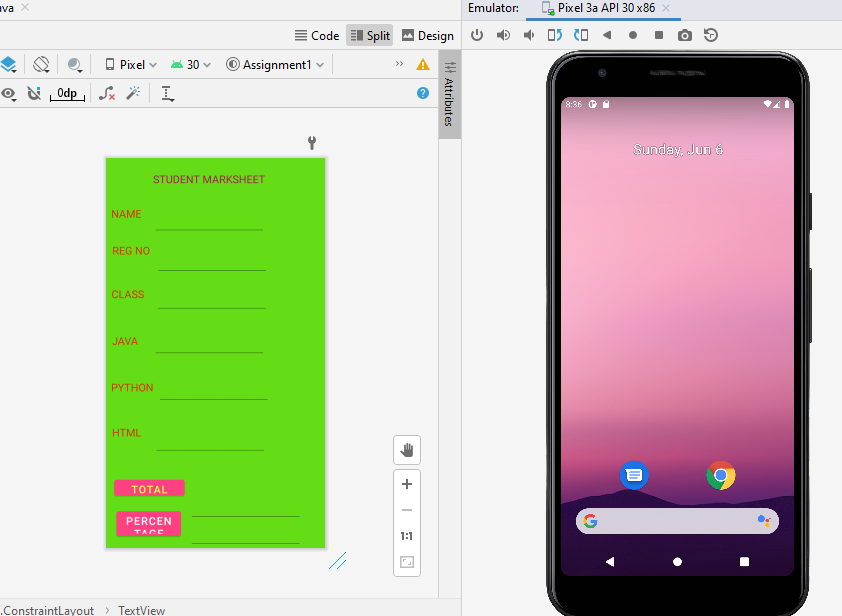
Code:

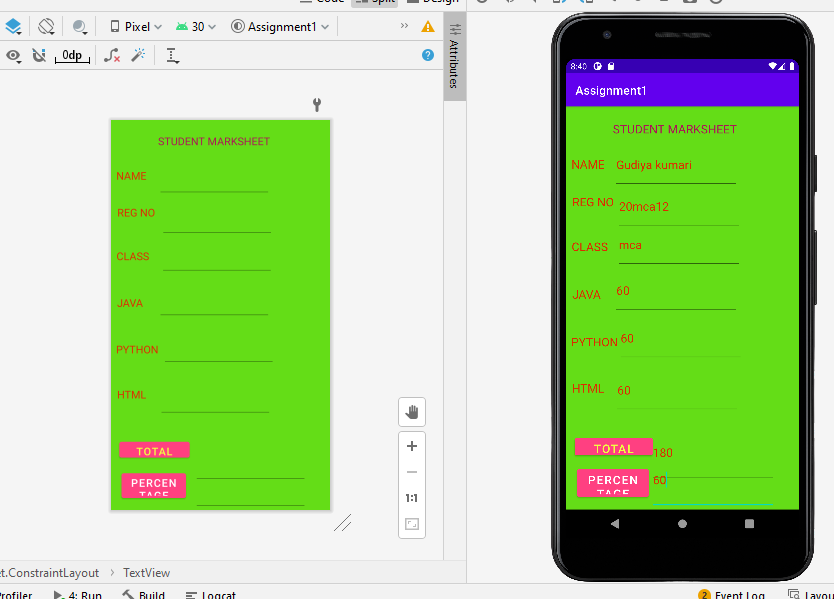
**package** com.example.assignment1;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
  
**public class** MainActivity **extends** AppCompatActivity {  
 **private** Button btntotal,per;  
 **private** EditText e1,e2,e3, totalsum,totalper;  
 **private** EditText a1,a2,a3;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 addListenereonButton();  
  
 }  
  
 **public void** addListenereonButton()  
 {  
  
 btntotal=(Button)findViewById(R.id.btn\_total);  
 e1=(EditText)findViewById(R.id.txt\_java);  
 e2=(EditText)findViewById(R.id.txt\_python);  
 e3=(EditText)findViewById(R.id.txt\_html);  
  
 a1=(EditText)findViewById(R.id.txt\_name);  
 a2=(EditText)findViewById(R.id.txt\_regno);  
 a3=(EditText)findViewById(R.id.txt\_class);  
  
  
 totalsum=(EditText)findViewById(R.id.txt\_total);  
 totalper=(EditText)findViewById(R.id.txt\_per);  
  
 btntotal.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
  
 **int** num1, num2,Finalsum,num3,percentage;  
  
 num1=Integer.parseInt(e1.getText().toString());  
 num2=Integer.parseInt(e2.getText().toString());  
 num3=Integer.parseInt(e3.getText().toString());  
  
 Finalsum=num1+num2+num3;  
 percentage=Finalsum/3;  
 totalsum.setText(Integer.toString(Finalsum));  
 totalper.setText(Integer.toString(percentage));  
  
}  
 });  
 }  
  
}

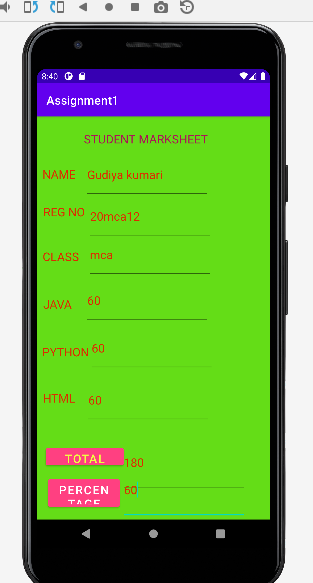
**xml file:-**

*<?***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"  
 android:background="#64DD17"  
 tools:context=".MainActivity"**>  
  
 <**TextView  
 android:id="@+id/textView"  
 android:layout\_width="235dp"  
 android:layout\_height="50dp"  
 android:text="STUDENT MARKSHEET"  
 android:textColor="#AD1457"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.038"** />  
  
 <**TextView  
 android:id="@+id/textView2"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:text="NAME"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.049"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.139"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:text="REG NO"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.058"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.245"** />  
  
 <**TextView  
 android:id="@+id/textView4"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:singleLine="true"  
 android:text="CLASS"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.051"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.371"** />  
  
 <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:text="JAVA"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.057"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.505"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:text="PYTHON"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.047"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.639"** />  
  
 <**TextView  
 android:id="@+id/textView7"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:text="HTML"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.056"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.769"** />  
  
 <**Button  
 android:id="@+id/btn\_total"  
 android:layout\_width="132dp"  
 android:layout\_height="41dp"  
 android:text="total marks"  
 android:textColor="#EEFF41"  
 android:textSize="20sp"  
 app:backgroundTint="#FF4081"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.056"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.866"** />  
  
 <**Button  
 android:id="@+id/btn\_per"  
 android:layout\_width="121dp"  
 android:layout\_height="58dp"  
 android:text="percentage"  
 android:textSize="20sp"  
 app:backgroundTint="#FF4081"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.068"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.975"** />  
  
 <**EditText  
 android:id="@+id/txt\_name"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.442"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.097"** />  
  
 <**EditText  
 android:id="@+id/txt\_regno"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.468"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.214"** />  
  
 <**EditText  
 android:id="@+id/txt\_class"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.467"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.322"** />  
  
 <**EditText  
 android:id="@+id/txt\_java"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.442"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.451"** />  
  
 <**EditText  
 android:id="@+id/txt\_python"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.483"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.585"** />  
  
 <**EditText  
 android:id="@+id/txt\_html"  
 android:layout\_width="210dp"  
 android:layout\_height="80dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.452"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.731"** />  
  
 <**EditText  
 android:id="@+id/txt\_total"  
 android:layout\_width="210dp"  
 android:layout\_height="100dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.781"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.92"** />  
  
 <**EditText  
 android:id="@+id/txt\_per"  
 android:layout\_width="210dp"  
 android:layout\_height="100dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textColor="#DD2C00"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.781"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="1.0"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**Output:-**







**2.Create an app to convert indian rupee to currencies of 5 different currencies namely USD, EUR, GBP, CHF and AUD . Accept the indian rupee in a editext and display the converted currencies by  pressing a button.**

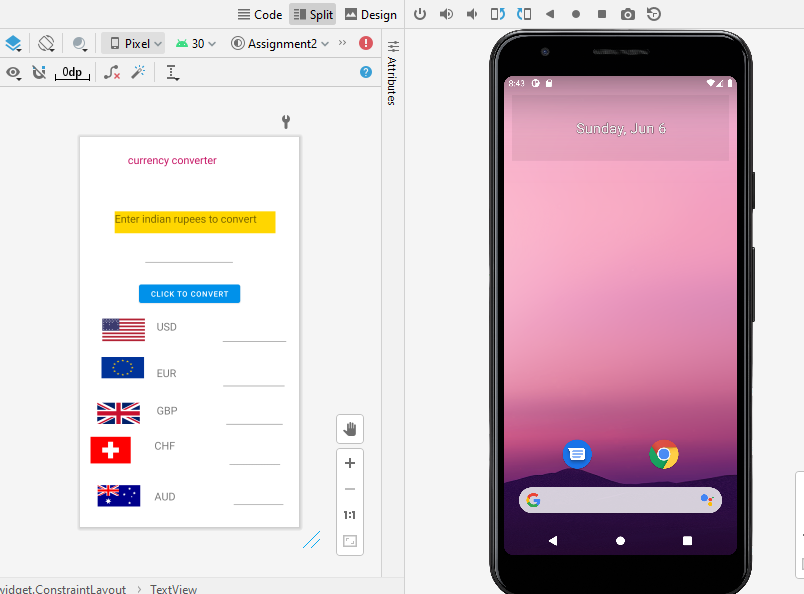
**package** com.example.assignment2;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
  
**public class** MainActivity **extends** AppCompatActivity {  
 **private** Button **btnsum**;  
 **private** TextView **usd**,**eur**,**gbp**,**chf**,**aud**;  
 **private** EditText **e1**,**e2**,**e3**,**e4**,**e5**,**enter**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 addListenereonButton();  
  
 }  
  
 **public void** addListenereonButton()  
 {  
 **btnsum**=(Button)findViewById(R.id.***btn\_submit***);  
 **enter**=(EditText)findViewById(R.id.***txt\_indian***);  
  
 **usd**=(EditText)findViewById(R.id.***txt\_usd***);  
 **eur**=(EditText)findViewById(R.id.***txt\_euro***);  
 **gbp**=(EditText)findViewById(R.id.***txt\_gbp***);  
 **chf**=(EditText)findViewById(R.id.***txt\_chf***);  
 **aud**=(EditText)findViewById(R.id.***txt\_aud***);  
  
 **btnsum**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
  
 **double** indian;  
 **double** FinalUSD,finaleur,finalgbp,finalchf,finalaud ;  
  
 indian=Double.*parseDouble*(**enter**.getText().toString());  
   
 FinalUSD=indian\*0.014;  
 **usd**.setText(Double.*toString*(FinalUSD));  
 finaleur=indian\*0.011;  
 **eur**.setText(Double.*toString*(finaleur));  
 finalgbp=indian\*0.0097;  
 **gbp**.setText(Double.*toString*(finalgbp));  
 finalchf=indian\*0.012;  
 **chf**.setText(Double.*toString*(finalchf));  
 finalaud=indian\*0.018;  
 **aud**.setText(Double.*toString*(finalaud));

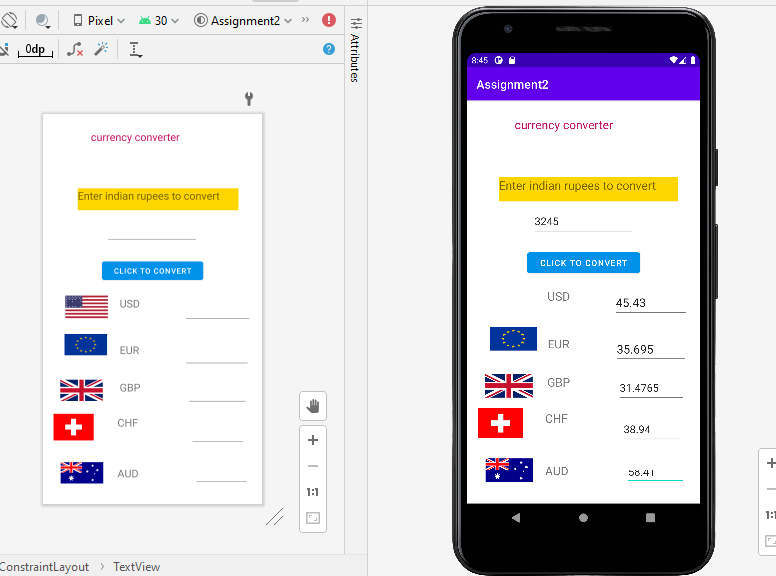
}  
 });  
 }  
  
}

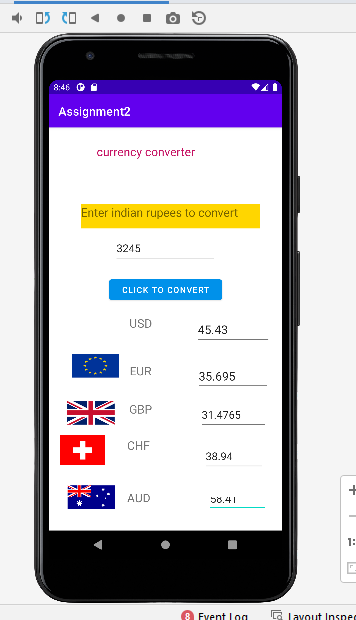
**Activity\_main.xml**

*<?***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/textView"  
 android:layout\_width="231dp"  
 android:layout\_height="68dp"  
 android:text="currency converter"  
 android:textColor="#C51162"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.044"** />  
  
 <**TextView  
 android:id="@+id/textView2"  
 android:layout\_width="302dp"  
 android:layout\_height="41dp"  
 android:background="#FFD600"  
 android:text="Enter indian rupees to convert"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.596"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.202"** />  
  
 <**EditText  
 android:id="@+id/txt\_indian"  
 android:layout\_width="172dp"  
 android:layout\_height="50dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.284"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="90dp"  
 android:layout\_height="45dp"  
 android:text="USD"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.448"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.498"** />  
  
 <**TextView  
 android:id="@+id/textView4"  
 android:layout\_width="91dp"  
 android:layout\_height="46dp"  
 android:text="EUR"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.45"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.626"** />  
  
 <**Button  
 android:id="@+id/btn\_submit"  
 android:layout\_width="190dp"  
 android:layout\_height="46dp"  
 android:text="click to convert"  
 app:backgroundTint="#0091EA"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.395"** />  
  
 <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="93dp"  
 android:layout\_height="48dp"  
 android:text="GBP"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.452"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.73"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="94dp"  
 android:layout\_height="47dp"  
 android:text="CHF"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.441"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.825"** />  
  
 <**TextView  
 android:id="@+id/textView7"  
 android:layout\_width="86dp"  
 android:layout\_height="38dp"  
 android:text="AUD"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.43"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.952"** />  
  
 <**EditText  
 android:id="@+id/txt\_usd"  
 android:layout\_width="127dp"  
 android:layout\_height="50dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.929"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.502"** />  
  
 <**EditText  
 android:id="@+id/txt\_euro"  
 android:layout\_width="123dp"  
 android:layout\_height="47dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.92"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.626"** />  
  
 <**EditText  
 android:id="@+id/txt\_gbp"  
 android:layout\_width="114dp"  
 android:layout\_height="49dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.91"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.73"** />  
  
 <**EditText  
 android:id="@+id/txt\_chf"  
 android:layout\_width="103dp"  
 android:layout\_height="49dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.897"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.841"** />  
  
 <**EditText  
 android:id="@+id/txt\_aud"  
 android:layout\_width="101dp"  
 android:layout\_height="35dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.918"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.952"** />  
  
 <**ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="80dp"  
 android:layout\_height="50dp"  
 android:visibility="gone"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.126"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.494"  
 app:srcCompat="@drawable/usd"  
 tools:visibility="visible"** />  
  
 <**ImageView  
 android:id="@+id/imageView2"  
 android:layout\_width="80dp"  
 android:layout\_height="50dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.122"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.598"  
 app:srcCompat="@drawable/eur"** />  
  
 <**ImageView  
 android:id="@+id/imageView3"  
 android:layout\_width="80dp"  
 android:layout\_height="50dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.098"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.724"  
 app:srcCompat="@drawable/gbp"** />  
  
 <**ImageView  
 android:id="@+id/imageView4"  
 android:layout\_width="80dp"  
 android:layout\_height="50dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.053"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.825"  
 app:srcCompat="@drawable/chf"** />  
  
 <**ImageView  
 android:id="@+id/imageView5"  
 android:layout\_width="80dp"  
 android:layout\_height="50dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.1"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.951"  
 app:srcCompat="@drawable/aud"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**Output:-**







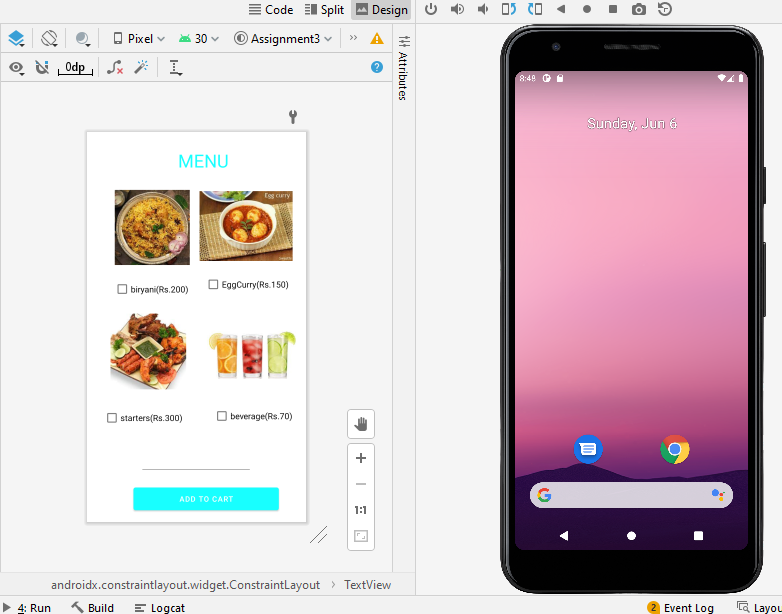
**3.Create an app to order food items and calculate the bill amount and display it in the editext on a button click event.  Create a menu card including starters, Biryanis, curries along with price and beverages by using checkboxes. Add few images at the bottom of the activity.**

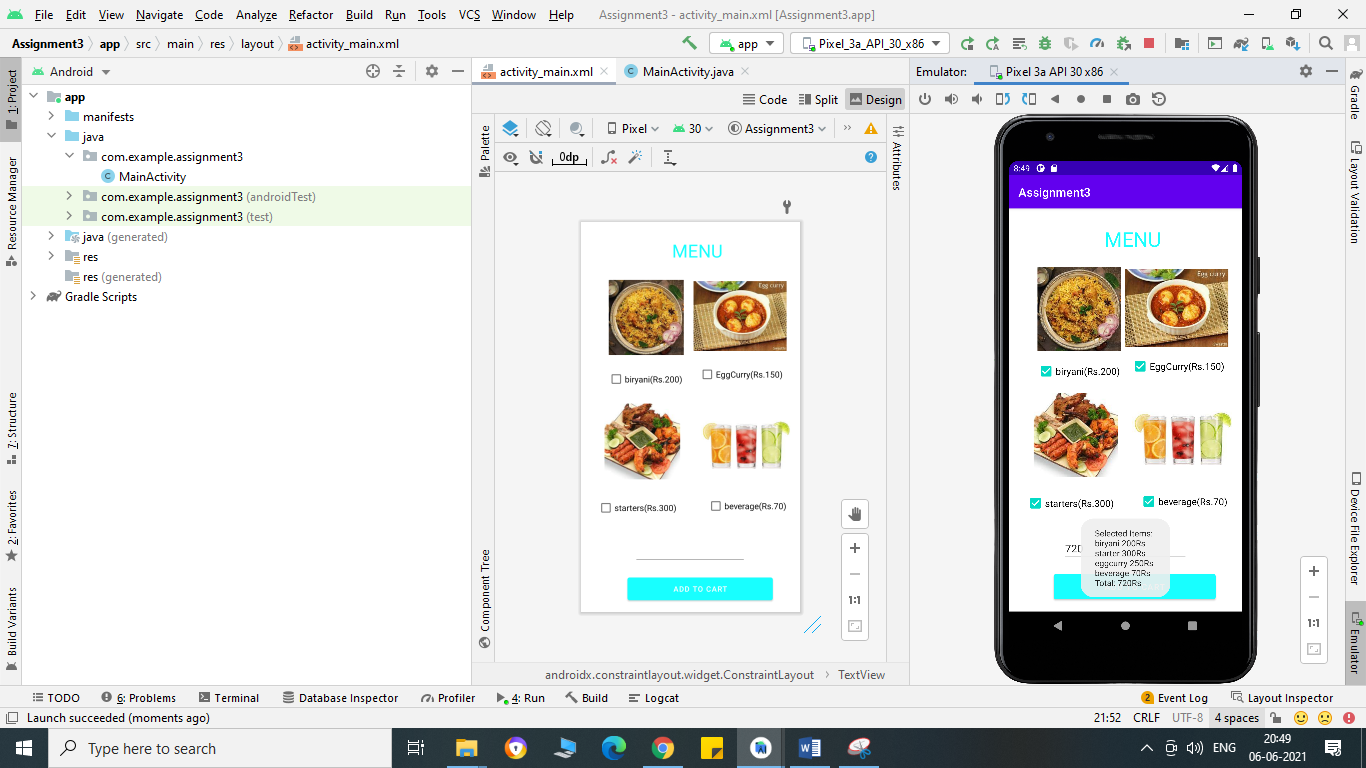
**package** com.example.assignment3;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.CheckBox;  
**import** android.widget.EditText;  
**import** android.widget.Toast;  
  
**import** java.util.zip.CheckedInputStream;  
  
  
**public class** MainActivity **extends** AppCompatActivity {  
 CheckBox **biryani**, **starter**, **eggcurry**,**beverage**;  
 Button **btn**;  
 EditText **sum**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 addListenerOnButtonClick();  
 }  
  
 **public void** addListenerOnButtonClick(){  
 *//Getting instance of CheckBoxes and Button from the activty\_main.xml file* **biryani**=(CheckBox)findViewById(R.id.***check\_biryani***);  
 **eggcurry**=(CheckBox)findViewById(R.id.***check\_egg***);  
 **starter** =(CheckBox)findViewById(R.id.***check\_stater***);  
 **beverage** =(CheckBox)findViewById(R.id.***check\_beverage***);  
  
 **btn**=(Button)findViewById(R.id.***btn\_cart***);  
 **sum**=(EditText)findViewById(R.id.***txt\_total***);  
  
*//Applying the Listener on the Button click* **btn**.setOnClickListener(**new** View.OnClickListener(){  
  
 @Override  
 **public void** onClick(View view) {  
 **int** totalamount=0;  
  
 StringBuilder result=**new** StringBuilder();  
  
 result.append(**"Selected Items:"**);  
 **if**(**biryani**.isChecked()){  
 result.append(**"\nbiryani 200Rs"**);  
 totalamount+=200;  
 }  
 **if**(**starter**.isChecked()){  
 result.append(**"\nstarter 300Rs"**);  
 totalamount+=300;  
 }  
 **if**(**eggcurry**.isChecked()){  
 result.append(**"\neggcurry 250Rs"**);  
 totalamount+=150;  
 }  
 **if**(**beverage**.isChecked()){  
 result.append(**"\nbeverage 70Rs"**);  
 totalamount+=70;  
 }  
 result.append(**"\nTotal: "**+totalamount+**"Rs"**);  
  
 Toast.*makeText*(getApplicationContext(), result.toString(), Toast.***LENGTH\_LONG***).show();  
  
  
 **sum**.setText(Integer.*toString*(totalamount));  
  
 }  
  
 });  
 }  
  
}

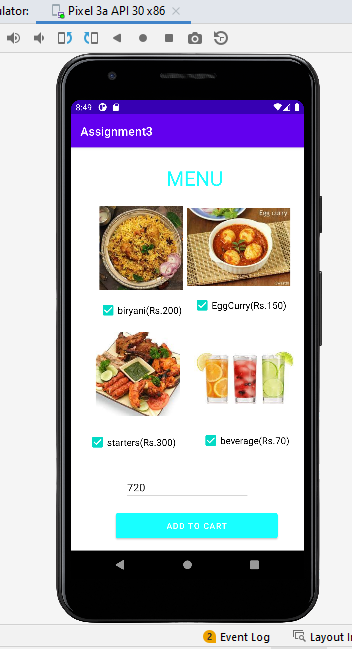
**xml file:-**

*<?***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/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="MENU"  
 android:textColor="#18FFFF"  
 android:textSize="34sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.541"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.045"** />  
  
 <**ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="145dp"  
 android:layout\_height="141dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.187"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.184"  
 app:srcCompat="@drawable/biryani"** />  
  
 <**CheckBox  
 android:id="@+id/check\_biryani"  
 android:layout\_width="150dp"  
 android:layout\_height="66dp"  
 android:text="biryani(Rs.200)"  
 android:textSize="16sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.192"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.393"** />  
  
 <**ImageView  
 android:id="@+id/imageView2"  
 android:layout\_width="175dp"  
 android:layout\_height="170dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.894"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.163"  
 app:srcCompat="@drawable/eggcurry"** />  
  
 <**CheckBox  
 android:id="@+id/check\_egg"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="EggCurry(Rs.150)"  
 android:textSize="16sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.873"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.383"** />  
  
 <**ImageView  
 android:id="@+id/imageView3"  
 android:layout\_width="170dp"  
 android:layout\_height="142dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.124"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.578"  
 app:srcCompat="@drawable/staters"** />  
  
 <**CheckBox  
 android:id="@+id/check\_stater"  
 android:layout\_width="169dp"  
 android:layout\_height="48dp"  
 android:text="starters(Rs.300)"  
 android:textSize="16sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.128"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.749"** />  
  
 <**ImageView  
 android:id="@+id/imageView4"  
 android:layout\_width="171dp"  
 android:layout\_height="154dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.937"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.59"  
 app:srcCompat="@drawable/beverage"** />  
  
 <**CheckBox  
 android:id="@+id/check\_beverage"  
 android:layout\_width="159dp"  
 android:layout\_height="58dp"  
 android:text="beverage(Rs.70)"  
 android:textSize="16sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.939"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.748"** />  
  
 <**EditText  
 android:id="@+id/txt\_total"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.868"** />  
  
 <**Button  
 android:id="@+id/btn\_cart"  
 android:layout\_width="273dp"  
 android:layout\_height="54dp"  
 android:text="ADD TO CART"  
 app:backgroundTint="#18FFFF"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.63"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.976"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**Output:-**







**4.Create an app to pass the value from one activity to another activity using intents. In first activity add the following fields: Name, Aadhar number, Gender, Photo, Mobile, Email, Educational qualification.  Dsiplay only the entered Name, Aadhar number in the second activity.**

**Mainactivity.java**

**package** com.example.program\_4th;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.CheckBox;  
**import** android.widget.EditText;  
**import** android.widget.RadioButton;  
  
  
**public class** MainActivity **extends** AppCompatActivity {  
 **private** Button buttonpass;  
 **private** EditText editname, editadhar , editphone,editemail;  
 **private** RadioButton radiomale,radiofemale,radioother;  
 **private** CheckBox checkpuc,checkug,checkpg;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 buttonpass=(Button)findViewById(R.id.btn\_login);  
 editname=(EditText)findViewById(R.id.txt\_name);  
 editadhar=(EditText)findViewById(R.id.txt\_adhar);  
  
 radiomale=(RadioButton)findViewById(R.id.radio\_female);  
 radiofemale=(RadioButton)findViewById(R.id.radio\_male);  
 radioother=(RadioButton)findViewById(R.id.radio\_other);  
  
 editphone=(EditText)findViewById(R.id.txt\_mobile);  
 editemail=(EditText)findViewById(R.id.txt\_email);  
  
 checkpuc=(CheckBox) findViewById(R.id.check\_pu);  
 checkug=(CheckBox) findViewById(R.id.check\_ug);  
 checkpg=(CheckBox) findViewById(R.id.check\_pg);  
  
 buttonpass.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
  
 String name=editname.getText().toString();  
 String AdharNumber=editadhar.getText().toString();  
  
 String male= radiomale.getText().toString();  
 String female= radiofemale.getText().toString();  
 String other= radioother.getText().toString();  
  
 String phonenumber= editphone.getText().toString();  
 String emailid= editemail.getText().toString();  
  
 String puc= checkpuc.getText().toString();  
 String ug= checkug.getText().toString();  
 String pg= checkpg.getText().toString();  
  
 Intent intent= **new** Intent(MainActivity.**this**,subprogram4.**class**);  
  
 intent.putExtra(**"Sname"**,name);  
 intent.putExtra(**"AdharNumber"**,AdharNumber);  
 intent.putExtra(**"male"**,male);  
 intent.putExtra(**"female"**,female);  
 intent.putExtra(**"other"**,other);  
  
 intent.putExtra(**"Sphone"**,phonenumber);  
 intent.putExtra(**"email"**,emailid);  
  
 intent.putExtra(**"PUC"**,puc);  
 intent.putExtra(**"UG"**,ug);  
 intent.putExtra(**"PG"**,pg);  
  
 startActivity(intent);  
 }  
 });  
 }  
}

**mainactivity.xml:-**

*<?***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"**

**android:background="#81EEFF03"**

**tools:context=".MainActivity"**>

<**EditText**

**android:id="@+id/txt\_name"**

**android:layout\_width="171dp"**

**android:layout\_height="48dp"**

**android:ems="10"**

**android:hint="Enter name"**

**android:inputType="textPersonName"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.92"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.217"** />

<**EditText**

**android:id="@+id/txt\_adhar"**

**android:layout\_width="172dp"**

**android:layout\_height="47dp"  
 android:ems="10"**

**android:hint="enter adhar number"**

**android:inputType="textPersonName"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.882"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.327"** />

<**TextView**

**android:id="@+id/textView"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="name"**

**android:textColor="#2979FF"**

**android:textSize="24sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.045"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.223"** />

<**TextView**

**android:id="@+id/textView2"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Adhar Numer"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.054"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.346"** />

<**TextView**

**android:id="@+id/textView3"**

**android:layout\_width="66dp"**

**android:layout\_height="28dp"**

**android:text="Gender"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.046"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.477"** />

<**ImageView**

**android:id="@+id/imageView"**

**android:layout\_width="143dp"**

**android:layout\_height="71dp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.895"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.096"**

**app:srcCompat="@drawable/i"** />

<**TextView**

**android:id="@+id/textView5"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Mobile"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.045"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.65"** />

<**EditText**

**android:id="@+id/txt\_mobile"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:ems="10"**

**android:hint="enter mobile no"**

**android:inputType="textPersonName"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.93"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.667"** />

<**TextView**

**android:id="@+id/textView6"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="REGISTRATION FORM"**

**android:textColor="#FF3D00"**

**android:textSize="24sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.492"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.04"** />

<**TextView**

**android:id="@+id/textView7"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Email"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.072"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.774"** />

<**EditText**

**android:id="@+id/txt\_email"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:ems="10"**

**android:hint="enter email id"**

**android:inputType="textEmailAddress"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.925"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.768"** />

<**TextView**

**android:id="@+id/textView8"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Educational Qualification"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.085"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.829"** />

<**CheckBox**

**android:id="@+id/check\_pu"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="PUC"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.047"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.906"** />

<**CheckBox**

**android:id="@+id/check\_ug"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="UG"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.383"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.906"** />

<**CheckBox**

**android:id="@+id/check\_pg"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="PG"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.679"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.906"** />

<**Button**

**android:id="@+id/btn\_login"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="login"**

**android:textSize="20sp"**

**app:backgroundTint="#FF3D00"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.498"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.976"** />

<**RadioGroup**

**android:layout\_width="203dp"**

**android:layout\_height="167dp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.968"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.505"**>

<**RadioButton**

**android:id="@+id/radio\_male"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="male"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"** />

<**RadioButton**

**android:id="@+id/radio\_female"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="female"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"** />

<**RadioButton**

**android:id="@+id/radio\_other"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Other"**

**android:textColor="#00B0FF"**

**android:textSize="20sp"** />

</**RadioGroup**>

</**androidx.constraintlayout.widget.ConstraintLayout**>

**Subprogram4th.java:-**

package com.example.program\_4th;

import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;

import android.widget.EditText;

public class subprogram4 extends AppCompatActivity {  
private EditText rectxt\_name,rectxt\_adhar;  
@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_subprogram4);

rectxt\_name=(EditText)findViewById(R.id.txt\_name1);

rectxt\_adhar=(EditText)findViewById(R.id.txt\_adhar1);

String Rname;  
String Radharnumber;

Rname=getIntent().getExtras().getString("Sname");  
Radharnumber=getIntent().getExtras().getString("AdharNumber");

rectxt\_name.setText(Rname);

rectxt\_adhar.setText(Radharnumber);

}

}

**subprogram4th.xml:-**

*<?***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"**

**android:background="#8100E5FF"**

**tools:context=".subprogram4"**>

<**TextView**

**android:id="@+id/textView4"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Name"**

**android:textColor="#F50057"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.196"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.203"** />

<**TextView**

**android:id="@+id/textView9"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="Adhar Number"**

**android:textColor="#F50057"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.057"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.33"** />

<**EditText**

**android:id="@+id/txt\_name1"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:ems="10"**

**android:inputType="textPersonName"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.92"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.208"** />

<**EditText**

**android:id="@+id/txt\_adhar1"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:ems="10"**

**android:inputType="textPersonName"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

**app:layout\_constraintHorizontal\_bias="0.925"**

**app:layout\_constraintStart\_toStartOf="parent"**

**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.322"** />

<**TextView**

**android:id="@+id/textView10"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:text="LOGIN DETAILS"**

**android:textColor="#E6FF3D00"**

**android:textSize="20sp"**

**app:layout\_constraintBottom\_toBottomOf="parent"**

**app:layout\_constraintEnd\_toEndOf="parent"**

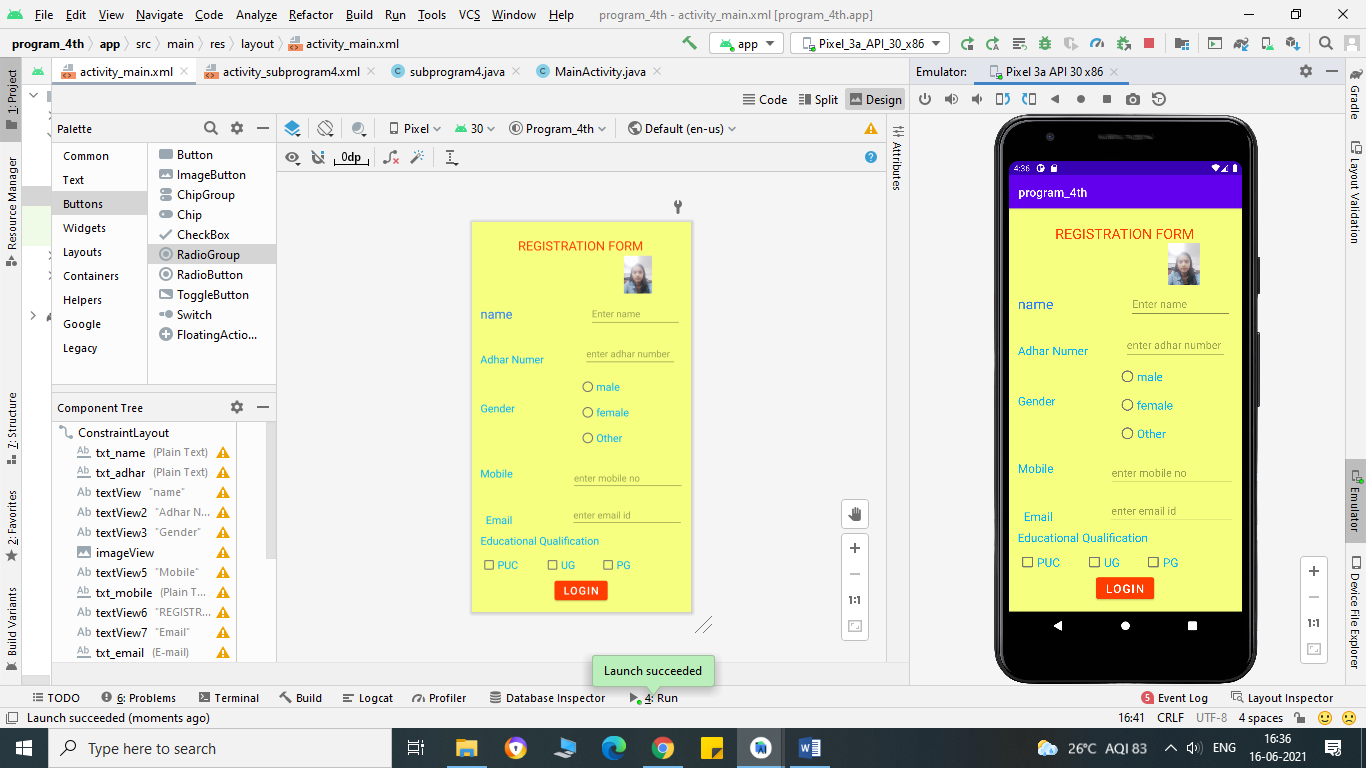
**app:layout\_constraintStart\_toStartOf="parent"**

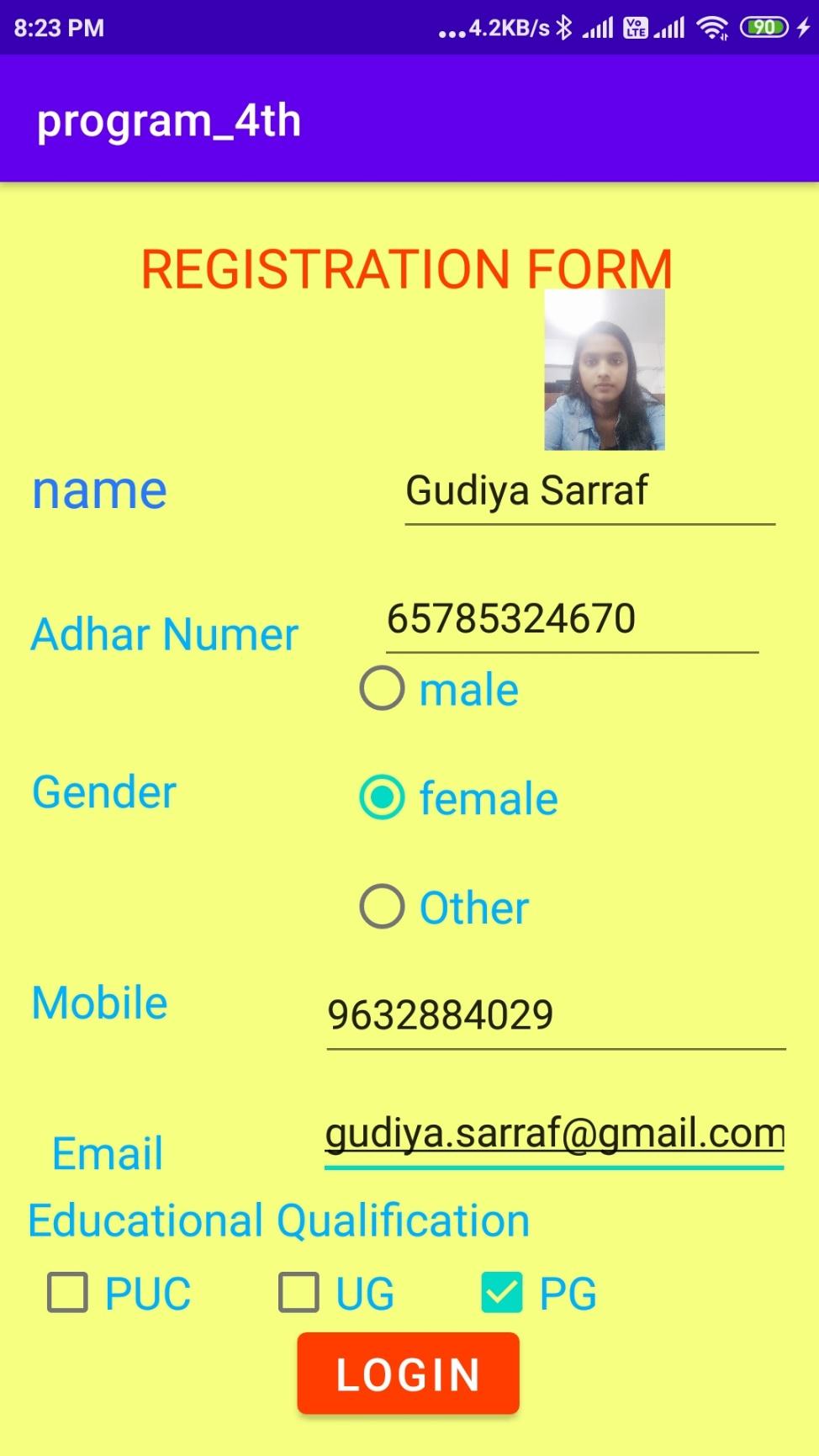
**app:layout\_constraintTop\_toTopOf="parent"**

**app:layout\_constraintVertical\_bias="0.052"** />

</**androidx.constraintlayout.widget.ConstraintLayout**>

**output**







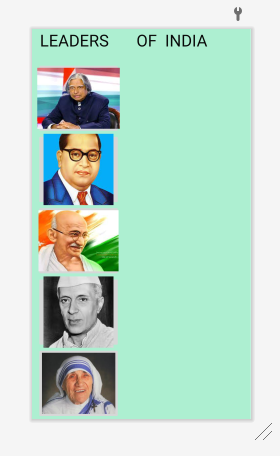
**5. Create an activity and display the images of five great leaders of india on the left  
side and add required fragments to display the contents related to the  
respective leader in the right side on a click operation.**

**MainActivity.java**

**package** com.example.leadersofindia;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.fragment.app.Fragment;  
**import** androidx.fragment.app.FragmentManager;  
**import** androidx.fragment.app.FragmentTransaction;  
  
**import** android.os.Bundle;  
**import** android.view.View;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 }  
 **public void** changefragment(View view){  
 Fragment fragment;  
  
 **if**(view==findViewById(R.id.***Btn1***))  
 {  
 fragment = **new** FragmentOne();  
 FragmentManager fm = getSupportFragmentManager();  
 FragmentTransaction ft = fm.beginTransaction();  
 ft.replace(R.id.***Right\_fragment***, fragment);  
 ft.addToBackStack(**null**);  
 ft.commit();  
 }**else if**(view == findViewById(R.id.***Btn2***)){  
 fragment = **new** FragmentTwo();  
 FragmentManager fm = getSupportFragmentManager();  
 FragmentTransaction ft = fm.beginTransaction();  
 ft.replace(R.id.***Right\_fragment***, fragment);  
 ft.addToBackStack(**null**);  
 ft.commit();  
 }**else if**(view==findViewById(R.id.***Btn3***)){  
 fragment = **new** FragmentThree();  
 FragmentManager fm = getSupportFragmentManager();  
 FragmentTransaction ft = fm.beginTransaction();  
 ft.replace(R.id.***Right\_fragment***, fragment);  
 ft.addToBackStack(**null**);  
 ft.commit();  
 }**else if**(view == findViewById(R.id.***Btn4***)){  
 fragment = **new** FragmentFour();  
 FragmentManager fm = getSupportFragmentManager();  
 FragmentTransaction ft = fm.beginTransaction();  
 ft.replace(R.id.***Right\_fragment***, fragment);  
 ft.addToBackStack(**null**);  
 ft.commit();  
 }**else if**(view == findViewById(R.id.***Btn5***)){  
 fragment = **new** FragmentFive();  
 FragmentManager fm = getSupportFragmentManager();  
 FragmentTransaction ft = fm.beginTransaction();  
 ft.replace(R.id.***Right\_fragment***, fragment);  
 ft.addToBackStack(**null**);  
 ft.commit();  
 }  
 }  
}

**activity\_main.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout 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"**>  
  
 <**fragment  
 android:id="@+id/LeftFragment"  
 android:name="com.example.leadersofindia.LeftFragment"  
 android:layout\_width="176dp"  
 android:layout\_height="match\_parent"  
 tools:layout="@layout/fragment\_left"**>  
  
 </**fragment**>  
  
 <**fragment  
 android:id="@+id/Right\_fragment"  
 android:name="com.example.leadersofindia.RightFragment"  
 android:layout\_width="235dp"  
 android:layout\_height="match\_parent"  
 tools:layout="@layout/fragment\_right"**>  
  
 </**fragment**>  
  
</**LinearLayout**>



**LeftFragment.java**

**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
  
**import** androidx.fragment.app.Fragment;  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
  
  
**public class** LeftFragment **extends** Fragment{  
  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 View view = inflater.inflate(R.layout.***fragment\_left***, container, **false**);  
 **return** view;  
 }  
  
}

**fragment\_left.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout 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"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 tools:context=".LeftFragment"**>  
  
 <**TextView  
 android:id="@+id/textView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="10dp"  
 android:layout\_marginLeft="15dp"  
 android:layout\_weight="1"  
 android:text="leaders"  
 android:textAllCaps="true"  
 android:textColor="#070707"  
 android:textSize="31sp"** />  
  
 <**ImageButton  
 android:id="@+id/Btn1"  
 android:layout\_width="155dp"  
 android:layout\_height="80dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_weight="1"  
 android:scaleType="centerCrop"  
 android:src="@drawable/abdul"  
 android:onClick="changefragment"  
 android:text="Button"  
 tools:ignore="OnClick"** />  
  
 <**ImageButton  
 android:id="@+id/Btn2"  
 android:layout\_width="155dp"  
 android:layout\_height="80dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_weight="1"  
 android:scaleType="centerCrop"  
 android:src="@drawable/bhimrao"  
 android:onClick="changefragment"  
 tools:ignore="OnClick"** />  
  
 <**ImageButton  
 android:id="@+id/Btn3"  
 android:layout\_width="155dp"  
 android:layout\_height="80dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_weight="1"  
 android:scaleType="centerCrop"  
 android:src="@drawable/gandhi"  
 android:onClick="changefragment"  
 tools:ignore="OnClick"** />  
  
 <**ImageButton  
 android:id="@+id/Btn4"  
 android:layout\_width="155dp"  
 android:layout\_height="80dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_weight="1"  
 android:scaleType="centerCrop"  
 android:src="@drawable/jawahar"  
 android:onClick="changefragment"  
 tools:ignore="OnClick"** />  
  
 <**ImageButton  
 android:id="@+id/Btn5"  
 android:layout\_width="155dp"  
 android:layout\_height="80dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_weight="1"  
 android:scaleType="centerCrop"  
 android:src="@drawable/terasa"  
 android:onClick="changefragment"  
 tools:ignore="OnClick"** />  
  
</**LinearLayout**>

**RightFragment.java**

**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
  
**import** androidx.fragment.app.Fragment;  
  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
  
  
**public class** RightFragment **extends** Fragment {  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* **return** inflater.inflate(R.layout.***fragment\_right***, container, **false**);  
 }  
}

fragment\_right.xml

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 tools:context=".RightFragment"**>  
  
 <**TextView  
 android:id="@+id/textView2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="20dp"  
 android:text="OF INDIA"  
 android:textColor="#070707"  
 android:textSize="31sp"** />  
  
</**LinearLayout**>

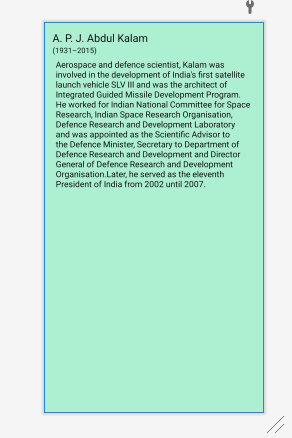


**FragmentOne.java**

**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
  
**import** androidx.fragment.app.Fragment;  
  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
  
  
**public class** FragmentOne **extends** Fragment {  
  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* **return** inflater.inflate(R.layout.***fragment\_one***, container, **false**);  
 }  
}

**Fragment\_one.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".FragmentOne"**>  
  
 <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
  
 android:text="A. P. J. Abdul Kalam"  
 android:textColor="#070707"  
 android:textSize="20sp"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="(1931–2015)"  
  
 android:textColor="#070707"  
 android:textSize="14sp"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="6dp"  
 android:text="Aerospace and defence scientist, Kalam was involved in the development of India's first satellite launch vehicle SLV III and was the architect of Integrated Guided Missile Development Program. He worked for Indian National Committee for Space Research, Indian Space Research Organisation, Defence Research and Development Laboratory and was appointed as the Scientific Advisor to the Defence Minister, Secretary to Department of Defence Research and Development and Director General of Defence Research and Development Organisation.Later, he served as the eleventh President of India from 2002 until 2007."  
 android:textColor="#070707"  
 android:textSize="16sp"** />  
  
</**LinearLayout**>

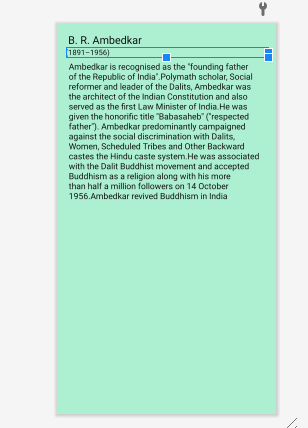


**FragmentTwo.java**

**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
  
**import** androidx.fragment.app.Fragment;  
  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
  
**public class** FragmentTwo **extends** Fragment {  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* **return** inflater.inflate(R.layout.***fragment\_two***, container, **false**);  
 }  
}

**fragment\_two.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".FragmentTwo"**>  
  
 <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text=" B. R. Ambedkar "  
 android:textColor="#070707"  
 android:textSize="20sp"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="(1891–1956)"  
 android:textColor="#070707"  
 android:textSize="14sp"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="6dp"  
 android:text='Ambedkar is recognised as the "founding father of the Republic of India".Polymath scholar, Social reformer and leader of the Dalits, Ambedkar was the architect of the Indian Constitution and also served as the first Law Minister of India.He was given the honorific title "Babasaheb" ("respected father"). Ambedkar predominantly campaigned against the social discrimination with Dalits, Women, Scheduled Tribes and Other Backward castes the Hindu caste system.He was associated with the Dalit Buddhist movement and accepted Buddhism as a religion along with his more than half a million followers on 14 October 1956.Ambedkar revived Buddhism in India'  
 android:textColor="#070707"  
 android:textSize="16sp"** />  
  
</**LinearLayout**>

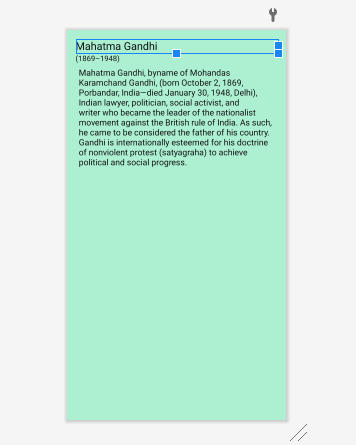


**FragmentThree.java**

**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
  
**import** androidx.fragment.app.Fragment;  
  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
  
  
**public class** FragmentThree **extends** Fragment {  
  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* **return** inflater.inflate(R.layout.***fragment\_three***, container, **false**);  
 }  
}

**Fragment\_three.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".FragmentThree"**>  
  
 *<!--* ***TODO: Update blank fragment layout*** *-->* <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Mahatma Gandhi"  
  
 android:textColor="#070707"  
 android:textSize="20sp"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
  
 android:text="(1869–1948)"  
  
 android:textColor="#070707"  
 android:textSize="14sp"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="6dp"  
 android:text="Mahatma Gandhi, byname of Mohandas Karamchand Gandhi, (born October 2, 1869, Porbandar, India—died January 30, 1948, Delhi), Indian lawyer, politician, social activist, and writer who became the leader of the nationalist movement against the British rule of India. As such, he came to be considered the father of his country. Gandhi is internationally esteemed for his doctrine of nonviolent protest (satyagraha) to achieve political and social progress."  
 android:textColor="#070707"  
 android:textSize="16sp"** />  
  
</**LinearLayout**>

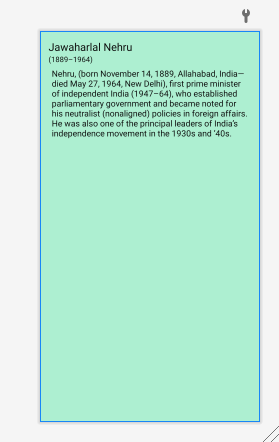


**FragmentFour.java**

**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
**import** androidx.fragment.app.Fragment;  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
**public class** FragmentFour **extends** Fragment {  
  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* **return** inflater.inflate(R.layout.***fragment\_four***, container, **false**);  
 }  
}

**Fragment\_four.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".FragmentFour"**>  
  
 *<!--* ***TODO: Update blank fragment layout*** *-->* <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Jawaharlal Nehru "  
 android:textColor="#070707"  
 android:textSize="20sp"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
  
 android:text="(1889–1964)"  
 android:textColor="#070707"  
 android:textSize="14sp"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="376dp"  
 android:layout\_height="225dp"  
 android:layout\_margin="6dp"  
 android:text="Nehru, (born November 14, 1889, Allahabad, India—died May 27, 1964, New Delhi), first prime minister of independent India (1947–64), who established parliamentary government and became noted for his neutralist (nonaligned) policies in foreign affairs. He was also one of the principal leaders of India’s independence movement in the 1930s and ’40s."  
 android:textColor="#070707"  
 android:textSize="16sp"** />  
  
</**LinearLayout**>

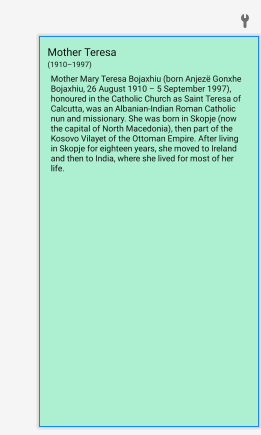


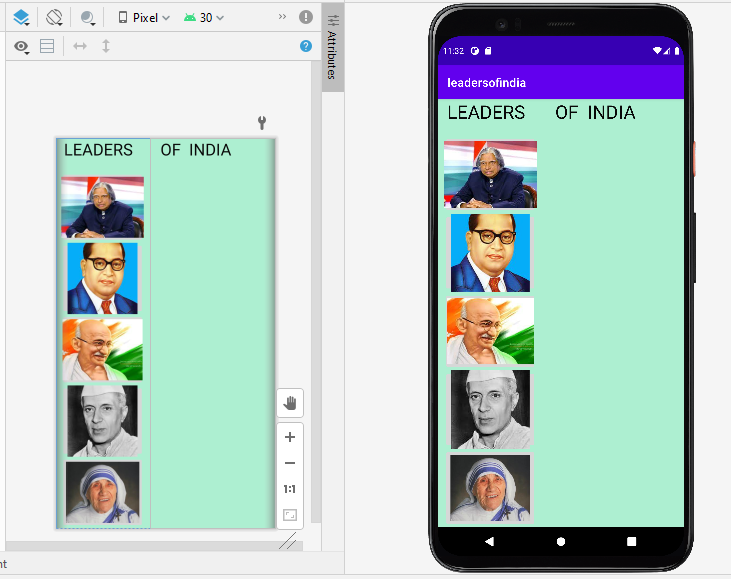
**Fragmet\_five.java**

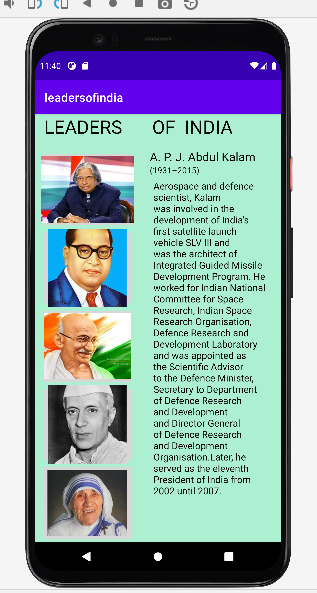
**package** com.example.leadersofindia;  
  
**import** android.os.Bundle;  
**import** androidx.fragment.app.Fragment;  
**import** android.view.LayoutInflater;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
  
**public class** FragmentFive **extends** Fragment {  
 @Override  
 **public** View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* **return** inflater.inflate(R.layout.***fragment\_five***, container, **false**);  
 }}

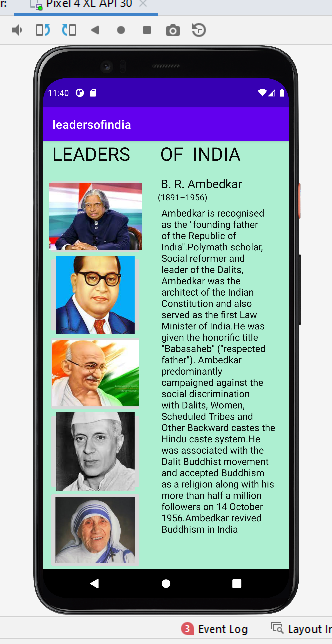
**fragment\_five.xml**

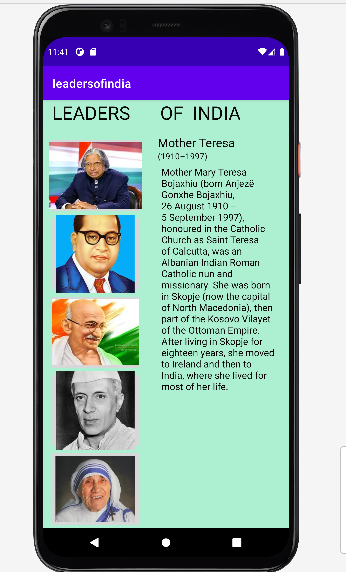
*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#ADEFD1"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".FragmentFive"**>  
  
 <**TextView  
 android:id="@+id/textView5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Mother Teresa"  
 android:textColor="#070707"  
 android:textSize="20sp"** />  
  
 <**TextView  
 android:id="@+id/textView6"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="(1910–1997)"  
 android:textColor="#070707"  
 android:textSize="14sp"** />  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="6dp"  
 android:text="Mother Mary Teresa Bojaxhiu (born Anjezë Gonxhe Bojaxhiu, 26 August 1910 – 5 September 1997), honoured in the Catholic Church as Saint Teresa of Calcutta, was an Albanian-Indian Roman Catholic nun and missionary. She was born in Skopje (now the capital of North Macedonia), then part of the Kosovo Vilayet of the Ottoman Empire. After living in Skopje for eighteen years, she moved to Ireland and then to India, where she lived for most of her life."  
 android:textColor="#070707"  
 android:textSize="16sp"** />  
</**LinearLayout**>











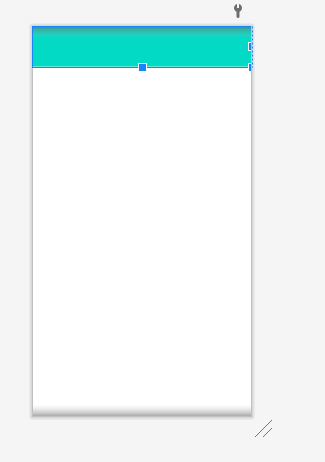
**6. Create a toolbar and add atleast three icons as  menu items on it. Display a message when you click on the icons.**

**mainActivity.java**

**package** com.example.toolbar\_pgm;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.appcompat.widget.Toolbar;  
  
**import** android.os.Bundle;  
**import** android.view.Menu;  
**import** android.view.MenuInflater;  
**import** android.view.MenuItem;  
**import** android.widget.Toast;  
  
**public class** MainActivity **extends** AppCompatActivity {  
 **private** Toolbar **toolbar**;  
  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **toolbar** = findViewById(R.id.***toolbar***);  
 setSupportActionBar(**toolbar**);  
   
 }  
  
  
 @Override  
 **public boolean** onCreateOptionsMenu(Menu menu) {  
 MenuInflater menuInflater = getMenuInflater();  
 menuInflater.inflate(R.menu.***tool\_bar***, menu);  
 **return true**;  
 }  
  
 @Override  
 **public boolean** onOptionsItemSelected(@NonNull MenuItem item) {  
  
  
 **switch** (item.getItemId()) {  
 **case** R.id.***action\_call***:  
 Toast.*makeText*(**this**, **"U have clicked call"**, Toast.***LENGTH\_LONG***).show();  
 **return true**;  
 **case** R.id.***action\_location***:  
 Toast.*makeText*(**this**, **"U have clicked location"**, Toast.***LENGTH\_LONG***).show();  
 **return true**;  
 **case** R.id.***action\_settings***:  
 Toast.*makeText*(**this**, **"u have clicked settings"**, Toast.***LENGTH\_LONG***).show();  
 **return true**;  
 **default**:  
 **return super**.onOptionsItemSelected(item);  
  
  
 }  
  
 }  
}

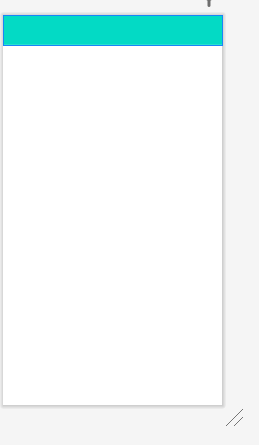
**mainactivity.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout  
 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"  
 android:orientation="vertical"** >  
 <**include  
 android:id="@+id/toolbar"  
 layout="@layout/toolbar"  
 android:layout\_width="413dp"  
 android:layout\_height="76dp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 tools:layout\_editor\_absoluteY="0dp"** />  
  
  
</**LinearLayout**>



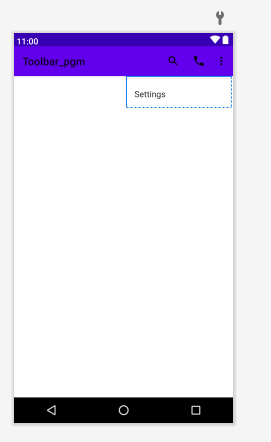
**Toolbar.xml**

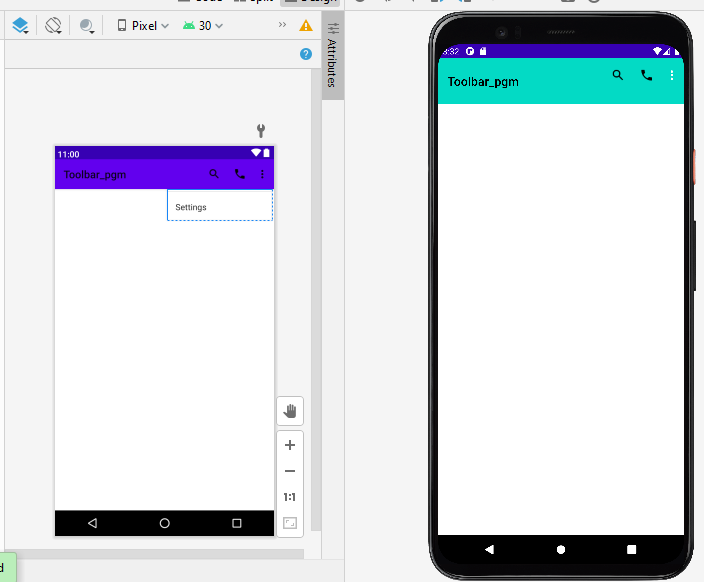
*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.appcompat.widget.Toolbar xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="?attr/actionBarSize"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:background="?attr/colorControlActivated"  
 android:theme="@style/ThemeOverlay.AppCompat.Dark.ActionBar"  
 app:popupTheme="@style/ThemeOverlay.AppCompat.Light"  
 app:titleTextColor="@color/black"  
 android:id="@+id/toolbar"**>  
  
</**androidx.appcompat.widget.Toolbar**>

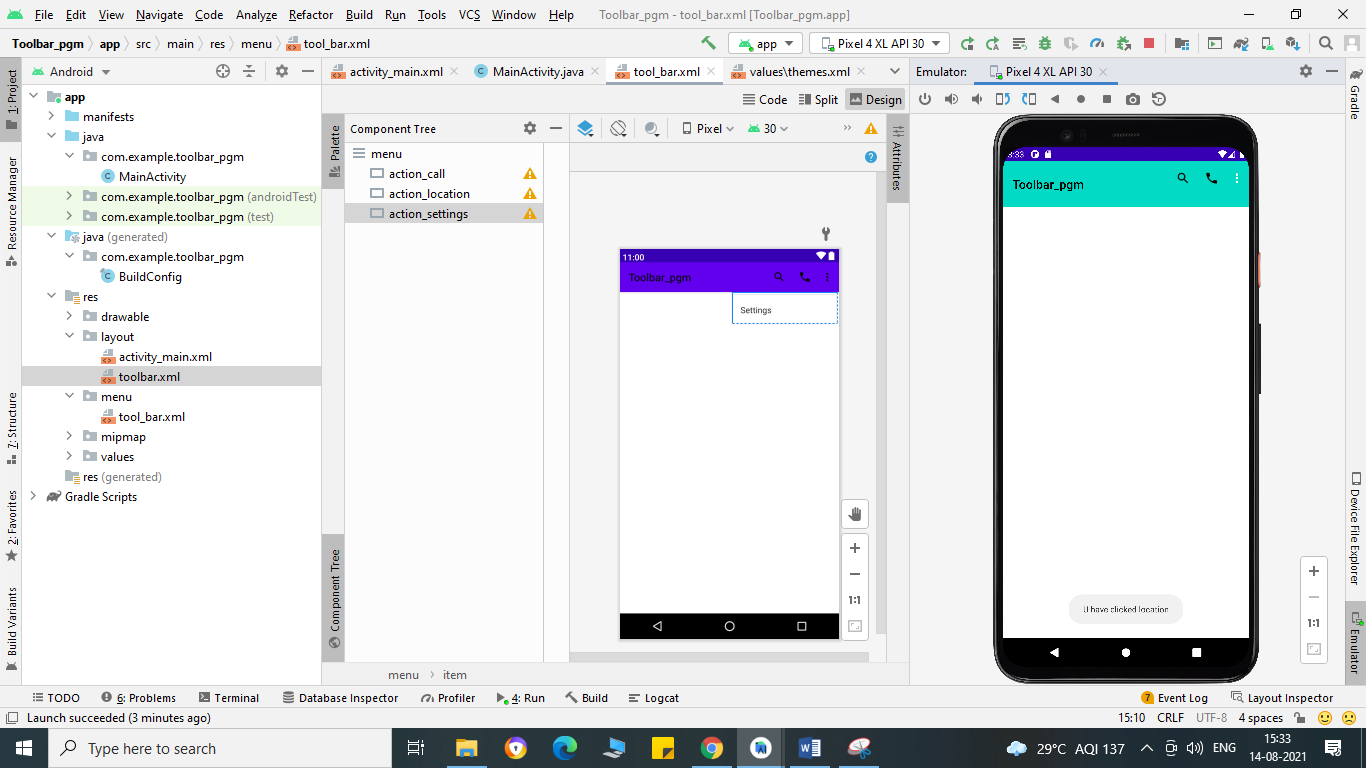


**Tool\_bar.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**menu  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"** >  
 <**item  
 android:id="@+id/action\_call"  
 android:title="Call"  
 android:icon="@mipmap/search"  
 app:showAsAction="ifRoom"**/>  
 <**item android:id="@+id/action\_location"  
 android:icon="@mipmap/phone"  
 android:title="Location"  
 app:showAsAction="ifRoom"**/>  
 <**item  
 android:id="@+id/action\_settings"  
 android:title="Settings"  
 app:showAsAction="never"**/>  
  
  
  
</**menu**>







7.  Create a listview in the activity and add five items and also write the code to navigate to the respective activity of each item(create any two activities).

**mainActivity.java**

**package** com.example.listview\_tri\_program;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.AdapterView;  
**import** android.widget.ArrayAdapter;  
**import** android.widget.ListView;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**public class** MainActivity **extends** AppCompatActivity {  
 ListView **listView**;  
  
 ArrayAdapter<String>**adapter**;  
  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 **listView**=(ListView)findViewById(R.id.***listview***);  
  
 TextView textView=(TextView)findViewById(R.id.***textView***);  
  
 String[] countries={**"india"**,**"USA"**,**"china"**,**"pakistan"**,**"koria"**,**"japan"**};  
  
  
 **adapter**=**new** ArrayAdapter<String>(**this**,R.layout.***row\_item***,R.id.***textView***,countries);  
  
 **listView**.setAdapter(**adapter**);  
  
 **listView**.setOnItemClickListener(**new** AdapterView.OnItemClickListener() {  
 @Override  
 **public void** onItemClick(AdapterView<?> parent, View view, **int** position, **long** id) {  
 **if** (position == 0) {  
 Intent anotherActivity = **new** Intent(view.getContext(), MainActivity2.**class**);  
 startActivity(anotherActivity);  
 }  
 **if** (position == 1) {  
 Intent anotherActivity = **new** Intent(view.getContext(), MainActivity3.**class**);  
 startActivity(anotherActivity);  
 }  
 }  
  
 });  
 }  
}

**activitymain.xml**

*<?***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"**>  
<**ListView  
 android:id="@+id/listview"  
 android:layout\_width="300dp"  
 android:layout\_height="690dp"  
 android:background="#4D00E5FF"  
 android:divider="#ff00"  
 android:dividerHeight="2dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

**row\_item.xml**

*<?***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"**>  
  
 <**TextView  
 android:id="@+id/textView"  
 android:layout\_width="152dp"  
 android:layout\_height="72dp"  
 android:text="TextView"  
 android:textColor="#F50057"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.498"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.471"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>

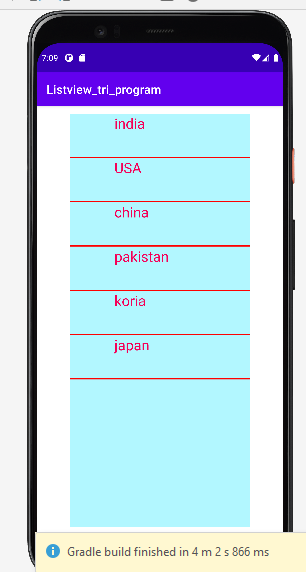
**activityMain2.xml**

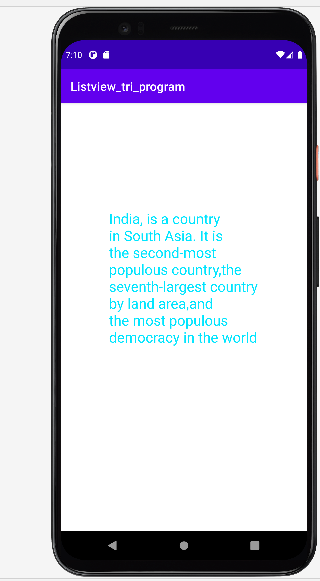
*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity2"**>  
  
 <**TextView  
 android:id="@+id/textView2"  
 android:layout\_width="250dp"  
 android:layout\_height="336dp"  
 android:text="India, is a country in South Asia. It is the second-most populous country,the seventh-largest country by land area,and the most populous democracy in the world"  
 android:textColor="#00E5FF"  
 android:textColorLink="#FF1744"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.498"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.466"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>

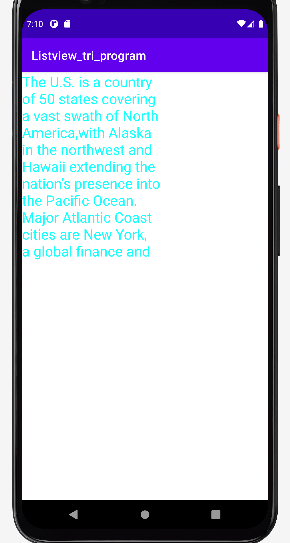
**activityMain3.xml**

*<?***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=".MainActivity3"**>  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="249dp"  
 android:layout\_height="319dp"  
 android:text="The U.S. is a country of 50 states covering a vast swath of North America,with Alaska in the northwest and Hawaii extending the nation’s presence into the Pacific Ocean. Major Atlantic Coast cities are New York, a global finance and culture center, and capital Washington, DC."  
 android:textColor="#18FFFF"  
 android:textSize="24sp"  
 tools:layout\_editor\_absoluteX="77dp"  
 tools:layout\_editor\_absoluteY="177dp"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>

Output:-







**8. Create a database as library, tablename as Bookdetails and add the following   fields: Bookid, Bookname and price. Perform CRUD operations using sqliteopenhelper class.**

**mainActivity.java**

package com.example.program8\_db;  
  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.database.Cursor;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 EditText name,contact,dob;  
 Button add,update,delete,view;  
 DBHELper DB;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 name=findViewById(R.id.*edit\_name*);  
 contact=findViewById(R.id.*edit\_contact*);  
 dob=findViewById(R.id.*edit\_dob*);  
 add=findViewById(R.id.*btn\_add1*);  
  
 update=findViewById(R.id.*btn\_update1*);  
 delete=findViewById(R.id.*btn\_delete1*);  
 view=findViewById(R.id.*btn\_view1*);  
 DB=new DBHELper(this);  
  
 add.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String nameTXT=name.getText().toString();  
 String contactTXT=contact.getText().toString();  
 String dobTXT=dob.getText().toString();  
  
 Boolean checkinsertdata=DB.insertdata(nameTXT,contactTXT,dobTXT);  
 if(checkinsertdata==true)  
 Toast.*makeText*(MainActivity.this, "new entry inserted", Toast.*LENGTH\_SHORT*).show();  
 else  
 Toast.*makeText*(MainActivity.this, "not inserted", Toast.*LENGTH\_SHORT*).show();  
  
 }  
 });  
  
 update.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String nameTXT=name.getText().toString();  
 String contactTXT=contact.getText().toString();  
 String dobTXT=dob.getText().toString();  
  
 Boolean checkupdatedata=DB.updateuserdata(nameTXT,contactTXT,dobTXT);  
 if(checkupdatedata==true)  
 Toast.*makeText*(MainActivity.this, "entry updated", Toast.*LENGTH\_SHORT*).show();  
 else  
 Toast.*makeText*(MainActivity.this, "not updated", Toast.*LENGTH\_SHORT*).show();  
  
 }  
 });  
  
 delete.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String nameTXT=name.getText().toString();  
  
 Boolean checkdeletedata=DB.deletedata(nameTXT);  
 if(checkdeletedata==true)  
 Toast.*makeText*(MainActivity.this, "entry deleted", Toast.*LENGTH\_SHORT*).show();  
 else  
 Toast.*makeText*(MainActivity.this, "not deleted", Toast.*LENGTH\_SHORT*).show();  
  
 }  
 });  
  
 view.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 Cursor res=DB.getdata();  
 if (res.getCount()==0){  
 Toast.*makeText*(MainActivity.this, "no entry exists", Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 StringBuffer buffer=new StringBuffer();  
 while (res.moveToNext())  
 {  
 buffer.append("name::"+res.getString(0)+"\n");  
 buffer.append("contact::"+res.getString(1)+"\n");  
 buffer.append("Date Of Birth::"+res.getString(2)+"\n\n");  
  
 }  
  
 AlertDialog.Builder builder=new AlertDialog.Builder(MainActivity.this);  
 builder.setCancelable(true);  
 builder.setTitle("user entries");  
 builder.setMessage(buffer.toString());  
 builder.show();  
 }  
 });  
 }  
}

**activitymain.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout 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/textView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Please enter all the details below"  
 android:textSize="25dp"  
 android:layout\_marginTop="@android:dimen/app\_icon\_size"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.569"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.086" />  
  
 <EditText  
 android:id="@+id/edit\_name"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/textView"  
 android:ems="10"  
 android:hint="enter name"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.267"  
 tools:ignore="UnknownId" />  
  
 <EditText  
 android:id="@+id/edit\_contact"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/edit\_name"  
 android:ems="20"  
 android:hint="enter contact no"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.552"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.389" />  
  
 <EditText  
 android:id="@+id/edit\_dob"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/edit\_contact"  
 android:ems="10"  
 android:hint="enter dob"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <Button  
 android:id="@+id/btn\_add1"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/edit\_dob"  
 android:text="add data "  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.425"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.65" />  
  
 <Button  
 android:id="@+id/btn\_update1"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/btn\_add1"  
 android:text="update data"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.375"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.771" />  
  
 <Button  
 android:id="@+id/btn\_delete1"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/btn\_update1"  
  
 android:text="delete existing data"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.425"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.868" />  
  
 <Button  
 android:id="@+id/btn\_view1"  
 android:layout\_width="315dp"  
 android:layout\_height="60dp"  
 android:layout\_below="@+id/btn\_delete1"  
 android:layout\_marginTop="5dp"  
 android:text="view data"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.425"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.976" />  
</RelativeLayout>

**DBHelper**

package com.example.program8\_db;  
  
import android.content.ContentValues;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
  
import androidx.annotation.Nullable;  
  
public class DBHELper extends SQLiteOpenHelper {  
 public DBHELper(Context context) {  
 super(context, "userdata.db", null, 1);  
 }  
  
 @Override  
 public void onCreate(SQLiteDatabase DB) {  
 DB.execSQL("create table userdetails(name text primary key,contact Text,dob text)");  
  
 }  
  
 @Override  
 public void onUpgrade(SQLiteDatabase DB, int i, int i1) {  
 DB.execSQL("drop table if exists userdetails");  
  
 }  
  
 public Boolean insertdata(String name, String contact, String dob) {  
 SQLiteDatabase DB = this.getWritableDatabase();  
 ContentValues contentValues = new ContentValues();  
 contentValues.put("name", name);  
 contentValues.put("contact", contact);  
 contentValues.put("dob", dob);  
 long result = DB.insert("userdetails", null, contentValues);  
 if (result == -1) {  
 return false;  
 } else {  
 return true;  
 }  
 }  
  
 public Boolean updateuserdata(String name, String contact, String dob) {  
 SQLiteDatabase DB = this.getWritableDatabase();  
 ContentValues contentValues = new ContentValues();  
 contentValues.put("name", name);  
 contentValues.put("contact", contact);  
 contentValues.put("dob", dob);  
 Cursor cursor = DB.rawQuery("select \* from userdetails where name=? ", new String[]{name});  
 if (cursor.getCount() > 0) {  
 long result = DB.update("userdetails", contentValues, "name=?", new String[]{name});  
  
 if (result == -1) {  
 return false;  
 } else {  
 return true;  
 }  
 }  
 else {  
 return false;  
 }  
 }  
  
 public Boolean deletedata(String name) {  
 SQLiteDatabase DB = this.getWritableDatabase();  
 Cursor cursor = DB.rawQuery("select \* from userdetails where name=? ", new String[]{name});  
 if (cursor.getCount() > 0) {  
 long result = DB.delete("userdetails","name=?", new String[]{name});  
  
 if (result == -1) {  
 return false;  
 } else {  
 return true;  
 }  
 }  
 else {  
 return false;  
 }  
 }  
  
 public Cursor getdata() {  
 SQLiteDatabase DB = this.getWritableDatabase();  
 Cursor cursor = DB.rawQuery("select \* from userdetails",null);  
 return cursor;  
  
 }  
}

**Output:-**

