

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

Q1 Create an app implementing dialog box interaction.

MainLayout.xml

```
1. <?xml version="1.0" encoding="utf-8"?>
2. <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
3.     xmlns:app="http://schemas.android.com/apk/res-auto"
4.     xmlns:tools="http://schemas.android.com/tools"
5.     android:layout_width="match_parent"
6.     android:layout_height="match_parent"
7.     android:background="#D81B60"
8.     tools:context=".MainActivity">
9.
10.    <ImageView
11.        android:id="@+id/iv_card"
12.        android:layout_width="0dp"
13.        android:layout_height="wrap_content"
14.        android:scaleType="fitXY"
15.        app:layout_constraintBottom_toBottomOf="parent"
16.        app:layout_constraintEnd_toEndOf="parent"
17.        app:layout_constraintHorizontal_bias="0.0"
18.        app:layout_constraintStart_toStartOf="parent"
19.        app:layout_constraintTop_toTopOf="parent"
20.        app:layout_constraintVertical_bias="0.0"
21.        app:srcCompat="@drawable/bg3" />
22.
23.    <TextView
24.        android:id="@+id/textView"
25.        android:layout_width="0dp"
26.        android:layout_height="wrap_content"
27.        android:layout_marginStart="40dp"
28.        android:layout_marginEnd="40dp"
29.        android:fontFamily="casual"
30.        android:text="@string/mssg1"
31.        android:textAlignment="center"
32.        android:textColor="#000000"
33.        android:textSize="24sp"
34.        android:textStyle="bold"
35.        app:layout_constraintBottom_toBottomOf="parent"
36.        app:layout_constraintEnd_toEndOf="parent"
37.        app:layout_constraintHorizontal_bias="0.0"
38.        app:layout_constraintStart_toStartOf="parent"
39.        app:layout_constraintTop_toTopOf="parent"
40.        app:layout_constraintVertical_bias="0.479" />
41.
42.    <TextView
43.        android:id="@+id/tv_to"
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
44.         android:layout_width="match_parent"
45.         android:layout_height="wrap_content"
46.         android:layout_marginStart="40dp"
47.         android:layout_marginEnd="40dp"
48.         android:ems="10"
49.         android:fontFamily="cursive"
50.         android:hint="Dear: To ?"
51.         android:inputType="textPersonName"
52.         android:textColor="#5E35B1"
53.         android:textSize="30sp"
54.         android:textStyle="bold"
55.         app:layout_constraintBottom_toBottomOf="parent"
56.         app:layout_constraintEnd_toEndOf="parent"
57.         app:layout_constraintHorizontal_bias="0.0"
58.         app:layout_constraintStart_toStartOf="parent"
59.         app:layout_constraintTop_toTopOf="parent"
60.         app:layout_constraintVertical_bias="0.317" />
61.
62.     <TextView
63.         android:id="@+id/tv_from"
64.         android:layout_width="match_parent"
65.         android:layout_height="wrap_content"
66.         android:layout_marginStart="40dp"
67.         android:layout_marginEnd="40dp"
68.         android:ems="10"
69.         android:fontFamily="cursive"
70.         android:hint="Regards: from?"
71.         android:inputType="textPersonName"
72.         android:textAlignment="viewEnd"
73.         android:textColor="#D81B60"
74.         android:textSize="30sp"
75.         android:textStyle="bold"
76.         app:layout_constraintBottom_toBottomOf="parent"
77.         app:layout_constraintEnd_toEndOf="parent"
78.         app:layout_constraintHorizontal_bias="1.0"
79.         app:layout_constraintStart_toStartOf="parent"
80.         app:layout_constraintTop_toTopOf="parent"
81.         app:layout_constraintVertical_bias="0.629" />
82.
83.     <Button
84.         android:id="@+id/btn_editCard"
85.         android:layout_width="99dp"
86.         android:layout_height="49dp"
87.         android:background="#D87A7A"
88.         android:backgroundTint="#FFE368"
89.         android:fontFamily="casual"
90.         android:padding="2dp"
91.         android:text="@string/btn_txt"
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
92.         android:textAlignment="center"
93.         android:textColor="#070606"
94.         android:textSize="16sp"
95.         android:textStyle="bold"
96.         app:layout_constraintBottom_toBottomOf="parent"
97.         app:layout_constraintEnd_toEndOf="parent"
98.         app:layout_constraintHorizontal_bias="0.5"
99.         app:layout_constraintStart_toStartOf="parent"
100.        app:layout_constraintTop_toTopOf="@+id/iv_card"
101.        app:layout_constraintVertical_bias="1.0" />
102.    </androidx.constraintlayout.widget.ConstraintLayout>
```

### Layout\_dialog.xml

```
1. <?xml version="1.0" encoding="utf-8"?>
2. <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/andro
   id"
3.     android:layout_width="match_parent"
4.     android:layout_height="match_parent"
5.     android:padding="16dp">
6.
7.     <EditText
8.         android:id="@+id/et_to"
9.         android:layout_width="match_parent"
10.        android:layout_height="wrap_content"
11.        android:hint="To ?" />
12.
13.        <EditText
14.            android:id="@+id/et_from"
15.            android:layout_width="match_parent"
16.            android:layout_height="wrap_content"
17.            android:layout_below="@id/et_to"
18.            android:layout_alignParentStart="true"
19.            android:hint="From ?" />
20.
21.    </RelativeLayout>
```

### MainActivity.java

```
1. package com.example.alertdilougeapp;
2.
3. import androidx.appcompat.app.AppCompatActivity;
4.
5. import android.os.Bundle;
6. import android.view.View;
7. import android.widget.Button;
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
8. import android.widget.TextView;
9.
10. public class MainActivity extends AppCompatActivity implements Ex
    ampleDialog.ExampleDialogListener {
11.
12.     private TextView to_person, from_person;
13.
14.     @Override
15.     protected void onCreate(Bundle savedInstanceState) {
16.         super.onCreate(savedInstanceState);
17.         setContentView(R.layout.activity_main);
18.
19.         to_person = findViewById(R.id.tv_to);
20.         from_person = findViewById(R.id.tv_from);
21.         Button btn_editCard = findViewById(R.id.btn_editCard);
22.
23.         btn_editCard.setOnClickListener(new View.OnClickListener(
24.             ) {
25.                 @Override
26.                 public void onClick(View v) {
27.                     openDialog();
28.                 }
29.             });
30.
31.     private void openDialog(){
32.         ExampleDialog customDialog = new ExampleDialog();
33.         customDialog.show(getSupportFragmentManager(),"Custom Dia
34.         log Box");
35.     }
36.
37.     @Override
38.     public void applyText(String to, String from) {
39.         to_person.setText("Dear "+to);
40.         from_person.setText("Regards "+from);
41.     }
```

ExampleDialog.java(Class for dialog box listener)

```
1. package com.example.alertdilougeapp;
2.
3. import android.app.AlertDialog;
4. import android.app.Dialog;
5. import android.content.Context;
6. import android.content.DialogInterface;
7. import android.os.Bundle;
8. import android.view.LayoutInflater;
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
9. import android.view.View;
10.     import android.widget.EditText;
11.
12.     import androidx.annotation.NonNull;
13.     import androidx.annotation.Nullable;
14.     import androidx.appcompat.app.AppCompatActivity;
15.
16.     import java.util.Objects;
17.
18.     public class ExampleDialog extends AppCompatActivity {
19.
20.         private EditText to_person, from_person;
21.
22.         //dialog listener for our activity
23.         private ExampleDialogListener listener;
24.
25.         @Override
26.         public void onStart(@NonNull Context context) {
27.             super.onStart(context);
28.
29.             try {
30.                 listener = (ExampleDialogListener) context;
31.             } catch (ClassCastException e) {
32.                 throw new ClassCastException(context.toString() + "
must implement ExampleDialogListener Interface in your MainActivity.jav
a");
33.             }
34.         }
35.
36.         @Nullable
37.         @Override
38.         public Dialog onCreateDialog(@Nullable Bundle savedInstanceState) {
39.
40.             AlertDialog.Builder builder = new AlertDialog.Builder(get
Activity());
41.
42.             //getting the custom layout using inflater
43.             LayoutInflater inflater = Objects.requireNonNull(getActiv
ity()).getLayoutInflater();
44.             View cardTmpl = inflater.inflate(R.layout.layout_dialog,
null);
45.
46.             //setting the dialog window template with the custom temp
late using the dialog builder obj
47.
48.             builder.setView(cardTmpl)
49.                 .setTitle("Required Informations")
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

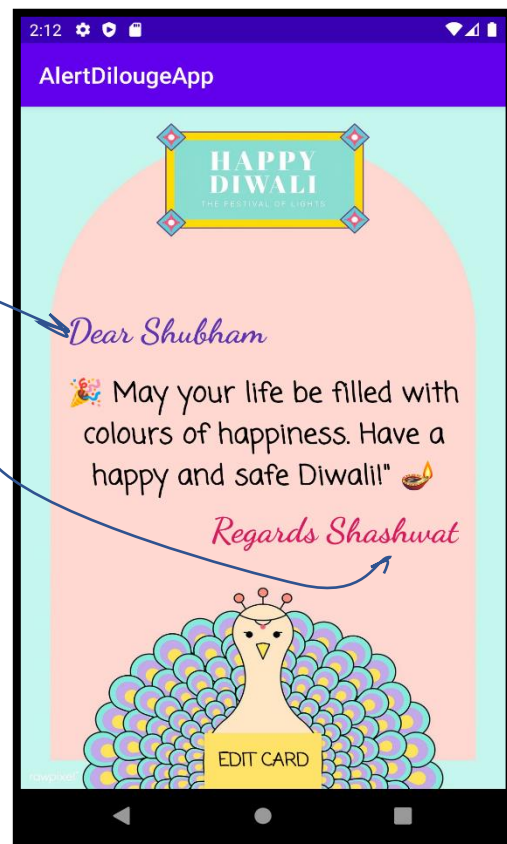
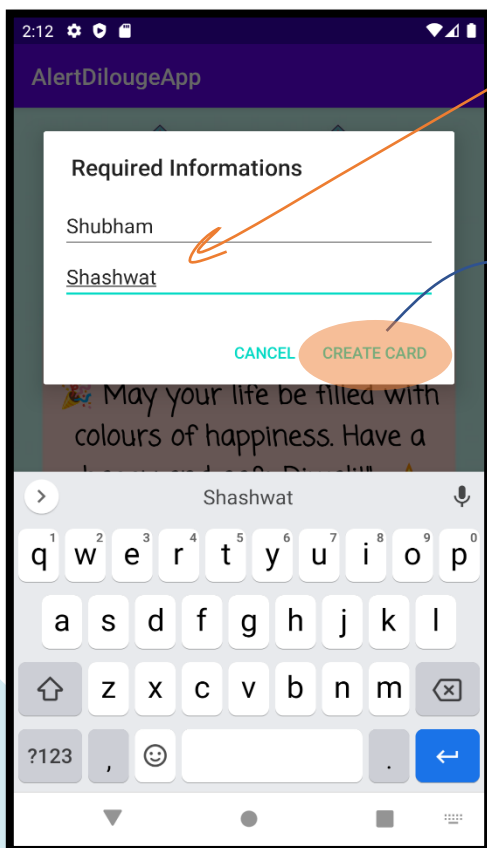
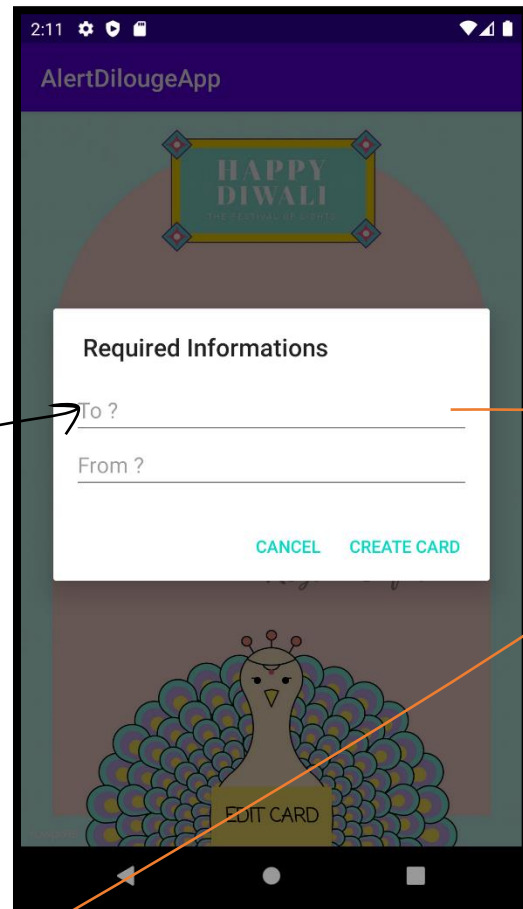
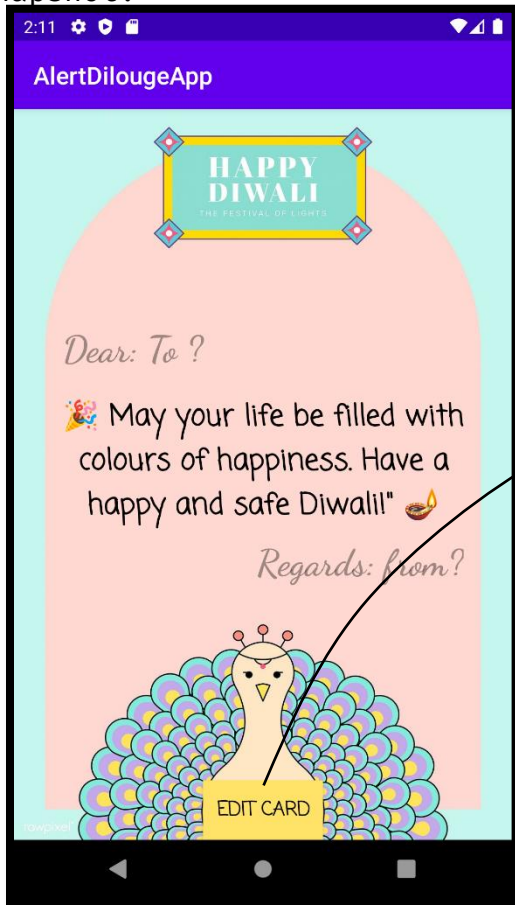
```
50.                .setNegativeButton("Cancel", new DialogInterface.
    OnClickListener() {
51.                    @Override
52.                    public void onClick(DialogInterface dialog, i
    nt which) {
53.                        //using the default listener
54.                    }
55.                })
56.                .setPositiveButton("Create Card", new DialogInter
    face.OnClickListener() {
57.                    @Override
58.                    public void onClick(DialogInterface dialog, i
    nt which) {
59.                        String to = to_person.getText().toString()
    ;
60.                        String from = from_person.getText().toStri
    ng();
61.
62.                        //will inject data into our main template
63.                        listener.applyText(to,from);
64.                    }
65.                });
66.
67.                //getting information from our custom layout
68.                //using the custom layout's view obj
69.                to_person = cardTplt.findViewById(R.id.et_to);
70.                from_person = cardTplt.findViewById(R.id.et_from);
71.
72.                return builder.create();
73.
74.            }
75.
76.            //injecting data from dialogbox into our main layout
77.
78.            public interface ExampleDialogListener{
79.                void applyText(String to, String from);
80.            }
81.        }
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

Snapshot:



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Q2 Develop an app to send SMS to other devices from you app.

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MainActivity.xml

```
1. package com.example.smsapp;
2.
3. import androidx.appcompat.app.AppCompatActivity;
4. import androidx.core.app.ActivityCompat;
5.
6. import android.Manifest;
7. import android.content.pm.PackageManager;
8. import android.os.Bundle;
9. import android.telephony.SmsManager;
10.     import android.util.Log;
11.     import android.view.View;
12.     import android.widget.Button;
13.     import android.widget.EditText;
14.     import android.widget.Toast;
15.
16.     public class MainActivity extends AppCompatActivity {
17.         //tutorial reffered: https://google-developer-training.github.io/android-developer-phone-sms-course/Lesson%202/2\_p\_sending\_sms\_messages.html
18.
19.         private static final int MY_PERMISSIONS_REQUEST_SEND_SMS = 1;
20.
21.         private Button sendBtn;
22.
23.         @Override
24.         protected void onCreate(Bundle savedInstanceState) {
25.             super.onCreate(savedInstanceState);
26.             setContentView(R.layout.activity_main);
27.             sendBtn = findViewById(R.id.btn_send);
28.             sendBtn.setVisibility(View.INVISIBLE);
29.             checkForSmsPermission();
30.             sendBtn.setOnClickListener(new View.OnClickListener() {
31.                 @Override
32.                 public void onClick(View v) {
33.                     smsSendMessage();
34.                 }
35.             });
36.         }
37.
38.         public void smsSendMessage() {
39.             EditText phone = findViewById(R.id.et_phone);
40.             EditText mssg = findViewById(R.id.et_mssg);
41.
```



## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
42.         //checking permission before
43.         checkForSmsPermission();
44.
45.         // Use SmsManager.
46.         SmsManager smsManager = SmsManager.getDefault();
47.         smsManager.sendTextMessage(phone.getText().toString(), nu
48.         ll, mssg.getText().toString(), null, null);
49.         Toast.makeText(this, "Message Successfully Sent!", Toast.LE
50.         NGTH_LONG).show();
51.     }
52.
53.     private void checkForSmsPermission() {
54.         if (ActivityCompat.checkSelfPermission(this,
55.             Manifest.permission.SEND_SMS) !=
56.             PackageManager.PERMISSION_GRANTED) {
57.             Log.d("Permission Status:", "Permission Denied!");
58.             // Permission not yet granted. Use requestPermissions
59.             ().
60.             // MY_PERMISSIONS_REQUEST_SEND_SMS is an
61.             // app-
62.             defined int constant. The callback method gets the
63.             // result of the request.
64.             ActivityCompat.requestPermissions(this,
65.                 new String[]{Manifest.permission.SEND_SMS},
66.                 MY_PERMISSIONS_REQUEST_SEND_SMS);
67.         } else {
68.             // Permission already granted. Enable the SMS button.
69.
70.             sendBtn.setVisibility(View.VISIBLE);
71.         }
72.     }
73.
74.     @Override
75.     public void onRequestPermissionsResult(int requestCode,
76.         String permissions[],
77.         int[] grantResults) {
78.         // Check if permission is granted or not for the request.
79.
80.         if(requestCode == MY_PERMISSIONS_REQUEST_SEND_SMS){
81.             if (permissions[0].equalsIgnoreCase
82.                 (Manifest.permission.SEND_SMS)
83.                 && grantResults[0] ==
84.                 PackageManager.PERMISSION_GRANTED) {
85.                 // Permission was granted. Enable sms button.
86.
87.                 sendBtn.setVisibility(View.VISIBLE);
88.             } else {
89.                 // Permission denied.
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
82.                Log.d("Permission Status:", "Permission Denie
    d!");
83.                Toast.makeText(this,
84.                    "Permission Denied!",
85.                    Toast.LENGTH_LONG).show();
86.                // Disable the sms button.
87.                sendBtn.setVisibility(View.INVISIBLE);
88.            }
89.        }
90.    }
91. }
```

Activity.xml

```
1. <?xml version="1.0" encoding="utf-8"?>
2. <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http:
    //schemas.android.com/apk/res/android"
3.     xmlns:app="http://schemas.android.com/apk/res-auto"
4.     xmlns:tools="http://schemas.android.com/tools"
5.     android:layout_width="match_parent"
6.     android:layout_height="match_parent"
7.     android:background="#FFFFFF"
8.     tools:context=".MainActivity">
9.
10.    <EditText
11.        android:id="@+id/et_mssg"
12.        android:layout_width="0dp"
13.        android:layout_height="wrap_content"
14.        android:layout_marginStart="8dp"
15.        android:layout_marginTop="40dp"
16.        android:layout_marginEnd="16dp"
17.        android:ems="10"
18.        android:fontFamily="monospace"
19.        android:hint="@string/mssg_hint"
20.        android:inputType="textPersonName"
21.        app:layout_constraintEnd_toEndOf="parent"
22.        app:layout_constraintHorizontal_bias="0.0"
23.        app:layout_constraintStart_toEndOf="@+id/iv_mssg"
24.        app:layout_constraintTop_toBottomOf="@+id/et_phone" />
25.
26.    <EditText
27.        android:id="@+id/et_phone"
28.        android:layout_width="0dp"
29.        android:layout_height="wrap_content"
30.        android:layout_marginStart="8dp"
31.        android:layout_marginTop="68dp"
32.        android:layout_marginEnd="16dp"
33.        android:ems="10"
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
34.         android:fontFamily="monospace"
35.         android:hint="@string/phone_hint"
36.         android:inputType="phone"
37.         app:layout_constraintEnd_toEndOf="parent"
38.         app:layout_constraintHorizontal_bias="0.0"
39.         app:layout_constraintStart_toEndOf="@+id/iv_phone"
40.         app:layout_constraintTop_toBottomOf="@+id/appName" />
41.
42.     <Button
43.         android:id="@+id/btn_send"
44.         android:layout_width="0dp"
45.         android:layout_height="wrap_content"
46.         android:layout_marginStart="16dp"
47.         android:layout_marginTop="92dp"
48.         android:layout_marginEnd="16dp"
49.         android:background="#FFB300"
50.         android:backgroundTint="#5E35B1"
51.         android:fontFamily="monospace"
52.         android:text="@string/btn1_text"
53.         android:textColor="#FFFFFF"
54.         android:textSize="22sp"
55.         android:textStyle="bold"
56.         app:layout_constraintEnd_toEndOf="parent"
57.         app:layout_constraintHorizontal_bias="0.0"
58.         app:layout_constraintStart_toStartOf="parent"
59.         app:layout_constraintTop_toBottomOf="@+id/et_mssg" />
60.
61.     <ImageView
62.         android:id="@+id/iv_phone"
63.         android:layout_width="@dimen/img_dim"
64.         android:layout_height="@dimen/img_dim"
65.         android:layout_marginStart="16dp"
66.         android:layout_marginTop="68dp"
67.         android:background="#FFFFFF"
68.         android:backgroundTint="#FFFFFF"
69.         app:layout_constraintStart_toStartOf="parent"
70.         app:layout_constraintTop_toBottomOf="@+id/appName"
71.         app:srcCompat="@android:drawable/stat_sys_phone_call"
72.         app:tint="#5E35B1" />
73.
74.     <ImageView
75.         android:id="@+id/iv_mssg"
76.         android:layout_width="@dimen/img_dim"
77.         android:layout_height="@dimen/img_dim"
78.         android:layout_marginStart="16dp"
79.         android:layout_marginTop="40dp"
80.         android:background="#FFFFFF"
81.         android:backgroundTint="#FFFFFF"
```

## Assignment 2:

Q1 Create an app implementing dialog box interaction.

Q2 Develop an app to send SMS to other devices from you app.

```
82.         app:layout_constraintStart_toStartOf="parent"
83.         app:layout_constraintTop_toBottomOf="@+id/iv_phone"
84.         app:srcCompat="@android:drawable/stat_notify_chat"
85.         app:tint="#5E35B1" />
86.
87.     <TextView
88.         android:id="@+id/appName"
89.         android:layout_width="0dp"
90.         android:layout_height="wrap_content"
91.         android:layout_marginTop="44dp"
92.         android:fontFamily="monospace"
93.         android:text="@string/appTitle"
94.         android:textAlignment="center"
95.         android:textColor="#7CB342"
96.         android:textSize="24sp"
97.         android:textStyle="bold"
98.         app:layout_constraintEnd_toEndOf="parent"
99.         app:layout_constraintHorizontal_bias="0.0"
100.        app:layout_constraintStart_toStartOf="parent"
101.        app:layout_constraintTop_toTopOf="parent" />
102.
103.    </androidx.constraintlayout.widget.ConstraintLayout>
```

## Snapshots:

