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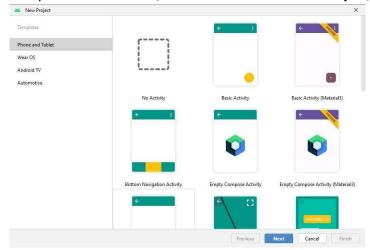
PRACTICAL:1

<u>AIM:</u> Introduction to Android, Introduction to Android Studio IDE, Creating a Project, Creating Android Virtual device, Android Application Overview. Simple "Hello World" program.

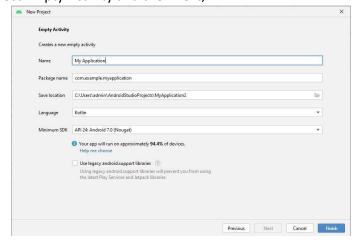
SOURCE CODE:

Hello World Program:

Launch your android studio, click on File>>New>>New Project,



Select Empty Activity and then next,



Provide your Application name and select language as Kotlin and then click on finish.

After few minutes your project will be ready. activityMain.xml:

```
<?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/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

<a href="Arrow of the content of the co
```

MainActivity.kt:

```
package com.example.prac1
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
    }
}
```

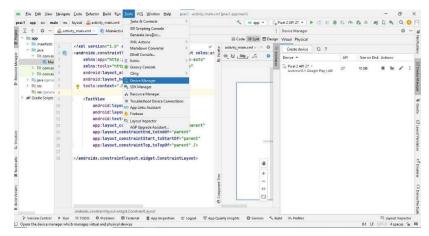
Output:



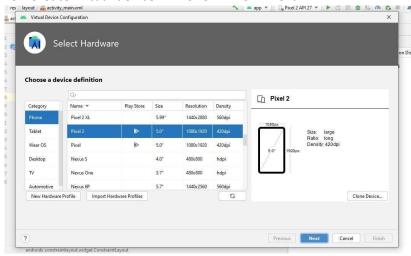
Creating Android Virtual device:

To open Device Manager:

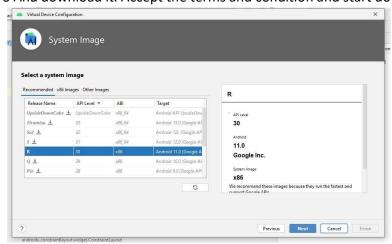
Click on tools>>DeviceManager



Click on Create virtual device>>Phone>>Pixel>>Next



Select S And download it. Accept the terms and condition and start downloading.



After downloading click on finish your virtual device is created.

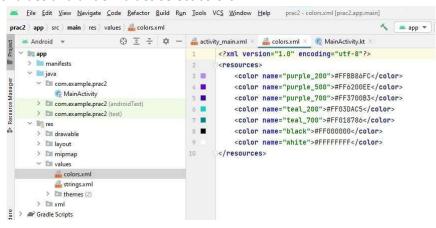
PRACTICAL:2

<u>AIM:</u> Android Resources: (Color, Theme, String, Drawable, Dimension, Image).

SOURCE CODE:

Color:

Launch your android studio and create new project. Under Android select res and under res select values and under values select colors.xml.

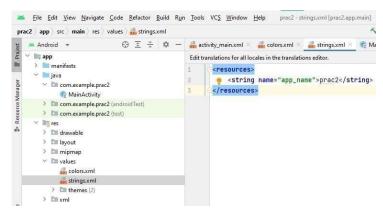


Add you color in colors.xml.

colors.xml:

String:

Launch your android studio and create new project. Under Android select res and under res select values and under values select strings.xml.



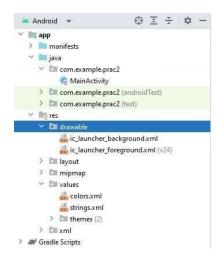
Add your string in strings.xml.

strings.xml:

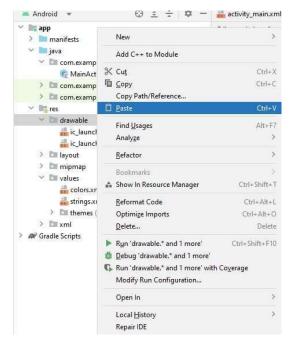


Drawable:

1. Right click on drawable folder



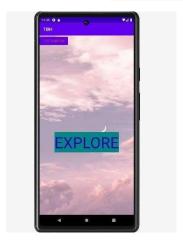
- 2. Copy the image if you want to create image drawable
- 3. Paste that image file inside the drawable folder



Note: to create drawable resource, right click on drawable folder and select drawable resource file.

Dimension, Image: activity Main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
                                                                             102 A4 ~ v
                                   <androidx.constraintlayout.widget.ConstraintLayout xmlns</pre>
                                      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:background="@drawable/img_3"
                                      tools:context=".MainActivity">
                                      <TextView
                                          android:layout_width="wrap_content"
                                          android: layout_height="wrap_content"
                                          android:background="@color/teal_700"
                                          android:text="EXPLORE"
                                          android:textColor="@color/purple_700"
                                          android:textSize="67dp"
                                          app:layout constraintBottom toBottomOf="parent"
                                          app:layout_constraintEnd_toEndOf="parent"
MainActivity.kt:
                                          app:layout_constraintStart_toStartOf="parent"
                                          app:layout_constraintTop_toTopOf="parent"
                                          app:layout_constraintVertical_bias="0.607" />
      package com.example.prac2
      import androidx.appcompat.app.AppCompatActivity
       import android.os.Bundle
      class MainActivity : AppCompatActivity() {
           override fun onCreate(savedInstanceState: Bundle?) {
               super.onCreate(savedInstanceState)
               setContentView(R.layout.activity_main)
```



Using ImageView: activityMain.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
    xmlns:app="http://schemas.android.com/apk/res-auto"
                                                                           <Button
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
                                                                                android:id="@+id/button"
    android:orientation="vertical"
                                                                                android: layout_width="wrap_content"
    android:layout_height="match_parent"
                                                                                android:layout_height="wrap_content"
    tools:context=".MainActivity">
                                                                                tools:layout_editor_absoluteX="143sp"
                                                                                tools:layout_editor_absoluteY="435sp"
       android:layout_width="wrap_content"
                                                                                android:text="LET'S BEGIN!!"
       android:layout_height="wrap_content"
       android:background="@color/teal_700"
                                                                                android:textColor="@color/orange" />
       android:text="EXPLORE"
                                                                           <ImageView
       android:textColor="@color/purple_700"
                                                                                android:layout_width="306dp"
       android:textSize="67sp"
                                                                                android:layout_height="400dp"
       app:layout_constraintBottom_toBottomOf="parent"
       app:layout_constraintEnd_toEndOf="parent"
                                                                                android:src="@drawable/imgp2"
       app:layout_constraintStart_toStartOf="parent"
                                                                                android:layout_marginLeft="55dp"/>
       app:layout_constraintTop_toTopOf="parent" />
                                                                       </LinearLayout>
    <Button
       android:id="@+id/button"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       tools:layout_editor_absoluteX="143sp"
       tools:layout_editor_absoluteY="435sp"
```



<u>AIM:</u> Multiple Activities <u>SOURCE</u> <u>CODE:</u>

activityMain.xml:

```
<ImageView
        android:layout_width="200dp"
        android: layout_height="200dp"
       android:src="@drawable/bulb1"
        android:layout_gravity="center" />
        android:layout_width="wrap_content"
       android: layout_height="wrap_content"
        android:text="This is Home Page.."
       android:textSize="25sp"
        android:layout_gravity="center_horizontal" />
    <Button
        android: layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/second_page"
        android:text="First Page"
        android:layout_gravity="center_horizontal"
       android:layout_marginTop="10dp" />
    <Button
       android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/third_page"
        android:text="Second Page"
        android:layout_gravity="center_horizontal"
       android:layout_marginTop="10dp" />
</LinearLayout>
```

MainActivity.kt:

```
package com.example.prac3a
import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Button
class MainActivity : AppCompatActivity() {
   override fun onCreate(savedInstanceState: Bundle?) {
       super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
       val first_page=findViewById<Button>(R.id.second_page);
       first_page.setOnClickListener { it View!
            val intent=Intent( packageContext this, first_activity::class.java)
            startActivity(intent)
       val second_page=findViewById<Button>(R.id.third_page);
       second_page.setOnClickListener { it View!
            val intent=Intent( packageContext this, second_activity::class.java)
            startActivity(intent)
```

First_Activity.xml:

```
<ImageView
        android: layout_width="200dp"
        android:layout_height="200dp"
        android:src="@drawable/bulb2'
        android:layout_gravity="center" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is First Page.."
        android:textSize="25sp"
        android:layout_gravity="center_horizontal" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/home_page"
        android:text="Home Page"
       android:layout_gravity="center_horizontal"
        android:layout_marginTop="10dp" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/third_page'
        android:text="Third Page"
        android:layout_gravity="center_horizontal"
        android:layout_marginTop="10dp" />
</LinearLayout>
```

Activity_First.kt:

```
package com.example.prac3a
import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Button
class first_activity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_first)
        val home_page=findViewById<Button>(R.id.home_page);
        home_page.setOnClickListener { it: View!
           val intent=Intent( packageContext: this, MainActivity::class.java)
           startActivity(intent)
        val third_page=findViewById<Button>(R.id.third_page);
        third_page.setOnClickListener { it: View!
           val intent=Intent( packageContext this, second_activity::class.java)
            startActivity(intent)
```

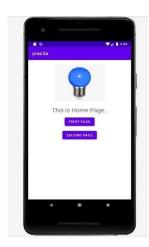
Second_Activity.xml:

```
<ImageView
   android:layout_width="200dp"
    android:layout_height="200dp"
   android:src="@drawable/bulb3"
   android:layout_gravity="center" />
<TextView
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
   android:text="This is Second Page.."
   android:textSize="25sp"
   android:layout_gravity="center_horizontal" />
<Button
   android:layout_width="wrap_content"
   android: layout_height="wrap_content"
   android:id="@+id/home_page"
   android:text="Home Page"
   android:layout_gravity="center_horizontal"
   android:layout_marginTop="10dp" />
<Button
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
   android:id="@+id/first_page"
   android:text="First Page"
   android:layout_gravity="center_horizontal"
 android:layout_marginTop="10dp" />
```

Activity_Second.kt:

```
package com.example.prac3a
import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Button
class second activity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
         super.onCreate(savedInstanceState)
         setContentView(R.layout.activity_second)
         val home_page=findViewById<Button>(R.id.home_page);
        home_page.setOnClickListener { it: View!
            val intent=Intent( packageContext this, MainActivity::class.java)
             startActivity(intent)
        val first_page=findViewById<Button>(R.id.first_page);
        first_page.setOnClickListener { it: View!
            val intent=Intent( packageContext: this,first_activity::class.java)
             startActivity(intent)
```

OUTPUT:







AIM: Text passing SOURCE CODE:

activityMain.xml:

```
<ImageView
   android:layout_width="200dp"
   android:layout_height="200dp"
   android:src="@drawable/androidpp"
   android:layout_gravity="center" />
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
    android:text="This is Home Page.."
   android:textSize="25sp"
   android:layout_gravity="center_horizontal" />
<EditText
   android:id="@+id/name"
   android:layout_width="match_parent"
   android: layout_height="wrap_content"
    android:hint="Enter Name"
    android:minHeight="48dp" />
<EditText
   android:id="@+id/Class"
   android:layout_width="match_parent"
   android:layout_height="wrap_content"
    android:hint="Enter Class"
   android:minHeight="48dp" />
<Button
   android:layout_width="wrap_content"
   android: layout_height="wrap_content"
   android:id="@+id/Submit"
   android:layout_gravity="center_horizontal"
android:text="SUBMIT" />
```

MainActivity.kt:

```
package com.example.prac3b
import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import java.util.jar.Attributes.Name
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val submit=findViewById<Button>(R.id.Submit)
        submit.setOnClickListener { it View
            callActivity()
    private fun callActivity(){
        val name=findViewById<EditText>(R.id.name)
        val std=findViewById<EditText>(R.id.Class)
        val Name=name.<u>text</u>.toString()
        val Std=std.<u>text</u>.toString()
        val intent=Intent( packageContext this,first_activity::class.java).also { it Intent
            it.putExtra( name: "Name", Name)
            it.putExtra( name: "STD", Std)
            startActivity(it)
```

FirstActivity.xml:

```
<ImageView
    android:layout_width="200dp"
    android:layout_height="200dp"
   android:src="@drawable/androidp1"
   android:layout_gravity="center" />
   android:layout_width="wrap_content"
    android:layout_height="wrap_content"
   android:text="This is First Page.."
   android:textSize="25sp"
   android:layout_gravity="center_horizontal" />
<TextView
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
   android:id="@+id/text1"
   android:textSize="25sp"
   android:layout_gravity="center_horizontal" />
<TextView
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
    android:id="@+id/text2"
   android:textSize="25sp"
   android:layout_gravity="center_horizontal" />
```

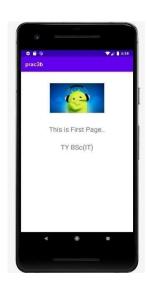
activityFirst.kt:

```
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.TextView
import java.util.jar.Attributes.Name

class first_activity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_first)
        val Name=intent.getStringExtra( name: "NAME")
        val Std=intent.getStringExtra( name: "STD")
        val txt1=findViewById<TextView>(R.id.text1).apply { text=Name }
        val txt2=findViewById<TextView>(R.id.text2).apply { text=Std }
}
```







AIM: Programs related to different Layouts(Linear, Relative Layout)

SOURCE CODE: Constraint

Layout: activityMain.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
                                                                          app:layout_constraintStart_toStartOf="parent"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
                                                                          app:layout_constraintTop_toTopOf="parent"
   tools:context=".MainActivity">
                                                                          app:layout_constraintVertical_bias="0.643" />
   <TextView
                                                                     <ImageView
      android:id="@+id/textView"
                                                                          android: layout_width="200dp"
      android:layout_width="wrap_content"
                                                                          android:layout_height="200dp"
      android: layout_height="wrap_content"
      android:text="This is Home Page!!!"
                                                                          app:layout_constraintBottom_toTopOf="@+id/textView"
      app:layout_constraintBottom_toBottomOf="parent"
                                                                          app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent"
                                                                          app:layout_constraintHorizontal_bias="0.497"
      app:layout_constraintTop_toTopOf="parent" />
                                                                          app:layout_constraintStart_toStartOf="parent"
   <Button
                                                                          app:layout_constraintTop_toTopOf="parent"
      android:layout width="wrap content"
      android:layout_height="wrap_content"
                                                                          app:layout_constraintVertical_bias="0.544"
      android:layout_marginStart="8dp"
                                                                          android:src="@drawable/house" />
      android:layout_marginTop="16dp"
      android:layout_marginEnd="16dp"
      android: layout marginBottom="16dp"
                                                                </androidx.constraintlayout.widget.ConstraintLayout>
android:text="Click Here..."
      android:textSize="10dp"
      app:layout constraintBottom toBottomOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout constraintHorizontal bias="0.456"
             MainActivity.kt:
              package com.example.prac4
               import androidx.appcompat.app.AppCompatActivity
               import android.os.Bundle
               class MainActivity : AppCompatActivity() {
                   override fun onCreate(savedInstanceState: Bundle?) {
                         super.onCreate(savedInstanceState)
                        setContentView(R.layout.activity_main)
```



LinearLayout(Horizontal):

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:orientation="horizontal"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:src="@drawable/house" />
    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:src="@drawable/bulb2" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="AMP Journal" />
</LinearLayout>
```

Output:



LinearLayout(Vertical):

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:src="@drawable/house" />
    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:src="@drawable/bulb2" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="AMP Journal" />
</LinearLayout>
```

Output:



ListView():

activityMain.xml:



MainActivity.kt:

Output:





GridLayout:

activityMain.xml:

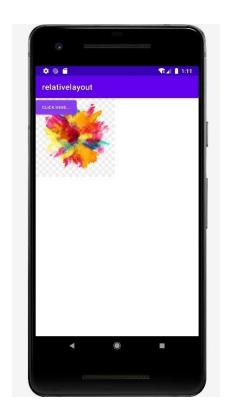
```
<?xml version="1.0" encoding="utf-8"?>
                                                                                        android:layout_row="1"
<GridLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
                                                                                        android:layout_marginTop="15dp"
    xmlns:app="http://schemas.android.com/apk/res-auto"
                                                                                        android:layout_gravity="center_horizontal"
    xmlns:tools="http://schemas.android.com/tools"
                                                                                        android:layout_column="0"
    android:layout_width="match_parent"
                                                                                        android:src="@drawable/bulb1" />
    android:layout_height="match_parent"
                                                                                    <ImageView
    android:layout_margin="15sp"
                                                                                        android:layout_width="123dp"
    android:background="@color/purple_200"
                                                                                        android:layout_height="194dp"
    android:orientation="vertical"
                                                                                        android:layout_row="1"
    tools:context=".MainActivity">
                                                                                        android:layout_column="1"
    <ImageView
                                                                                        android:layout_gravity="center_horizontal"
        android:layout_width="161dp"
                                                                                        android:src="@drawable/bulb2" />
        android:layout_height="165dp"
                                                                                    <ImageView
       android: layout row="0"
                                                                                        android:layout_width="214dp"
        android:layout_marginTop="10dp"
                                                                                        android:layout_height="171dp"
        android:layout_gravity="center_horizontal"
                                                                                        android:layout_row="2"
        android:layout_column="0"
                                                                                        android:layout_gravity="center_horizontal"
        android:src="@drawable/androidpp" />
                                                                                        android:layout_column="0"
    <ImageView
                                                                                        android:src="@drawable/bulb3" />
       android:layout_width="168dp"
                                                                                    <ImageView
        android:layout_height="135dp"
                                                                                        android:layout_width="167dp"
        android:layout_row="0"
                                                                                        android:layout_height="167dp"
       android:layout_column="1"
                                                                                        android:layout_row="2"
       android:layout_gravity="center_horizontal"
                                                                                        android:layout_column="1"
        android:layout_marginTop="10dp"
                                                                                        android:layout_gravity="center_horizontal"
        android:src="@drawable/androidp1" />
                                                                                        android:src="@drawable/house" />
    <ImageView
        android:layout_width="164dp"
                                                                               </GridLavout>
        android:layout_height="169dp"
```

Output:



RelativeLayout: activityMain.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    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:text="Hello World!" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Click here..."
        android:textSize="10dp" />
    <ImageView
        android:layout_width="200dp"
        android:layout_height="200dp"
        android:src="@drawable/bulb3" />
</RelativeLayout>
```



<u>AIM:</u> Alert Box <u>SOURCE</u> CODE:

activityMain.xml:

```
<TextView
   android:layout_width="match_parent"
   android:layout_height="wrap_content"
   android:gravity="center_horizontal"
   android:layout_marginTop="150sp"
   android:textColor="@color/teal_700"
   android:text="ALERT!!!"
   app:layout_constraintBottom_toBottomOf="parent"
   android:textSize="40sp"
   app:layout_constraintEnd_toEndOf="parent"
   app:layout_constraintStart_toStartOf="parent"
   app:layout_constraintTop_toTopOf="parent" />
<TextView
   android:layout_width="match_parent"
   android:textColor="@color/teal_700"
   android: layout_height="wrap_content"
   android:layout_marginTop="50sp"
   android:gravity="center_horizontal"
   android:textSize="30sp"
   android:text="Click the below button" />
   android:id="@+id/next"
   android:layout_gravity="center"
```

MainActivity.kt:

```
package com.example.prac5
import ...
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
       super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val nxt=findViewById<Button>(R.id.next)
        nxt.setOnClickListener { it: View!
            callActivity()
    private fun callActivity(){
        val builder=AlertDialog.Builder( context: this)
        builder.setTitle("Confirmation Required!!")
        builder.setMessage("Are you sure?")
        builder.setPositiveButton( text "CONFIRM", {dialogInterface, i->call()})
        builder.setNegativeButton( text "NO", {dialogInterface, i->})
        builder.show()
    private fun call(){
        val intent=Intent( packageContext: this,First::class.java)
        startActivity(intent)
```

First_activity.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   xmlns:app="http://schemas.android.com/apk/res-auto"
 xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:layout_height="match_parent"
    tools:context=".First">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
       android:layout_marginTop="300sp"
       android:gravity="center_horizontal"
        android:textSize="40sp"
        android:textColor="@color/teal_700"
        android:text="Alert Box has been Displayed..."/>
</LinearLayout>
```

First activity.kt:

```
package com.example.prac5

import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle

class First : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_first)
    }
```

OUTPUT:







Alert on Button Pressed:

activityMain.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android: layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:text="ALERT!!!"
        android:textColor="@color/red"
        android:textSize="50sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
       app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</LinearLayout>
```

MainActivity.kt:

```
package com.example.prac5

import androidx.appcompat.app.AppCompatActivity
import androidx.appcompat.app.AlertDialog

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
    }

override fun onBackPressed() {
    val builder=AlertDialog.Builder(context this)
    builder.setTitle("Exit Alert !!!")
    builder.setMessage("Do you really want to exit ?")
    builder.setPositiveButton(text: "Yes", {dialogInterface,i->finish()})
    builder.setNegativeButton(text: "No", {dialogInterface,i->})
    builder.show()
}
```





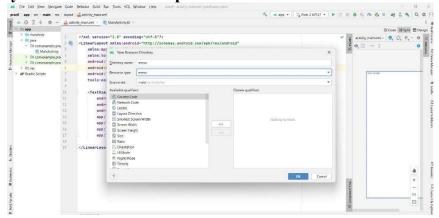
PRACTICAL:6

AIM: Programming menus, dialog **SOURCE**

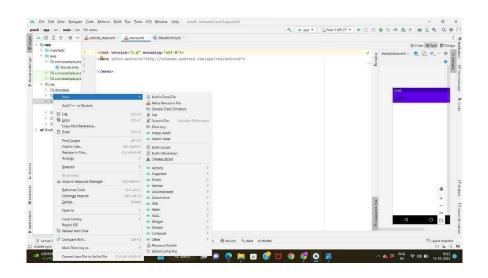
CODE:

Menu:

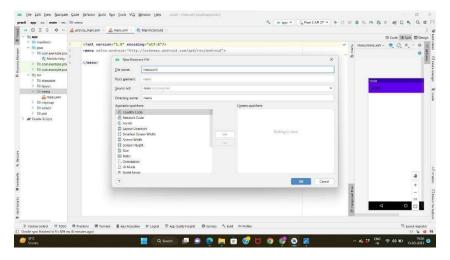
Under Android right click on app select new select android resource directory a new window will open like this



Put menu for both directory name and resource type and then press ok. After that under android menu will appear like above window right click on that



Select menu resource file a new window will open like this



Put file name as menu.xml and press ok

android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="HELLO WORLD!!"

android:textSize="30sp"

android:layout_gravity="center_horizontal"
android:textColor="@color/teal_700"

app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />

Menu.xml:

```
<?xml version="1.0" encoding="utf-8"?>
         <menu xmlns:android="http://schemas.android.com/apk/res/android">
              <item
                    android:title="Contact Us"
                   android:id="@+id/menu1" />
              <item
                    android:title="About Us"
                   android:id="@+id/menu2" />
              <item
                   android:title="Help"
                    android:id="@+id/menu3" />
         </menu>
activityMain.xml:
        <?xml version="1.0" encoding="utf-8"?>
        <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
           xmlns:app="http://schemas.android.com/apk/res-auto"
           xmlns:tools="http://schemas.android.com/tools"
           android:layout_width="match_parent"
           android:orientation="vertical"
           android:layout_height="match_parent"
           tools:context=".MainActivity">
```

</LinearLayout>
MainActivity.kt:

```
package com.example.prac6
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.view.Menu
import android.view.MenuItem
import android.widget.Toast
class MainActivity : AppCompatActivity() {
   override fun onCreate(savedInstanceState: Bundle?) {
       super.onCreate(savedInstanceState)
       setContentView(R.layout.activity_main)
    override fun onCreateOptionsMenu(menu: Menu?): Boolean {
       menuInflater.inflate(R.menu.menu,menu)
       return super.onCreateOptionsMenu(menu)
   override fun onOptionsItemSelected(item: MenuItem): Boolean {
        var optionselected=""
        when (item?.itemId){
           R.id.menu1->optionselected="menu1 selected"
            R.id.menu2->optionselected="menu2 selected"
            R.id.menu3->optionselected="menu3 selected"
        Toast.makeText( context: this, optionselected, Toast.LENGTH_LONG).show()
       return super.onOptionsItemSelected(item)
```

Output:





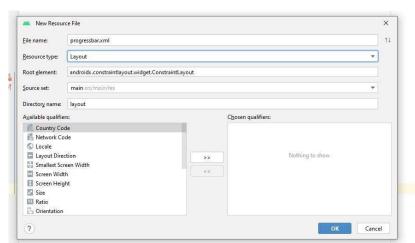


PRACTICAL:7

AIM: Progress Bar

SOURCE CODE:

Under Android right click on app select new select android resource file a new window will open like this, put file name as progressbar.xml and resource type as layout



activityMain.xml:

```
<?xml version="1.0" encoding="utf-8"?>
    <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
        xmlns:app="http://schemas.android.com/apk/res-auto"
        xmlns:tools="http://schemas.android.com/tools"
        android:layout_width="match_parent"
       android:orientation="vertical"
        android:layout_height="match_parent"
        tools:context=".MainActivity">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_horizontal"
            android:id="@+id/text1"
            android:text="Hello World!"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent" />
    </LinearLayout>
                                  package com.example.progressbar
                                  import androidx.appcompat.app.AppCompatActivity
MainActivity.kt:
                                  import android.os.Bundle
                                  import android.widget.TextView
                                  import androidx.appcompat.app.AlertDialog
                                  class MainActivity : AppCompatActivity() {
                                      override fun onCreate(savedInstanceState: Bundle?) {
                                          super.onCreate(savedInstanceState)
                                          setContentView(R.layout.activity_main)
                                          val builder=AlertDialog.Builder( context: this)
                                          val dialogView = layoutInflater.inflate(R.layout.progress_bar, root: null)
                                          val message = dialogView.findViewById<TextView>(R.id.text1)
                                          message. text="Downloading data...."
                                          builder.setView(dialogView)
                                          builder.show()
                                  H
```

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```
<?xml version="1.0" encoding="utf-8"?>
<einearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_height="match_parent">
    <ProgressBar
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/text1"
        android:textSize="30sp"
        android:gravity="center"
        android:text="Downloading text...." />
</LinearLayout>
```



AIM: Explicit Intent **SOURCE CODE:**

activityMain.xml:

```
<TextView
   android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="If you want to continue\n Kindly press the Button!"
   android:layout_marginTop="250sp"
   android:textSize="35sp"
   android:textColor="@color/teal_700"
   android:layout_gravity="center"
   app:layout_constraintBottom_toBottomOf="parent"
   app:layout_constraintEnd_toEndOf="parent"
   app:layout_constraintStart_toStartOf="parent"
   app:layout_constraintTop_toTopOf="parent" />
<Button
   android:id="@+id/redirect"
   android:layout_marginTop="100sp"
    android:textSize="25dp"
   android:layout_gravity="center"
   android: layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Click Here" />
```

MainActivity.kt:

```
package com.example.url_navigation
import ...

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
            setContentView(R.layout.activity_main)
        val red=findViewById<Button>(R.id.redirect)
        red.setOnClickListener { it:View!
            val intent=Intent()
            intent.action=Intent.ACTION_VIEW
            intent.data= Uri.parse( uriString: "https://www.google.co.in/")
            startActivity(intent)
        }
}
```







AIM: Permission

SOURCE CODE:

activityMain.xml

:

Add one in android manifest

```
<uses-permission android:name="android.permission.CAMERA"/>
 <?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
     xmlns:tools="http://schemas.android.com/tools">
     <uses-permission android:name="android.permission.CAMERA"/>
     <application
         android:allowBackup="true"
         android:dataExtractionRules="@xml/data_extraction_rules"
         android:fullBackupContent="@xml/backup_rules"
         android:icon="@mipmap/ic_launcher"
         android:label="practical_8_"
         android:supportsRtl="true"
         android:theme="@style/Theme.Practical_8_"
         tools:targetApi="31">
         <activity
                         The second second second
```

MainActivity.kt:

```
package com.example.practical_8_
import ...

class MainActivity : AppCompatActivity() {
    private val code=123
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        setupPermission()
}

private fun setupPermission(){
    val permission = ContextCompat.checkSelfPermission( context this,android.Manifest.permission.CAMERA)
    if(permission!=PackageManager.PERMISSION_GRANTED){
        makeRequest()
    }
}

private fun makeRequest(){
        ActivityCompat.requestPermissions( activity: this, arrayOf(android.Manifest.permission.CAMERA),code)
}
```

```
override fun onRequestPermissionsResult(
       requestCode: Int,
       permissions: Array<out String>,
        grantResults: IntArray
    ) {
        super.onRequestPermissionsResult(requestCode, permissions, grantResults)
        when(requestCode){
            code->{
                if(grantResults.isEmpty()||grantResults[0]!=PackageManager.PERMISSION_GRANTED){
                    Toast.makeText( context: this, text: "permission denied", Toast.LENGTH_LONG).show()
                }
                else{
                    Toast.makeText( context: this, text: "permission granted", Toast.LENGTH_LONG).show()
           }
       }
}
```

OUTPUT:

