

1. Create an activity like a phone dialer with CALL and SAVE buttons. On pressing the CALL button, it must call the phone number and on pressing the SAVE button it must save the number to the phone contacts.

XML code:

```
<?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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="CALL AND SAVE APP"
        android:textColor="#E31111"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.14" />

    <EditText
        android:id="@+id/etphno"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Phone number"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.268"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.29" />

    <Button
        android:id="@+id/b1"
        android:layout_width="63dp"
        android:layout_height="49dp"
        android:text="1"
        android:textColor="#121111"
        app:backgroundTint="#F45B93"
        app:cornerRadius="15dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.155"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.456" />

    <Button
        android:id="@+id/b4"
```

```

        android:layout_width="63dp"
        android:layout_height="49dp"
        android:text="4"
        android:textColor="#121111"
        app:backgroundTint="#F45B93"
        app:cornerRadius="15dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.155"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.567" />

<Button
    android:id="@+id/b5"
    android:layout_width="63dp"
    android:layout_height="49dp"
    android:text="5"
    android:textColor="#121111"
    app:backgroundTint="#F45B93"
    app:cornerRadius="15dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.408"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.567" />

<Button
    android:id="@+id/b6"
    android:layout_width="63dp"
    android:layout_height="49dp"
    android:text="6"
    android:textColor="#121111"
    app:backgroundTint="#F45B93"
    app:cornerRadius="15dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.652"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.567" />

<Button
    android:id="@+id/b7"
    android:layout_width="63dp"
    android:layout_height="49dp"
    android:text="7"
    android:textColor="#121111"
    app:backgroundTint="#F45B93"
    app:cornerRadius="15dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.155"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.681" />

<Button

```

```
android:id="@+id/b8"
android:layout_width="63dp"
android:layout_height="49dp"
android:text="8"
android:textColor="#121111"
app:backgroundTint="#F45B93"
app:cornerRadius="15dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.408"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.681" />
```

<Button

```
android:id="@+id/b9"
android:layout_width="63dp"
android:layout_height="49dp"
android:text="9"
android:textColor="#121111"
app:backgroundTint="#F45B93"
app:cornerRadius="15dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.652"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.681" />
```

<Button

```
android:id="@+id/bdot"
android:layout_width="63dp"
android:layout_height="49dp"
android:text="*"
android:textColor="#121111"
app:backgroundTint="#F45B93"
app:cornerRadius="15dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.155"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.799" />
```

<Button

```
android:id="@+id/b0"
android:layout_width="63dp"
android:layout_height="49dp"
android:text="0"
android:textColor="#121111"
app:backgroundTint="#F45B93"
app:cornerRadius="15dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.408"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.799" />
```

```
<Button
    android:id="@+id/bhash"
    android:layout_width="63dp"
    android:layout_height="49dp"
    android:text="#"
    android:textColor="#121111"
    app:backgroundTint="#F45B93"
    app:cornerRadius="15dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.652"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.799" />
```

```
<Button
    android:id="@+id/call"
    android:layout_width="98dp"
    android:layout_height="46dp"
    android:text="call"
    app:backgroundTint="#43A047"
    app:cornerRadius="8dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.155"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.913" />
```

```
<Button
    android:id="@+id/save"
    android:layout_width="98dp"
    android:layout_height="46dp"
    android:text="save"
    app:backgroundTint="#EC1212"
    app:cornerRadius="8dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.571"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.913" />
```

```
<Button
    android:id="@+id/b2"
    android:layout_width="63dp"
    android:layout_height="49dp"
    android:text="2"
    android:textColor="#121111"
    app:backgroundTint="#F45B93"
    app:cornerRadius="15dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.408"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.456" />
```

```
<Button
```

```

        android:id="@+id/b3"
        android:layout_width="63dp"
        android:layout_height="49dp"
        android:text="3"
        android:textColor="#121111"
        app:backgroundTint="#F45B93"
        app:cornerRadius="15dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.652"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.456" />

<Button
    android:id="@+id/bdel"
    android:layout_width="63dp"
    android:layout_height="49dp"
    android:text="del"
    android:textColor="#121111"
    app:backgroundTint="#F45B93"
    app:cornerRadius="15dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.833"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.285" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Java Code:

```

package com.example.call;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import com.example.call.R;

public class MainActivity extends AppCompatActivity implements
View.OnClickListener {

    Button b1, b2, b3, b4, b5, b6, b7, b8, b9, b0, bdot, bhash, call, save, bdel;
    EditText phno;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}

```

```

b1 = (Button) findViewById(R.id.b1);
b2 = (Button) findViewById(R.id.b2);
b3 = (Button) findViewById(R.id.b3);
b4 = (Button) findViewById(R.id.b4);
b5 = (Button) findViewById(R.id.b5);
b6 = (Button) findViewById(R.id.b6);
b7 = (Button) findViewById(R.id.b7);
b8 = (Button) findViewById(R.id.b8);
b9 = (Button) findViewById(R.id.b9);
b0 = (Button) findViewById(R.id.b0);
bdot = (Button) findViewById(R.id.bdot);
bhash = (Button) findViewById(R.id.bhash);
call = (Button) findViewById(R.id.call);
save = (Button) findViewById(R.id.save);
bdel = (Button) findViewById(R.id.bdel);
phno = (EditText) findViewById(R.id.etphno);
phno.setText("");
b1.setOnClickListener(this);
b2.setOnClickListener(this);
b3.setOnClickListener(this);
b4.setOnClickListener(this);
b5.setOnClickListener(this);
b6.setOnClickListener(this);
b7.setOnClickListener(this);
b8.setOnClickListener(this);
b9.setOnClickListener(this);
b0.setOnClickListener(this);
bdot.setOnClickListener(this);
bdel.setOnClickListener(this);
bhash.setOnClickListener(this);
call.setOnClickListener(this);
save.setOnClickListener(this);
}

```

```

@Override
public void onClick(View v) {
    if (v.equals(b1))
        phno.append("1");
    else if (v.equals(b2))
        phno.append("2");
    else if (v.equals(b3))
        phno.append("3");
    else if (v.equals(b4))
        phno.append("4");
    else if (v.equals(b5))
        phno.append("5");
    else if (v.equals(b6))
        phno.append("6");
    else if (v.equals(b7))
        phno.append("7");
    else if (v.equals(b8))
        phno.append("8");
    else if (v.equals(b9))
        phno.append("9");
    else if (v.equals(b0))
        phno.append("0");
    else if (v.equals(bdot))
        phno.append(".");
    else if (v.equals(bhash))
        phno.append("#");
    else if (v.equals(bdel))
        phno.append("X");
}

```

```

        phno.append("#");
    else if (v.equals(save)) {
        Intent i = new Intent(ContactsContract.Intents.Insert.ACTION);
        i.setType(ContactsContract.RawContacts.CONTENT_TYPE);
        i.putExtra(ContactsContract.Intents.Insert.NAME, "Unknown");
        i.putExtra(ContactsContract.Intents.Insert.PHONE,
phno.getText().toString());
        startActivity(i);
    }
    else if(v.equals(bdel))
    {
        String data=phno.getText().toString();
        if(data.length()>0)
        {
            phno.setText(data.substring(0,data.length()-1));
        }
        else {
            phno.setText("");
        }
    }
    call.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View view) {
            String data=phno.getText().toString();
            Intent callintent=new
Intent(Intent.ACTION_DIAL);

            callintent.setData(Uri.parse("tel:"+data));
            startActivity(callintent);
        }
    }
    );
}
}

```

Manifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.call">
    <uses-permission android:name="android.permission.CALL_PHONE"/>
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Call">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

```

</manifest>

Output:



