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Course: MCS 272 Mobile Application (Lab 01)

Output:

1. Welcome Screen



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2. Toast button clicked.



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TOAST COUNT

TOAST COUNT

Note: The color of the count changes for every onclick performed on the count button. It is achieved by generating different RGB integer values using Random.

3. Count button clicked.

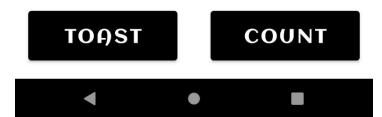


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4.Count button clicked (6th time).



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TOAST COUNT

5.Count button clicked (19th time).



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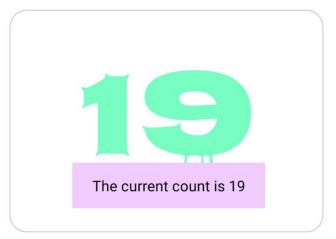
6. Toast button clicked.

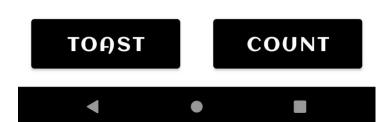


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The code used in the Main Activity and XML layout is attached below for reference.

```
1 package com.example.hellotoast;
2
 3 import androidx.appcompat.app.AppCompatActivity;
4
5 import android.graphics.Color;
6 import android.os.Bundle;
7 import android.view.Gravity;
8 import android.view.View;
9 import android.widget.TextView;
10 import android.widget.Toast;
11
12 import java.util.Random;
13
14 public class MainActivity extends AppCompatActivity {
15
16
       private int count=0;
17
       private TextView disp;
       @Override
18
       protected void onCreate(Bundle savedInstanceState) {
19
           super.onCreate(savedInstanceState);
20
           setContentView(R.layout.activity main);
21
22
           disp = (TextView) findViewById(R.id.display);
23
       }
       public void showToast(View view) {
24
25
           TextView text;
26
           Toast toast = Toast.makeText(this, "The current
   count is "+Integer.toString(count), Toast.LENGTH_SHORT);
27
           view = toast.getView();
           text = (TextView) view.findViewById(android.R.id.
28
  message);
29
           text.setTextColor(getResources().getColor(R.color.
   black));
           text.setTextSize(18);
30
           view.setBackgroundColor(Color.parseColor("#f2ccff"
31
   ));
32
           toast.setGravity(Gravity.CENTER, 0, 500);
33
           toast.show();
34
       }
35
36
       public void counter(View v) {
37
           count++;
           if (disp != null) {
38
               Random rnd = new Random();
39
               disp.setTextSize(150);
40
41
               int color = Color.rgb(rnd.nextInt(256), rnd.
   nextInt(256), rnd.nextInt(256));
```

```
disp.setTextColor(color);
42
               disp.setText(Integer.toString(count));
43
44
           }
45
       }
46 }
```

```
1 <?xml version="1.0" encoding="utf-8"?>
 2 <androidx.constraintlayout.widget.ConstraintLayout xmlns:</pre>
   android="http://schemas.android.com/apk/res/android"
3
       xmlns:app="http://schemas.android.com/apk/res-auto"
       xmlns:tools="http://schemas.android.com/tools"
4
 5
       android:layout_width="match_parent"
6
       android:layout height="match parent"
7
       android:background="#ffffff"
       tools:context=".MainActivity">
8
9
10
       <TextView
           android:id="@+id/textView3"
11
           android:layout width="167dp"
12
           android:layout height="31dp"
13
           android:layout marginTop="36dp"
14
           android:fontFamily="sans-serif"
15
           android:text="Rajkumar B L"
16
           android:textColor="#000000"
17
           android:textSize="24sp"
18
           app:layout_constraintEnd_toEndOf="parent"
19
           app:layout constraintHorizontal bias="0.515"
20
21
           app:layout_constraintStart_toEndOf="@+id/imageView"
22
           app:layout constraintTop toBottomOf="@+id/textView"
    />
23
24
       <TextView
25
           android:id="@+id/textView4"
           android:layout width="167dp"
26
           android:layout height="31dp"
27
           android:layout marginTop="16dp"
28
           android:fontFamily="sans-serif"
29
           android:text="2MCS - 2021"
30
           android:textColor="#000000"
31
           android:textSize="24sp"
32
33
           app:layout constraintEnd toEndOf="parent"
           app:layout_constraintHorizontal bias="0.515"
34
35
           app:layout_constraintStart_toEndOf="@+id/imageView"
           app:layout_constraintTop_toBottomOf="@+id/textView2
36
    />
37
       <TextView
38
           android:id="@+id/textView5"
39
           android:layout_width="167dp"
40
           android:layout height="31dp"
41
           android:layout_marginTop="16dp"
42
           android:fontFamily="sans-serif"
43
```

```
android:text="raj@chtuni.in"
44
45
           android:textColor="#000000"
           android:textSize="24sp"
46
47
           app:layout constraintBottom toTopOf="@+id/display"
           app:layout constraintEnd toEndOf="parent"
48
49
           app:layout_constraintHorizontal_bias="0.515"
50
           app:layout constraintStart toEndOf="@+id/imageView"
51
           app:layout constraintTop toBottomOf="@+id/textView4
52
           app:layout constraintVertical bias="0.0" />
53
54
       <TextView
           android:id="@+id/textView2"
55
           android:layout width="167dp"
56
           android:layout_height="31dp"
57
           android:layout_marginTop="16dp"
58
           android:fontFamily="sans-serif"
59
           android:text="2047120"
60
           android:textColor="#000000"
61
           android:textSize="24sp"
62
63
           app:layout constraintEnd toEndOf="parent"
64
           app:layout_constraintHorizontal_bias="0.515"
           app:layout_constraintStart_toEndOf="@+id/imageView"
65
           app:layout constraintTop toBottomOf="@+id/textView3
66
   " />
67
68
       <Button
69
           android:id="@+id/count"
           android:layout_width="180dp"
70
           android:layout height="72dp"
71
           android:layout marginEnd="16dp"
72
           android:layout_marginRight="16dp"
73
           android:layout marginBottom="16dp"
74
           android:fontFamily="@font/aclonica"
75
           android:onClick="counter"
76
77
           android:text="Count"
78
           android:textSize="24sp"
           app:backgroundTint="#000000"
79
           app:layout constraintBottom toBottomOf="parent"
80
           app:layout constraintEnd toEndOf="parent"
81
           app:layout constraintHorizontal bias="1.0"
82
           app:layout_constraintStart_toEndOf="@+id/toast" />
83
84
85
       <Button
           android:id="@+id/toast"
86
           android:layout width="180dp"
87
```

```
android:layout height="72dp"
88
89
            android:layout marginStart="16dp"
            android:layout marginLeft="16dp"
 90
            android:layout_marginBottom="16dp"
91
            android:fontFamily="@font/aclonica"
 92
93
            android:onClick="showToast"
94
            android:text="Toast"
            android:textSize="24sp"
 95
            app:backgroundTint="#000000"
96
            app:layout constraintBottom toBottomOf="parent"
97
            app:layout constraintStart toStartOf="parent" />
98
99
100
        <TextView
101
            android:id="@+id/textView"
            android:layout width="400dp"
102
            android:layout height="53dp"
103
            android:layout_marginTop="16dp"
104
            android:fontFamily="@font/aclonica"
105
            android:gravity="center"
106
            android:text="MCS 272 - LAB 01"
107
108
            android:textAppearance="@style/TextAppearance.
    AppCompat.Display1"
109
            android:textColor="#000000"
            android:textSize="40sp"
110
            app:layout_constraintBottom_toTopOf="@+id/display"
111
            app:layout constraintEnd toEndOf="parent"
112
            app:layout constraintHorizontal bias="0.454"
113
114
            app:layout constraintStart toStartOf="parent"
            app:layout constraintTop toTopOf="parent"
115
116
            app:layout constraintVertical bias="0.0" />
117
118
        <ImageView</pre>
            android:id="@+id/imageView"
119
            android:layout_width="215dp"
120
            android:layout height="195dp"
121
            android:layout marginTop="24dp"
122
123
            app:layout constraintBottom toTopOf="@+id/display"
            app:layout constraintEnd toEndOf="parent"
124
125
            app:layout constraintHorizontal bias="0.071"
            app:layout constraintStart toStartOf="parent"
126
            app:layout_constraintTop toBottomOf="@+id/textView
127
            app:layout constraintVertical bias="0.333"
128
            android:src="@drawable/bw" />
129
130
131
        <TextView
```

```
android:id="@+id/display"
132
133
            android:layout width="379dp"
            android:layout height="269dp"
134
            android:background="@drawable/customborder"
135
            android:ems="10"
136
137
            android:fontFamily="@font/nosifer"
138
            android:gravity="center"
139
            android:inputType="number"
            android:text="Welcome"
140
            android:textColor="#6908BD"
141
            android:textColorHighlight="#FFFFFF"
142
            android:textColorHint="#CA00FF"
143
            android:textSize="50sp"
144
            app:layout constraintBottom toBottomOf="parent"
145
            app:layout constraintEnd toEndOf="parent"
146
            app:layout constraintHorizontal bias="0.444"
147
            app:layout constraintStart toStartOf="parent"
148
            app:layout constraintTop toTopOf="parent"
149
            app:layout constraintVertical bias="0.701" />
150
151
152 </androidx.constraintlayout.widget.ConstraintLayout>
```