

# CHANDIGARH UNIVERSITY UNIVERSITY INSTITUTE OF NGINEERING DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



Submitted To:			
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20BCS9258			
20BCS_KRG_DM-1 Group A			
Mobile Application Development Lab			
20CSP-356			
CSE			
06			

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# Experiment – 1.3

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**Branch:** CSE **Section/Group:** 20BCS\_KRG\_DM-G1 **Semester:** 06 **Date of Performance:** 09/03/2023

**Subject Name:** Mobile Application Development Lab **Subject Code:** 20CSP-356

## 1. Aim/Overview of the practical:

Create Application by Using Widgets

#### 2. Task to be done:

To Create Application by Using Widgets and understand the specific requirements, possibilities and challenges when developing a mobile context.

## 3. System Requirements:

The required tools to develop Android applications are open source and can be downloaded from the Web. Following is the list of software's you will need before you start your Android application programming.

- > Android Studio .exe file
- > Java JDK5 or later version
- ➤ Java Runtime Environment (JRE) 6 Android Studio

### 4. Steps of Experiment:

In this experiment we are creating an alert on button. If we press the button, we will get two option whether we want to exit from application or not.

**Step 01:** Now, start Android Studio app and start new project as "Experiment03" and select activity as "Empty Activity" as shown below and enter activity details such as activity name, package name, save location, language as Java, minimum SDK and then select Finish.

**Step 02:** New window will open with MyActivity.java file, our new project is started as shown below:

#### Code:

#### MainActivity.java:

```
package com.example.experiment03;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.content.DialogInterface;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    Button show;
    AlertDialog.Builder builder;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        show = findViewById(R.id.btnShow);
        builder = new AlertDialog.Builder(this);
        show.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                builder.setCancelable(false);
                builder.setMessage("Are you sure you want to exit?")
                         .setPositiveButton("Yes", new
DialogInterface.OnClickListener() {
                            @Override
                            public void onClick(DialogInterface
dialog, int which) {
                                 finish();
                             }
                         .setNegativeButton("No", new
DialogInterface.OnClickListener() {
                            @Override
                            public void onClick(DialogInterface
dialog, int which) {
                                 dialog.cancel();
                        });
                AlertDialog alert = builder.create();
                alert.setTitle("Exit");
                alert.show();
```

```
});
}
```

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#### acticity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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"
   android:orientation="vertical"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/etName"
        android:layout width="146dp"
        android:layout height="36dp"
        android:layout marginStart="132dp"
        android:layout marginTop="115dp"
        android:layout marginEnd="133dp"
        android:layout marginBottom="55dp"
        android:text="@string/name"
        android:textSize="20sp"
        app:layout constraintBottom toTopOf="@+id/etUID"
        app:layout constraintEnd toEndOf="parent"
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toTopOf="parent" />
    <TextView
        android:id="@+id/etUID"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout marginStart="152dp"
        android:layout marginTop="55dp"
        android:layout marginEnd="153dp"
        android:layout marginBottom="46dp"
        android: text="@string/UID"
        android: textSize="20sp"
        app:layout_constraintBottom_toTopOf="@+id/btnShow"
        app:layout constraintEnd toEndOf="parent"
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toBottomOf="@+id/etName"
        tools:text="20BCS9258" />
    <Button
        android:id="@+id/btnShow"
        android:layout width="wrap content"
        android:layout height="wrap content"
```

```
android:layout_marginStart="101dp"
android:layout_marginTop="18dp"
android:layout_marginEnd="102dp"
android:layout_marginBottom="404dp"
android:text="@string/button"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/etUID" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

#### string.xml:

```
Ejle Edit View Navigate Code Refactor Build Run Tools Git Window Help Experiment03 - MainActivity.java (Experiment03.app.main)
                                                                                                                \textbf{Experiment03} \; \rangle \; \textbf{app} \; \rangle \; \text{src} \; \rangle \; \; \textbf{main} \; \rangle \; \; \text{java} \; \rangle \; \; \text{com} \; \; \rangle \; \; \text{example} \; \rangle \; \; \text{experiment03} \; \rangle \; \; \textcircled{\textbf{@}} \; \; \text{MainActivity}
     🛎 Android 🔻 😌 🖫 💠 — 🏭 activity_main.xml × 👛 strings.xml × 🧟 MainActivity,java ×
                                                            package com.example.experiment03;
      📭 арр
                                                         2
3 simport ...
      > manifests
                                                          10 public class MainActivity extends AppCompatActivity {

    MainActivity

                NewAppWidget
    © NewAppWidget

> □ com.example.experiment03 (androidTest)

> □ □ com.example.experiment03 (test)

13

> □ java (generated)

14
                                                                         Button show;
                                                                        AlertDialog.Builder builder;
                                                          15
                BuildConfig
                                                                      protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.octivity_main);
    show = findViewById(R.id.btnShow);
    builder = new AlertDialog.Bullder( context this);
    show.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            builder.setCancelabla(file);
        }
                                                           17 ●↑ protected void onCreate(Bundle savedInstanceState) {
> 🛅 mipmap
         ∨ 🖿 values

attrs.xml
                a colors.xml
           dimens.xml
strings.xml
             > 🛅 themes (4)
                                                                                           builder.setMessage("Are you sure you want to exit?")
                                                                                                    .setPositiveButton( text: "Yes", new DialogInterface.OnClickListener() {
          res (generated)
    > A Gradle Scripts
                                                                                                                                                                                                                                                                 Emulator
                                                                                                           public void onClick(DialogInterface dialog, int which) {
                                                                                                                finish();
                                                                                                          }
                                                                                                                                                                                                                                                                  Device
                                                                                                      .setNegativeButton( text: "No", new DialogInterface.OnClickListener() {
                                                                                                          public void onClick(DialogInterface dialog, int which) {
                                                                                                          dialog.cancel();
}
   P Git ▶ Run ≡ TODO ● Problems ■ Terminal ■ App Inspection ■ Logicat ♥ App Quality Insights ● Services < Build 1/1 Profiler
                                                                                                                                                                                                                       10:1 LF UTF-8 4 spaces 12 master 🚡 🖽
```

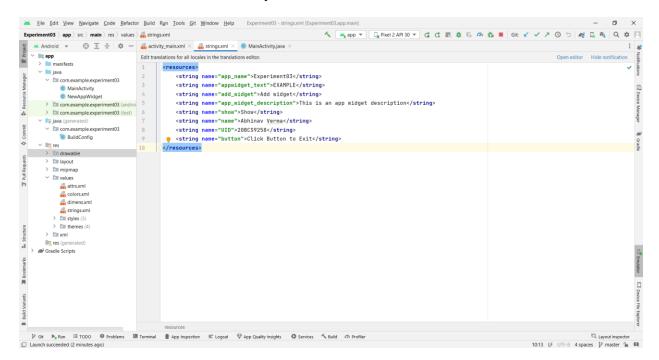
string.xml file screenshot

Eile Edit View Navigate Code Refactor Build Ryn Iools Git Window Help Experiment03 - activity\_main.xml [Experiment03.app.main] Experiment03 > app > src > main > res > layout > data activity\_main.xml 🔺 Android 🔻 💮 😇 💢 💠 — 🚛 activity\_main.xml 🗴 🚮 strings.xml × 🌀 MainActivity.java × V 📭 арр ■Code ■ Split ■ Design > manifests <?xml version="1.0" encoding="utf-8"?> java

com.example.experiment03 2 © <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" android:orientation="vertical" tools:context=".HainActivity"> > com.example.experiment03 (androi 5 > com.example.experiment03 (test) 6 BuildConfig 10 <TextView
11 android:id="0+id/etName"

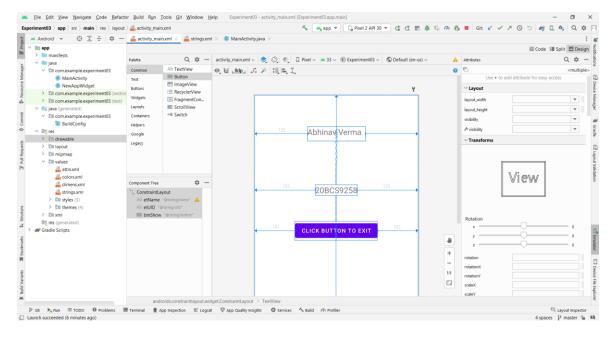
11 width="146d > 🛅 layout android:layout\_width="146dp" > 🛅 mipmap android:layout\_height="36dp" android:layout\_height="36dp"
android:layout\_marginStart="132dp"
android:layout\_marginTop="115dp"
android:layout\_marginTod="13dp"
android:layout\_marginBottom="55dp"
android:layout\_marginBottom="55dp"
android:text="@string/name"
android:textSize="20sp"
app:layout\_constraintBottom\_toTop0f="@+id/etUID"
app:layout\_constraintEnd\_toEnd0f="parent"
app:layout\_constraintStart\_toStartOf="parent" attrs.xml acolors.xml strings.xml > **=** styles (3) 18 19 20 21 res (generated) > @ Gradle Scripts 22 23 app:layout\_constraintStart\_toStartOf="parent" app:layout constraintTop toTopOf="parent" /> 24 25 26 27 Device <TextView android:id="@+id/etUID" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="152dp" Git 🌬 Run 🗏 TODO 🌑 Problems 💹 Terminal 🖠 App Inspection 🗉 Logcat 🖤 App Quality Insights 🔘 Services 🔨 Build 💋 Profiler 11:33 4 spaces 12 master 🚡 🖽

# activity\_main.xml file screenshot



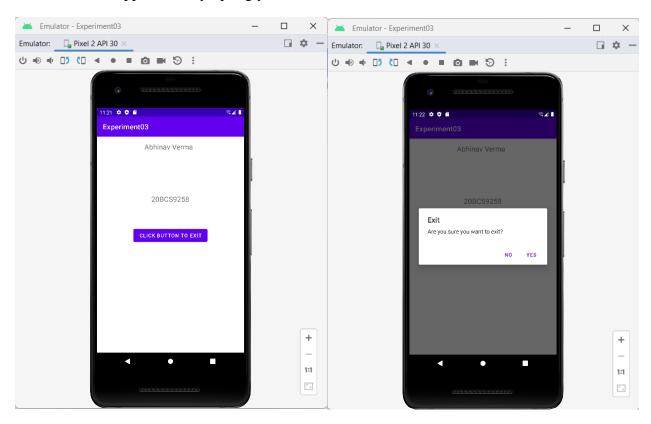
string.xml file screenshot

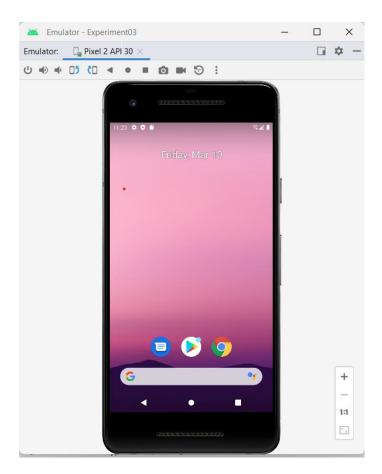
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activity\_main.xml file (design format) screenshot

**Step 3:** Now, if we run the application, it will show as below and on clicking button we can exit application by opting yes:





As we can see from above screenshots, we can exit from our application by clicking on button.

# **Learning Outcomes:**

- 1. Learned how to add new alerts in our application.
- 2. Learned to add buttons and textview.
- 3. Learned more about Android Studio and its components.