Q1: activit\_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="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Sign In"  
 android:textSize="30dp"  
 android:textStyle="normal"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.173" />  
  
 <TextView  
 android:id="@+id/textView2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="40dp"  
 android:text="E-mail address"  
 android:textSize="20sp"  
 app:layout\_constraintBottom\_toTopOf="@+id/button"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.133"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView"  
 app:layout\_constraintVertical\_bias="0.0" />  
  
 <EditText  
 android:id="@+id/editTextTextPersonName"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toTopOf="@+id/button"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.625"  
 app:layout\_constraintStart\_toEndOf="@+id/textView2"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView"  
 app:layout\_constraintVertical\_bias="0.233" />  
  
 <TextView  
 android:id="@+id/textView3"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Password"  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/button"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.114"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView2" />  
  
 <EditText  
 android:id="@+id/editTextTextPersonName2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toTopOf="@+id/button"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.786"  
 app:layout\_constraintStart\_toEndOf="@+id/textView3"  
 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName" />  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Sign In"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
</androidx.constraintlayout.widget.ConstraintLayout>

Q2:

Activity\_calc.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=".Calc">  
  
 <TextView  
 android:id="@+id/textView4"  
 android:layout\_width="46dp"  
 android:layout\_height="40dp"  
 android:text="From:"  
 app:autoSizeTextType="uniform"  
 app:layout\_constraintBottom\_toTopOf="@+id/textView5"  
 app:layout\_constraintEnd\_toStartOf="@+id/from"  
 app:layout\_constraintHorizontal\_bias="0.425"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.789" />  
  
 <EditText  
 android:id="@+id/from"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="76dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.234" />  
  
 <TextView  
 android:id="@+id/textView5"  
 android:layout\_width="40dp"  
 android:layout\_height="22dp"  
 android:layout\_marginStart="40dp"  
 android:text="To:"  
 app:autoSizeTextType="uniform"  
 app:layout\_constraintBottom\_toTopOf="@+id/textView6"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.697" />  
  
 <EditText  
 android:id="@+id/to"  
 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="0.407"  
 app:layout\_constraintStart\_toEndOf="@+id/textView5"  
 app:layout\_constraintTop\_toBottomOf="@+id/from"  
 app:layout\_constraintVertical\_bias="0.062" />  
  
 <Button  
 android:id="@+id/conv"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Convert"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.403"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/to"  
 app:layout\_constraintVertical\_bias="0.095" />  
  
 <Button  
 android:id="@+id/clr"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Clear"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.749"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/to"  
 app:layout\_constraintVertical\_bias="0.095" />  
  
 <TextView  
 android:id="@+id/textView6"  
 android:layout\_width="60dp"  
 android:layout\_height="52dp"  
 android:text="Result"  
 app:autoSizeTextType="uniform"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.096"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.571" />  
  
 <TextView  
 android:id="@+id/res"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 tools:layout\_editor\_absoluteX="130dp"  
 tools:layout\_editor\_absoluteY="390dp" />  
</androidx.constraintlayout.widget.ConstraintLayout>

**Calc.java**package com.example.login\_form;  
  
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 Calc extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_calc);  
  
  
 EditText from, to;  
 Button convert, cls;  
 TextView result;  
 result = findViewById(R.id.res);  
  
 from = (EditText) findViewById(R.id.from);  
 to = (EditText) findViewById(R.id.to);  
  
 convert = (Button) findViewById(R.id.conv);  
 cls = (Button) findViewById(R.id.clr);  
  
  
 convert.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String res = Integer.toString((int) (Integer.parseInt(from.getText().toString()) \* 1.609344));  
 result.setText(res);  
 }  
 });  
  
 cls.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 result.setText("");  
 from.setText("");  
 to.setText("");  
 }  
 });  
 }  
}

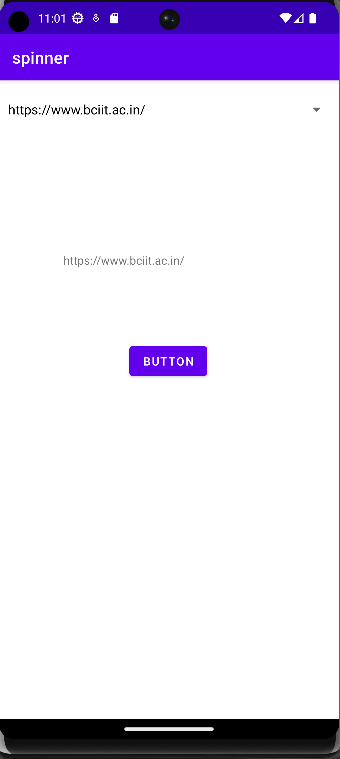
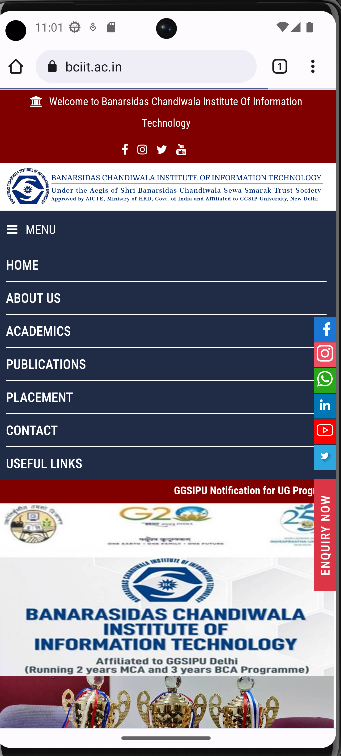
**SPINNER**

**MainActivity.java**

package com.example.spinner;  
  
import android.content.Intent;  
import android.net.Uri;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.ArrayAdapter;  
import android.widget.Spinner;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.widget.TextView;  
import android.widget.Toast;  
  
  
public class MainActivity extends AppCompatActivity {  
 final String urls[]={"https://www.bciit.ac.in/",  
 "https://www.facebook.com/",  
 "https://www.youtube.com/",  
 "https://www.instagram.com/accounts/login/?hl=en",  
 "https://accounts.snapchat.com/accounts/v2/login",  
 "https://web.whatsapp.com/"};  
 TextView selectedItemTextView;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 selectedItemTextView=(TextView)findViewById(R.id.*textView*);  
  
 Spinner spin=(Spinner)findViewById(R.id.*spinner*);  
 ArrayAdapter<String>adapter=new ArrayAdapter<String>(  
 this, android.R.layout.*simple\_spinner\_dropdown\_item*, urls  
 );  
 spin.setAdapter(adapter);  
 spin.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {  
 @Override  
 public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {  
 Toast.*makeText*(MainActivity.this,  
 "Selected Url: " + urls[i],  
 Toast.*LENGTH\_SHORT*).show();  
 selectedItemTextView.setText(urls[i]);  
 }  
  
 @Override  
 public void onNothingSelected(AdapterView<?> adapterView) {  
 Toast.*makeText*(MainActivity.this, "No Selected User",  
 Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
 }  
 public void Go\_URL(View view){  
 String url=selectedItemTextView.getText().toString();  
 Intent intent=new Intent(Intent.*ACTION\_VIEW*);  
 intent.setData(Uri.*parse*(url));  
 startActivity(intent);  
 }  
}

**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">  
  
 <Spinner  
 android:id="@+id/spinner"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 android:layout\_marginStart="3dp"  
 android:layout\_marginTop="3dp"  
 android:layout\_marginEnd="3dp"  
 android:layout\_marginBottom="141dp"  
 app:layout\_constraintBottom\_toTopOf="@+id/textView"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="32dp"  
 android:layout\_marginBottom="409dp"  
 android:text="Button"  
 android:onClick="Go\_URL"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="@+id/textView"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView" />  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="206dp"  
 android:layout\_height="0dp"  
 android:layout\_marginStart="78dp"  
 android:layout\_marginBottom="44dp"  
 android:text="TextView"  
 app:layout\_constraintBottom\_toTopOf="@+id/button"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/spinner" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

** **

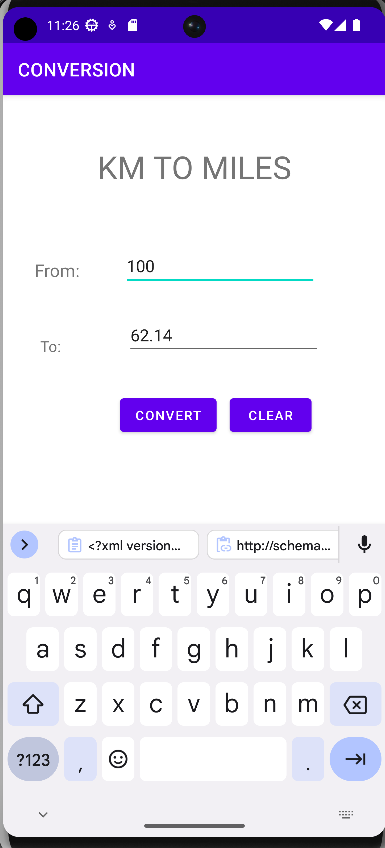
**CM TO INCH**

**MainActivity.java**

package com.example.conversion;  
  
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 {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
  
 EditText from, to;  
 Button convert, cls;  
 TextView result;  
  
 from = (EditText) findViewById(R.id.*from*);  
 to = (EditText) findViewById(R.id.*to*);  
  
 convert = (Button) findViewById(R.id.*conv*);  
 cls = (Button) findViewById(R.id.*clr*);  
  
  
  
  
 cls.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 from.setText("");  
 to.setText("");  
 }  
 });  
  
 convert.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 // Get the value from the 'From' field  
 double kmValue = Double.*parseDouble*(from.getText().toString());  
  
 // Convert km to miles (1 mile = 1.60934 km)  
 double mileValue = kmValue / 1.60934;  
  
 // Display the result in the 'To' field  
 to.setText(String.*format*("%.2f", mileValue));  
 }  
 });  
  
 }  
}

**main-activity.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/textView4"  
 android:layout\_width="0dp"  
 android:layout\_height="40dp"  
 android:layout\_marginStart="34dp"  
 android:layout\_marginTop="68dp"  
 android:layout\_marginEnd="46dp"  
 android:layout\_marginBottom="65dp"  
 android:text="From:"  
 app:autoSizeTextType="uniform"  
 app:layout\_constraintBottom\_toBottomOf="@+id/textView5"  
 app:layout\_constraintEnd\_toStartOf="@+id/from"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView" />  
  
 <EditText  
 android:id="@+id/from"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="74dp"  
 android:layout\_marginBottom="29dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintBottom\_toTopOf="@+id/to"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toEndOf="@+id/textView4" />  
  
 <TextView  
 android:id="@+id/textView5"  
 android:layout\_width="0dp"  
 android:layout\_height="22dp"  
 android:layout\_marginStart="40dp"  
 android:layout\_marginEnd="50dp"  
 android:text="To:"  
 app:autoSizeTextType="uniform"  
 app:layout\_constraintBottom\_toBottomOf="@+id/to"  
 app:layout\_constraintEnd\_toStartOf="@+id/to"  
 app:layout\_constraintStart\_toStartOf="parent" />  
  
 <EditText  
 android:id="@+id/to"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="235dp"  
 android:layout\_marginEnd="70dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toEndOf="@+id/textView5"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <Button  
 android:id="@+id/conv"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="39dp"  
 android:layout\_marginEnd="14dp"  
 android:text="Convert"  
 app:layout\_constraintEnd\_toStartOf="@+id/clr"  
 app:layout\_constraintTop\_toBottomOf="@+id/to" />  
  
 <Button  
 android:id="@+id/clr"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="10dp"  
 android:text="Clear"  
 app:layout\_constraintBaseline\_toBaselineOf="@+id/conv"  
 app:layout\_constraintEnd\_toEndOf="@+id/to" />  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="0dp"  
 android:layout\_height="53dp"  
 android:layout\_marginStart="65dp"  
 android:layout\_marginTop="54dp"  
 android:layout\_marginEnd="65dp"  
 android:layout\_marginBottom="54dp"  
 android:text="KM TO MILES"  
 android:textAlignment="center"  
 android:textSize="34sp"  
 app:layout\_constraintBottom\_toTopOf="@+id/from"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
  
</androidx.constraintlayout.widget.ConstraintLayout>

****