

~~~~~Program 1 - Visiting Card~~~~~

=== XML Code ===

```
<?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="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="291dp"
        android:layout_marginRight="291dp"
        android:layout_marginBottom="553dp"
        android:text="TJIT"
        android:textSize="38dp" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="231dp"
        android:layout_height="174dp"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:layout_marginBottom="482dp"
        app:srcCompat="@drawable/tjit_logo" />

    <View
        android:id="@+id/view"
        android:layout_width="wrap_content"
        android:layout_height="4dp"
        android:layout_alignParentBottom="true"
        android:background="#4444"
        android:layout_marginBottom="466dp" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="120dp"
        android:layout_marginRight="120dp"
        android:layout_marginBottom="394dp"
        android:text="Name"
        android:textSize="30dp"
        android:textStyle="bold" />
```



```

<Text View
    android:id="@+id/text View3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="126dp"
    android:layout_marginRight="126dp"
    android:layout_marginBottom="334dp"
    android:text="6th Sem - CSE"
    android:textSize="25dp" />

<Text View
    android:id="@+id/text View4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="116dp"
    android:layout_marginRight="116dp"
    android:layout_marginBottom="287dp"
    android:text="Ph No: 000000000"
    android:textSize="20dp" />

<Text View
    android:id="@+id/text View5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="58dp"
    android:layout_marginRight="58dp"
    android:layout_marginBottom="173dp"
    android:text="Address: Gottigere, Bengaluru- 83"
    android:textSize="20dp" />

<Text View
    android:id="@+id/text View6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="44dp"
    android:layout_marginRight="44dp"
    android:layout_marginBottom="244dp"
    android:text="Email: abc@tjohngroup.com"
    android:textSize="20dp" />

</RelativeLayout>

```

## JAVA CODE

```

===== package com.example.visiting_card; =====

```



```

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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

```

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~~~~~Program 2 - Simple Calculator~~~~~

===== 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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="68dp"
        android:layout_marginBottom="532dp"
        android:text="Simple Calculator"
        android:textColor="@color/black"
        android:textSize="35dp" />

```

```

    <EditText
        android:id="@+id/editText1"
        android:layout_width="129dp"
        android:layout_height="60dp"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="248dp"
        android:layout_marginBottom="386dp"
        android:ems="10"
        android:hint="Enter 1st Num"
        android:inputType="textPersonName"
        android:text="" />

```

```

    <EditText

```



```

android:id="@+id/editText2"
android:layout_width="127dp"
android:layout_height="57dp"
android:layout_alignParentEnd="true"
android:layout_alignParentBottom="true"
android:layout_marginEnd="38dp"
android:layout_marginBottom="388dp"
android:ems="10"
android:hint="Enter 2nd Num"
android:inputType="textPersonName"
android:text="" />

```

<Text View

```

android:id="@+id/textView1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentEnd="true"
android:layout_alignParentBottom="true"
android:layout_marginEnd="193dp"
android:layout_marginBottom="344dp"
android:text="0"
android:textColor="@color/black"
android:textSize="40dp" />

```

<Button

```

android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentEnd="true"
android:layout_alignParentBottom="true"
android:layout_marginEnd="269dp"
android:layout_marginBottom="254dp"
android:onClick="doAdd"
android:textColor="#ff0000"
android:background="@color/black"
android:text="ADD" />

```

<Button

```

android:id="@+id/button2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentEnd="true"
android:layout_alignParentBottom="true"
android:layout_marginEnd="53dp"
android:layout_marginBottom="253dp"
android:onClick="doSub"
android:textColor="#ff0000"
android:background="@color/black"
android:text="SUB" />

```

<Button

```

android:id="@+id/button3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentEnd="true"
android:layout_alignParentBottom="true"
android:layout_marginEnd="271dp"
android:layout_marginBottom="116dp"
android:onClick="doMul"
android:textColor="#ff0000"

```



```

        android:background="@color/black"
        android:text="MUL" />

<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="55dp"
    android:layout_marginBottom="116dp"
    android:onClick="doDiv"
    android:textColor="#ff0000"
    android:background="@color/black"
    android:text="DIV" />
</RelativeLayout>

```

===== JAVA CODE =====

```

package com.example.calculator;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText e1,e2;
    TextView tv1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1 = (EditText)findViewById(R.id.editText1);
        e2 = (EditText)findViewById(R.id.editText2);
        tv1 = (TextView)findViewById(R.id.textView1);
    }
    public void doAdd(View V){
        int a1 = Integer.parseInt(e1.getText().toString());
        int a2 = Integer.parseInt(e2.getText().toString());
        int result = a1+a2;
        tv1.setText(""+result);
    }
    public void doSub(View V){
        int a1 = Integer.parseInt(e1.getText().toString());
        int a2 = Integer.parseInt(e2.getText().toString());
        int result = a1-a2;
        tv1.setText(""+result);
    }
    public void doMul(View V){
        int a1 = Integer.parseInt(e1.getText().toString());
        int a2 = Integer.parseInt(e2.getText().toString());
        int result = a1*a2;
        tv1.setText(""+result);
    }
    public void doDiv(View V){
        int a1 = Integer.parseInt(e1.getText().toString());

```



```

        int a2 = Integer.parseInt(e2.getText().toString());
        float result = a1/a2;
        tv1.setText(""+result);
    }
}

```

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~~~~~Program 4 - Wallpaper Change~~~~~

=== XML CODE ===

```

<?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="210dp"
        android:layout_height="54dp"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="120dp"
        android:layout_marginBottom="576dp"
        android:text="Wall Paper Change Application"
        android:textSize="28dp" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="173dp"
        android:layout_marginBottom="189dp"
        android:text="Click Here To Change Wall Paper"
        android:textSize="26dp" />

</RelativeLayout>

```

===== JAVA CODE =====

```

package com.example.wallpaper;

import androidx.appcompat.app.AppCompatActivity;
import android.app.WallpaperManager;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.graphics.drawable.AnimationDrawable;

```



```

import android.graphics.drawable.BitmapDrawable;
import android.graphics.drawable.Drawable;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import java.io.IOException;
import java.util.Timer;
import java.util.TimerTask;

public class MainActivity extends AppCompatActivity {
    Button changewallpaper;
    Timer mytimer;
    Drawable drawable;
    WallpaperManager wpm;
    int prev=1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        mytimer = new Timer();
        wpm = WallpaperManager.getInstance(this);
        changewallpaper = findViewById(R.id.button);
        changewallpaper.setOnClickListener(new View.OnClickListener() {
            @Override public void onClick(View view) {
                setWallpaper();
            }
        });
    }
    private void setWallpaper() {
        mytimer.schedule(new TimerTask() {
            @Override
            public void run() {
                if (prev == 1) {
                    drawable = getResources().getDrawable(R.drawable.one);
                    prev = 2;
                } else if (prev == 2) {
                    drawable = getResources().getDrawable(R.drawable.two);
                    prev = 3;
                } else if (prev == 3) {
                    drawable = getResources().getDrawable(R.drawable.three);
                    prev = 4;
                } else if (prev == 4) {
                    drawable = getResources().getDrawable(R.drawable.four);
                    prev = 5;
                } else if (prev == 5) {
                    drawable = getResources().getDrawable(R.drawable.five);
                    prev = 1;
                }
                Bitmap wallpaper = ((BitmapDrawable) drawable).getBitmap();
                try {
                    wpm.setBitmap(wallpaper);
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        },0,300000);}}

```



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~~~~~Program 5 - Counter Activity~~~~~

==== XML CODE =====

```
<?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:layout_width="378dp"
        android:layout_height="68dp"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="18dp"
        android:layout_marginBottom="602dp"
        android:text="Counter Application"
        android:textSize="38dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <TextView
        android:id="@+id/textView"
        android:layout_width="121dp"
        android:layout_height="32dp"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="145dp"
        android:layout_marginBottom="478dp"
        android:text="Counter Value" />
    <Button
        android:id="@+id/btn_start"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="297dp"
        android:layout_marginBottom="295dp"
        android:text="Start" />
    <Button
        android:id="@+id/btn_stop"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="74dp"
        android:layout_marginBottom="292dp"
        android:text="Stop" />
</RelativeLayout>
```



===== JAVA CODE =====

```
package com.example.counteractivity;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    Button btnstart, btnstop;
    TextView txtcounter;
    int i=1;
    Handler customHandler= new Handler();
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btnstart= findViewById(R.id.btn_start);
        btnstop= findViewById(R.id.btn_stop);
        txtcounter= findViewById(R.id.textView);
        btnstart.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                customHandler.postDelayed(updateTimerThread,0);
            }
        });
        btnstop.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                customHandler.removeCallbacks(updateTimerThread);
            }
        });
    }
    private final Runnable updateTimerThread= new Runnable() {
        @Override
        public void run() {
            txtcounter.setText(""+i);
            customHandler.postDelayed(this,1000);
            i++;
        }
    };
}
```

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~~~~~Program 7 - Text to Speech~~~~~



===== XML CODE =====

```
<?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="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="59dp"
        android:layout_marginRight="59dp"
        android:layout_marginBottom="649dp"
        android:text="Text 2SpeechApp"
        android:textSize="40dp" />
    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="101dp"
        android:layout_marginRight="101dp"
        android:layout_marginBottom="514dp"
        android:ems="10"
        android:hint="Enter the text to be converted"
        android:inputType="textPersonName"
        android:text="" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="162dp"
        android:onClick="convert"
        android:layout_marginRight="162dp"
        android:layout_marginBottom="329dp"
        android:text="Convert" />
</RelativeLayout>
```

===== JAVA CODE =====

```
package com.example.texttospeech;

import androidx.appcompat.app.AppCompatActivity;
```



```

import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
import java.util.Locale;
public class MainActivity extends AppCompatActivity {
    TextToSpeech t1;
    EditText e1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1 = findViewById(R.id.editText);
        t1 = new TextToSpeech(getApplicationContext(), new
            TextToSpeech.OnInitListener() {
                @Override
                public void onInit(int status) {
                    if (status != TextToSpeech.ERROR){
                        t1.setLanguage(Locale.UK);
                    }
                }
            });
    }
    public void convert(View view){
        String toSpeak = e1.getText().toString();
        t1.speak(toSpeak, TextToSpeech.QUEUE_FLUSH, null);
    }
}

```

```

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```

