

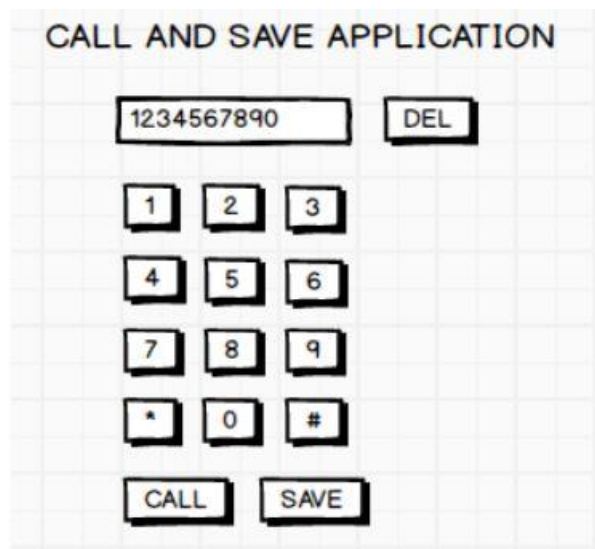


**SIDDAGDDAGANGA INSTITUTE OF TECHNOLOGY, TUMKUR-572103**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**MOBILE APPLICATION DEVELOPMENT LABORATORY( 6RCSL02)**

<b>Student Name: Pragati Shankar</b>	<b>USN: 1SI19CS090</b>	<b>Batch Id: B1</b>	<b>Date: 30-05-22</b>
--------------------------------------	------------------------	---------------------	-----------------------

## **Program 8**

**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 phonecontacts.**



## **FrontEnd - UI Code:**

### **In activity\_main.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/heading"
        android:layout_width="match_parent"
        android:layout_height="77dp"
        android:layout_alignParentTop="true"
        android:layout_marginTop="3dp"
        android:gravity="center"
        android:text="CALL AND SAVE APPLICATION"
        android:textAlignment="center"
        android:textSize="24sp" />
    <LinearLayout
```

---

```
android:layout_width="match_parent"
android:layout_height="60dp"
android:id="@+id/layer1"
android:layout_marginTop="30dp"
android:layout_below="@+id/heading"
android:orientation="horizontal">
```

```
<EditText
    android:layout_width="47dp"
    android:layout_height="60dp"
    android:layout_marginStart="20dp"
    android:id="@+id/editText"
    android:layout_marginLeft="10dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="529dp"
    android:layout_weight="5" />
```

```
<Button
    android:layout_width="wrap_content"
    android:text="DEL"
    android:id="@+id/del"
    android:layout_weight="1"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="10dp"
    android:layout_height="match_parent"/>
```

```
</LinearLayout>
```

```
<LinearLayout
    android:orientation="horizontal"
    android:layout_height="77dp"
    android:id="@+id/first"
    android:layout_below="@+id/layer1"
    android:layout_marginTop="30dp"
    android:layout_width="match_parent">
```

```
<Button
    android:id="@+id/one"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:text="1"
    android:textAlignment="center"
    android:layout_margin="10dp"
    android:layout_gravity="center"
```

```
    android:layout_width="wrap_content" />
```

```
<Button
    android:id="@+id/two"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:text="2"
    android:layout_margin="10dp"
    android:textAlignment="center"
    android:layout_gravity="center"
    android:layout_width="wrap_content"
```

```
/>
```

```
<Button
    android:id="@+id/three"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:text="3"
    android:layout_margin="10dp"
```

---

```
        android:textAlignment="center"
        android:layout_gravity="center"
        android:layout_width="wrap_content"

        />

</LinearLayout>

<LinearLayout
    android:orientation="horizontal"
    android:layout_height="77dp"
    android:id="@+id/second"
    android:layout_below="@+id/first"
    android:layout_marginTop="30dp"
    android:layout_width="match_parent">

    <Button
        android:id="@+id/four"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="4"
        android:textAlignment="center"
        android:layout_margin="10dp"
        android:layout_gravity="center"

        android:layout_width="wrap_content" />
    <Button
        android:id="@+id/five"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="5"
        android:layout_margin="10dp"
        android:textAlignment="center"
        android:layout_gravity="center"
        android:layout_width="wrap_content"

        />
    <Button
        android:id="@+id/six"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="6"
        android:layout_margin="10dp"
        android:textAlignment="center"
        android:layout_gravity="center"
        android:layout_width="wrap_content"

        />

</LinearLayout>

<LinearLayout
    android:orientation="horizontal"
    android:layout_height="77dp"
    android:id="@+id/third"
    android:layout_below="@+id/second"
    android:layout_marginTop="30dp"
    android:layout_width="match_parent">

    <Button
        android:id="@+id/seven"
        android:layout_weight="1"
```

---

```

        android:layout_height="match_parent"
        android:text="7"
        android:textAlignment="center"
        android:layout_margin="10dp"
        android:layout_gravity="center"

        android:layout_width="wrap_content" />
<Button
    android:id="@+id/eight"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:text="8"
    android:layout_margin="10dp"
    android:textAlignment="center"
    android:layout_gravity="center"
    android:layout_width="wrap_content"

    />
<Button
    android:id="@+id/nine"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:text="9"
    android:layout_margin="10dp"
    android:textAlignment="center"
    android:layout_gravity="center"
    android:layout_width="wrap_content"

    />
</LinearLayout>

<LinearLayout
    android:orientation="horizontal"
    android:layout_height="77dp"
    android:id="@+id/fourth"
    android:layout_below="@+id/third"
    android:layout_marginTop="30dp"
    android:layout_width="match_parent">

    <Button
        android:id="@+id/star"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="*"
        android:textAlignment="center"
        android:layout_margin="10dp"
        android:layout_gravity="center"

        android:layout_width="wrap_content" />
    <Button
        android:id="@+id/zero"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="0"
        android:layout_margin="10dp"
        android:textAlignment="center"
        android:layout_gravity="center"
        android:layout_width="wrap_content"

        />
    <Button

```

---

---

```
    android:id="@+id/hash"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:text="#"
    android:layout_margin="10dp"
    android:textAlignment="center"
    android:layout_gravity="center"
    android:layout_width="wrap_content"
```

```
/>
```

```
</LinearLayout>
```

```
<LinearLayout
    android:orientation="horizontal"
    android:layout_height="77dp"
    android:id="@+id/fifth"
    android:layout_below="@+id/fourth"
    android:layout_marginTop="30dp"
    android:layout_width="match_parent">
```

```
    <Button
        android:id="@+id/call"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="CALL"
        android:textAlignment="center"
        android:layout_margin="10dp"
        android:layout_gravity="center"

        android:layout_width="wrap_content" />
```

```
    <Button
        android:id="@+id/save"
        android:layout_weight="1"
        android:layout_height="match_parent"
        android:text="SAVE"
        android:layout_margin="10dp"
        android:textAlignment="center"
        android:layout_gravity="center"
        android:layout_width="wrap_content"
```

```
/>
```

```
</LinearLayout>
```

```
</RelativeLayout>
```

---

## BackEnd - Java Code:

### In MainActivity.java

```
package com.example.phone_1si19cs090;

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

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

        Button buttonNine = findViewById(R.id.nine);
        Button buttonEight = findViewById(R.id.eight);
        Button buttonSeven = findViewById(R.id.seven);
        Button buttonSix = findViewById(R.id.six);
        Button buttonFive = findViewById(R.id.five);
        Button buttonFour = findViewById(R.id.four);
        Button buttonThree = findViewById(R.id.three);
        Button buttonTwo = findViewById(R.id.two);
        Button buttonOne = findViewById(R.id.one);
        Button buttonZero = findViewById(R.id.zero);
        Button buttonClear = findViewById(R.id.del);
        Button buttonCall = findViewById(R.id.call);
        Button buttonSave = findViewById(R.id.save);
        Button buttonStar = findViewById(R.id.star);
        Button buttonHash = findViewById(R.id.hash);

        EditText text = (EditText) findViewById(R.id.editText);
        PhoneNumberUtils.formatNumber(text.getText().toString());

        buttonZero.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                text.setText(text.getText().toString()+"0");
            }
        });
        buttonOne.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                text.setText(text.getText().toString()+"1");
            }
        });
        buttonTwo.setOnClickListener(new View.OnClickListener() {
            @Override
```

---

```
        public void onClick(View view) {
            text.setText(text.getText().toString()+"2");
        }
    });
    buttonThree.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"3");
        }
    });
    buttonFour.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"4");
        }
    });
    buttonFive.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"5");
        }
    });
    buttonSix.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"6");
        }
    });
    buttonSeven.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"7");
        }
    });
    buttonEight.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"8");
        }
    });
    buttonNine.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"9");
        }
    });
    buttonStar.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"*");
        }
    });
    buttonHash.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            text.setText(text.getText().toString()+"#");
        }
    });
    buttonCall.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
```

---

```

        if (text.getText().length() > 0) {
            String phStr = "tel:" + text.getText().toString();
            if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.LOLLIPOP) {
                Intent callIntent = new Intent(Intent.ACTION_DIAL);
                callIntent.setData(Uri.parse(phStr));
                startActivity(callIntent);
            }
        } else {
            Toast.makeText(MainActivity.this, "Unable to call", Toast.LENGTH_SHORT).show();
        }
    }
});
buttonClear.setOnClickListener(v -> {
    if(text.getText().length() > 0) {
        CharSequence currentText = text.getText();
        text.setText(currentText.subSequence(0, currentText.length()-1));
    }
    else {
        text.setText("");
    }
});
buttonSave.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if(!text.getText().toString().isEmpty()){
            String phoneNumber=text.getText().toString();
            Intent intent = new Intent(Intent.ACTION_INSERT);
            intent.setType(ContactsContract.RawContacts.CONTENT_TYPE);
            intent.putExtra(ContactsContract.Intents.Insert.PHONE, phoneNumber);
            if(intent.resolveActivity(getPackageManager())!=null){
                startActivity(intent);
            }else {
                Toast.makeText(getApplicationContext(),"No app to support", Toast.LENGTH_SHORT).show();
            }
        }
    }
});
}
}

```

---



# Output - Snapshots :

