

Calculator :

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">
```

```
<EditText
    android:id="@+id/editText"
    android:layout_width="269dp"
    android:layout_height="47dp"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:layout_marginBottom="8dp"
    android:ems="10"
    android:inputType="number"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.554"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.108" />
```

```
<EditText
    android:id="@+id/editText2"
    android:layout_width="269dp"
    android:layout_height="47dp"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:layout_marginBottom="8dp"
    android:ems="10"
    android:inputType="number"
    app:layout_constraintBottom_toBottomOf="parent"
```

```
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.555"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.26" />
```

<Button

```
android:id="@+id/btnadd"
android:layout_width="144dp"
android:layout_height="46dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="248dp"
android:layout_marginRight="248dp"
android:layout_marginBottom="8dp"
android:text="Addition"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.401" />
```

<Button

```
android:id="@+id/btndiv"
android:layout_width="131dp"
android:layout_height="42dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="16dp"
android:layout_marginRight="16dp"
android:layout_marginBottom="8dp"
android:text="division"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.521" />
```

<Button

```
android:id="@+id/btnsub"
android:layout_width="138dp"
android:layout_height="47dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="16dp"
android:layout_marginRight="16dp"
android:layout_marginBottom="8dp"
android:text="subtraction"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent"
```

```

        app:layout_constraintVertical_bias="0.402" />

<Button
    android:id="@+id/btnmul"
    android:layout_width="144dp"
    android:layout_height="45dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="248dp"
    android:layout_marginRight="248dp"
    android:layout_marginBottom="8dp"
    android:text="multiplication"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.519" />

<TextView
    android:id="@+id/textView"
    android:layout_width="168dp"
    android:layout_height="48dp"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:layout_marginBottom="8dp"
    android:text="answer"
    android:textAppearance="@style/TextAppearance.AppCompat.Large"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.563"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.688" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Java code:

```

package com.example.calci;

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 add,sub,mul,div;
    private EditText num1;
    private EditText num2;
    private TextView ans;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        add = (Button)findViewById(R.id.btnadd);
        sub = (Button)findViewById(R.id.btnsub);
        mul = (Button)findViewById(R.id.btnmul);
        div = (Button)findViewById(R.id.btndiv);
        num1 = (EditText)findViewById(R.id.editText);
        num2 = (EditText)findViewById(R.id.editText2);
        ans = (TextView)findViewById(R.id.textView);
        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int number1= Integer.parseInt(num1.getText().toString());
                int number2= Integer.parseInt(num2.getText().toString());
                int sum= number1+number2;
                ans.setText("Answer "+ String.valueOf(sum));
            }
        });
        sub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int number1= Integer.parseInt(num1.getText().toString());
                int number2= Integer.parseInt(num2.getText().toString());
                int sum= number1-number2;
                ans.setText("Answer "+ String.valueOf(sum));
            }
        });
        mul.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int number1= Integer.parseInt(num1.getText().toString());
                int number2= Integer.parseInt(num2.getText().toString());

```

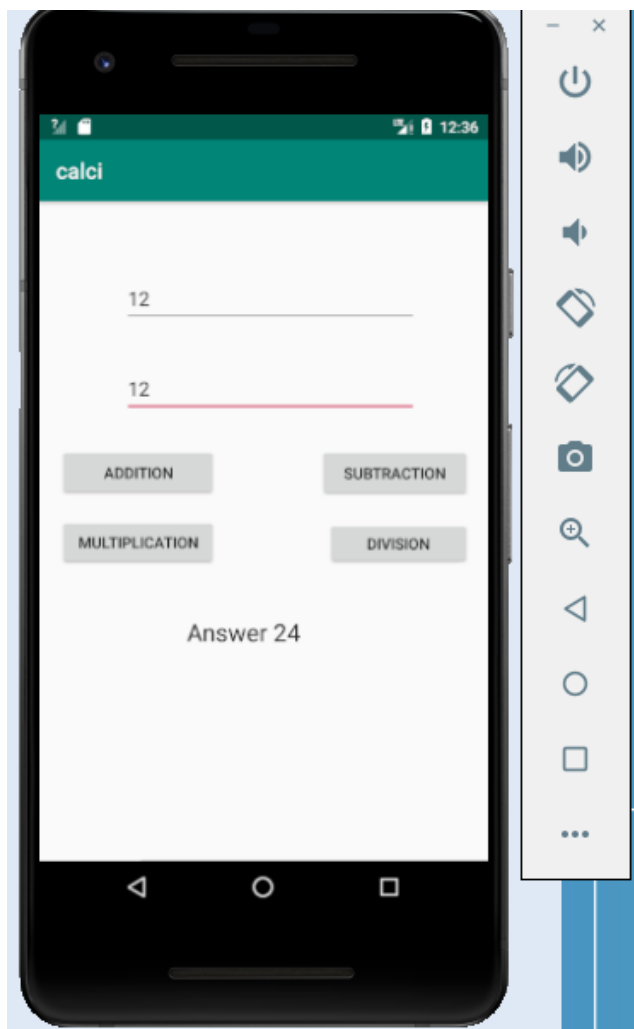
```

        int sum= number1*number2;
        ans.setText("Answer "+ String.valueOf(sum));

    }
});
div.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int number1= Integer.parseInt(num1.getText().toString());
        int number2= Integer.parseInt(num2.getText().toString());
        int sum= number1/number2;
        ans.setText("Answer "+ String.valueOf(sum));

    }
});
}
}

```



Spinner:

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:id="@+id/txt"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <Spinner
        android:id="@+id/spinner3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_marginLeft="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginBottom="485dp"
        android:entries="@array/option"/>

</RelativeLayout>
```

String.xml

```
<resources>
    <string name="app_name">Spinnerexp</string>
    <array name="option">
        <item>IOT</item>
        <item>ISMA</item>
        <item>GEN</item>
        <item>MACT</item>
    </array>
</resources>
```

Java code:

```
package com.example.spinnerexp;
```

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

```
import android.content.Intent;
```

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.AdapterView;
```

```
import android.widget.AdapterView;
```

```
import android.widget.Button;
```

```
import android.widget.EditText;
```

```
import android.widget.Spinner;
```

```
import android.widget.TextView;
```

```
import android.widget.Toast;
```

```
import java.util.ArrayList;
```

```
import java.util.List;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    Spinner sp;
```

```
    int dept=0;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        sp=(Spinner)findViewById(R.id.spinner3);
```

```
        sp.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
```

```
            @Override
```

```
            public void onItemSelected(AdapterView<?> parent, View view, int position, long  
id) {
```

```
                if (dept==position){
```

```
                    return;
```

```
                }
```

```
                else if (position==1)
```

```
                {
```

```
                    Intent intent= new Intent(MainActivity.this, SecondActivity.class);
```

```
                    startActivity(intent);
```

```
                }
```

```
                else if (position==2){
```

```
                    Intent intent1= new Intent(MainActivity.this, ThirdActivity.class);
```

```
                    startActivity(intent1);
```



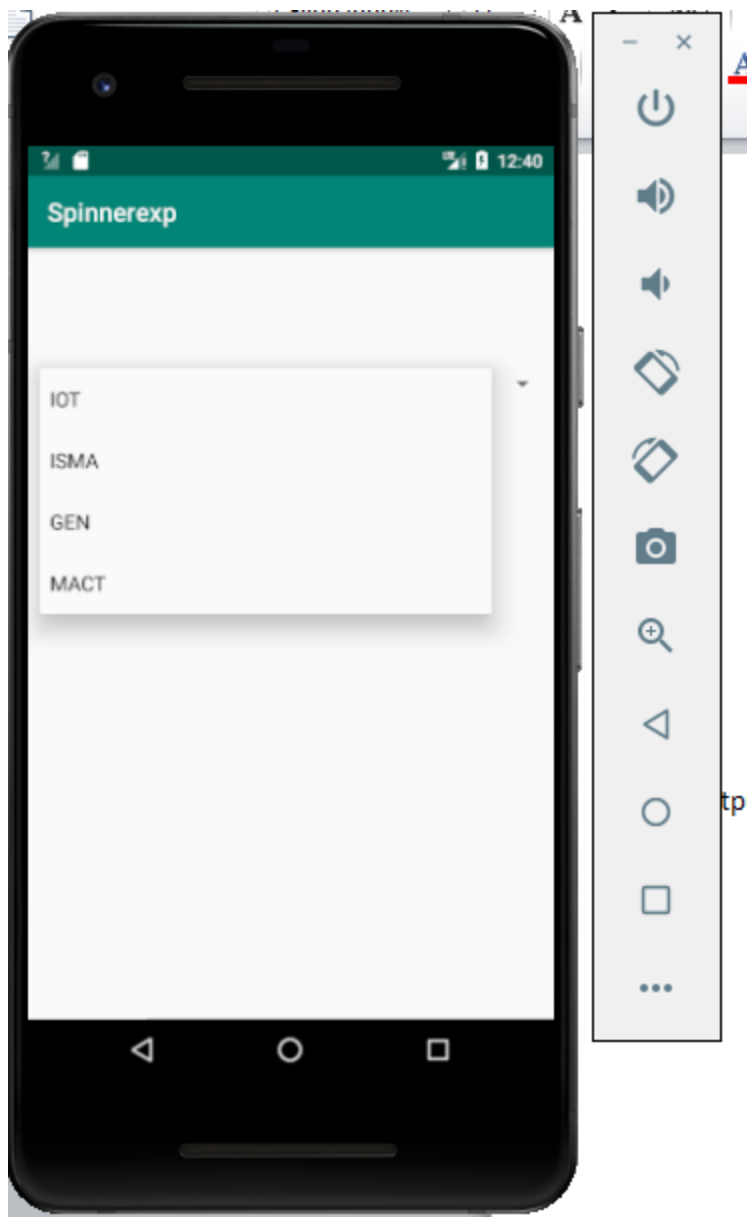
```
}  
else  
{  
    Intent intent2= new Intent(MainActivity.this, FourthActivity.class);  
    startActivity(intent2);  
}}
```

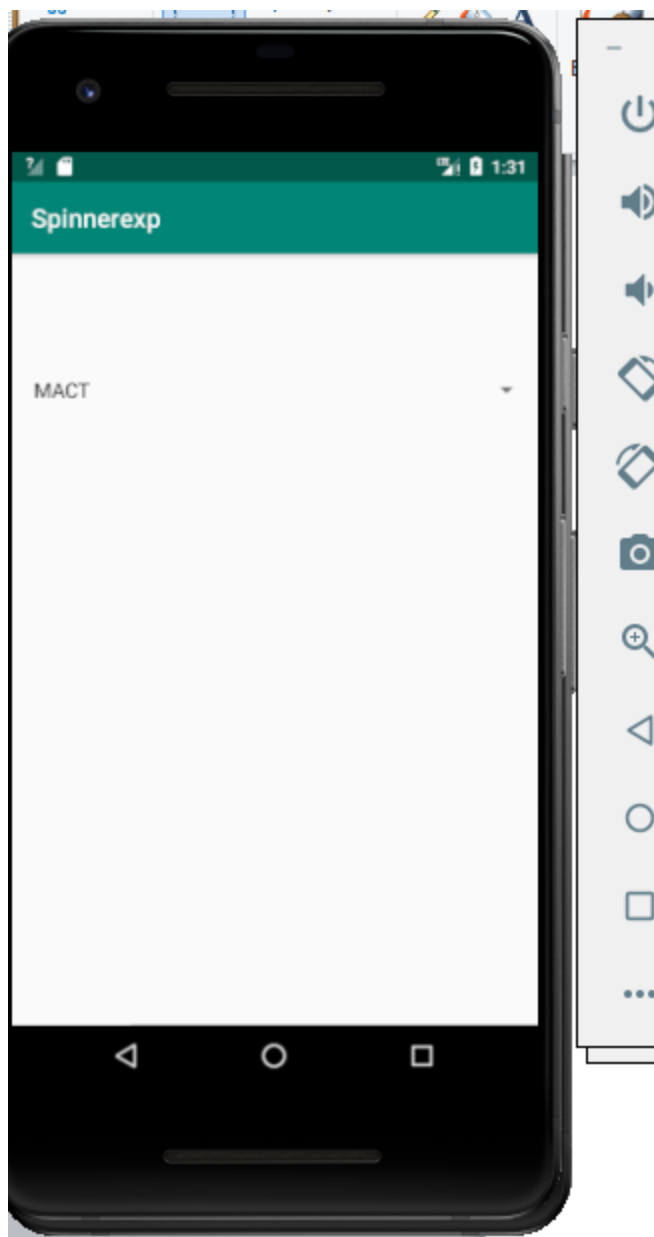
```
@Override  
public void onNothingSelected(AdapterView<?> parent) {  
  
    }  
});
```

```
}
```

```
}
```

Output:







Paly music:

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">
```

```
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:layout_marginBottom="8dp"
    android:text="Play"
    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="0.304" />
```

```
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:layout_marginBottom="8dp"
    android:text="Pause"
    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="0.421" />

<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:layout_marginBottom="8dp"
    android:text="Stop"
    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="0.532" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Java code:

```

package com.example.playmusic;

import androidx.appcompat.app.AppCompatActivity;

import android.media.MediaPlayer;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {
    Button start1,pause1,stop1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        start1=(Button)findViewById(R.id.button);
        pause1=(Button)findViewById(R.id.button2);
    }
}

```

```
stop1=(Button)findViewById(R.id.button3);  
//creating media player
```

```
final MediaPlayer mp = MediaPlayer.create(MainActivity.this,R.raw.files);  
try{
```

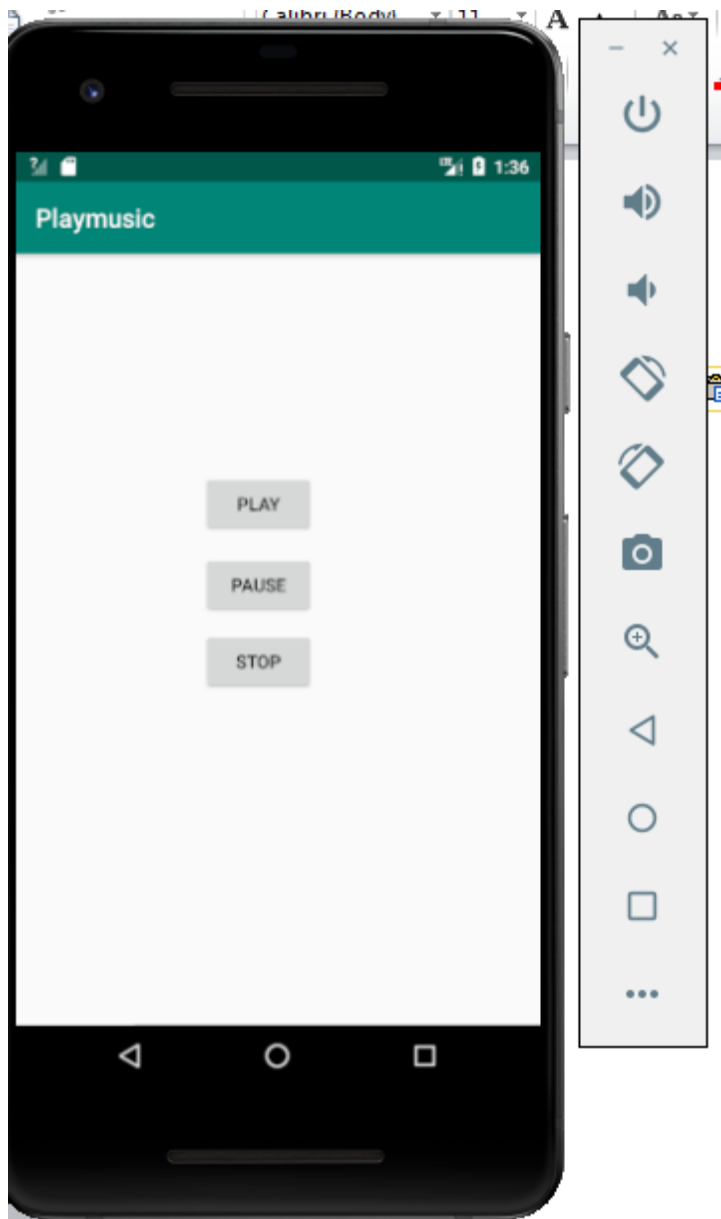
```
    mp.prepare();  
}catch(Exception e){e.printStackTrace();}
```

```
start1.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        mp.start();  
    }  
});
```

```
pause1.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        mp.pause();  
    }  
});
```

```
stop1.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        mp.stop();  
    }  
});
```

```
}  
}
```



Action bar menu, Dialog :

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">

<Button
    android:id="@+id/button"
    android:layout_width="279dp"
    android:layout_height="94dp"
    android:layout_marginStart="72dp"
    android:layout_marginLeft="72dp"
    android:layout_marginTop="8dp"
    android:text="AOS"
    android:textAppearance="@style/TextAppearance.AppCompat.Display3"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.333" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

mainmenu.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/settings"
        android:title="@string/setting"
        app:showAsAction="never"
        />
    <item android:id="@+id/help"
        android:title="@string/help"
        app:showAsAction="never"
        />
</menu>
```

String.xml code

```
<resources>
  <string name="app_name">ActionBar</string>
  <string name="setting">Setting</string>
  <string name="help">Help</string>
```

```
</resources>
```

Java code

```
package com.example.actionbar;
```

```
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.view.Menu;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
public class MainActivity extends AppCompatActivity {
    Button bt;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        bt=(Button) findViewById(R.id.button);
        bt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                openDialog();
            }
            private void openDialog(){
                ExampleDialog exampleDialog= new ExampleDialog();
                exampleDialog.show(getSupportFragmentManager(),"example dialog");
            }
        });
    }
}
```

```
@Override
```

```

    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.mainmenu,menu);
        return true;
    }
}

```

ExampleDialog.class

```

package com.example.actionbar;

```

```

import android.app.Dialog;
import android.content.DialogInterface;
import android.os.Bundle;

```

```

import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

```

```

public class ExampleDialog extends AppCompatActivity {

```

```

    @NonNull

```

```

    @Override

```

```

    public Dialog onCreateDialog(@Nullable Bundle savedInstanceState) {
        AlertDialog.Builder builder= new AlertDialog.Builder(getActivity());
        builder.setTitle("Information")
            .setMessage("This is AOS LAB for Batch 1")
            .setPositiveButton("Ok", new DialogInterface.OnClickListener() {
                @Override
                public void onClick(DialogInterface dialog, int which) {

```

```

                }
            });
        return builder.create();
    }
}

```

