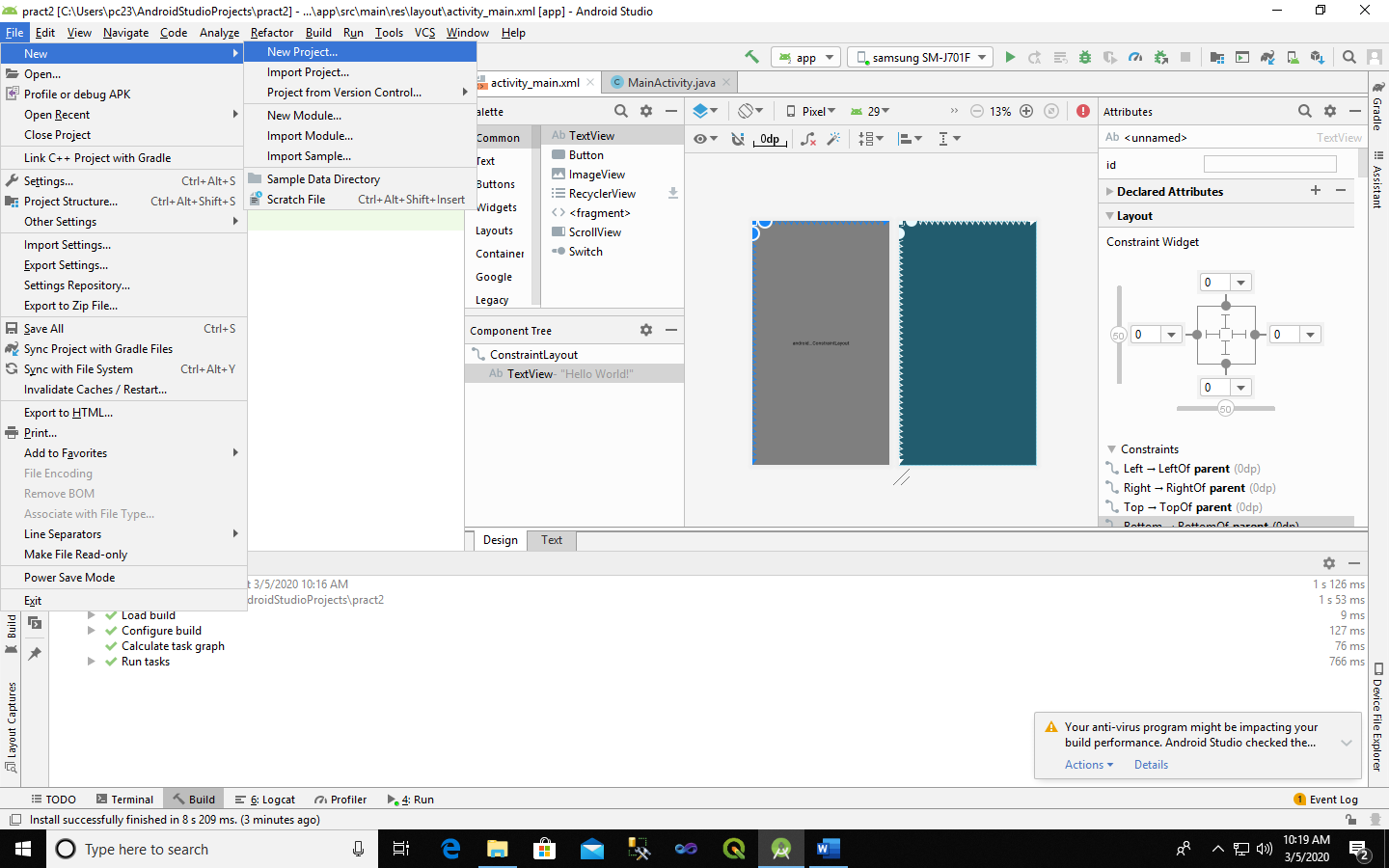
|  |
| --- |
| Description: H:\Uni logo\unilogo1[1].jpg  **UNIVERSITY OF MUMBAI’S**  **Vijayalakshmi Vishwanath Dalvie COLLEGE**  **Talere, dist- sindhudurg**  Department of information technology  2019-2020  **CERTIFICATE**  This to certify that Miss. **Vishakha Santosh Terwankar** of the **T. Y. B.Sc. I. T.** class and Exam seat number **4027409** has satisfactorily carried out the practical work in **Advanced Mobile Programming** as laid down by the University of Mumbai.  This Journal represents her bonafied work for **Semester VI** during the year 2019-2020.  **TEACHER INCHARGE HEAD OF DEPARTMENT** |

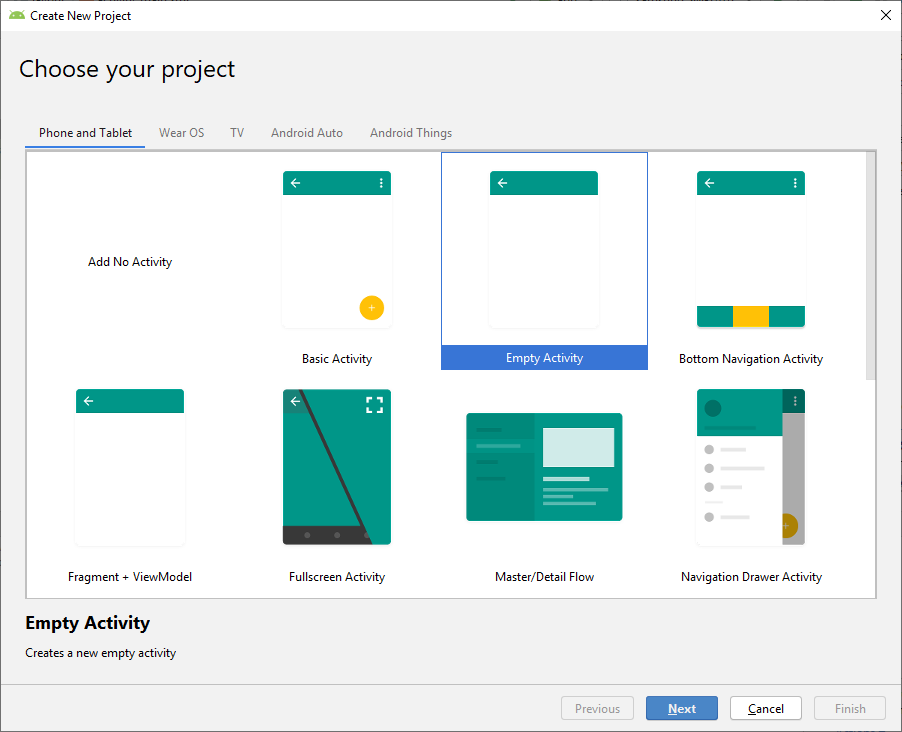
|  |  |  |  |
| --- | --- | --- | --- |
| **INDEX** | | | |
| **Sr. No.** | **Practical Name** | **Date** | **Sign** |
| **1.** | **Introduction to Android, Introduction to Android Studio IDE, Application Fundamentals:** Creating a Project, Android Components, Activities, Services, Content Providers, Broadcast Receivers, Interface overview, Creating Android Virtual device, USB debugging mode, Android Application Overview. Simple “Hello World” program. | 07/12/2019 |  |
| **2.** | **Programming Resources**  Android Resources: (Color, Theme, String, Drawable, Dimension, Image) | 14/12/2019 |  |
| **3.** | **Programming Activities and fragments**  Activity Life Cycle. | 21/12/2019 |  |
| **4.** | **Programs related to different Layouts**  Linear Layout, Relative Layout. | 04/01/2020 |  |
| **5.** | **Programs related to different Layouts**  Frame, Grid View. | 11/01/2020 |  |
| **6.** | **Programming menus.**  Creating Menus. | 01/02/2020 |  |
| **7.** | **Database Programming with SQLite** | 15/02/2020 |  |

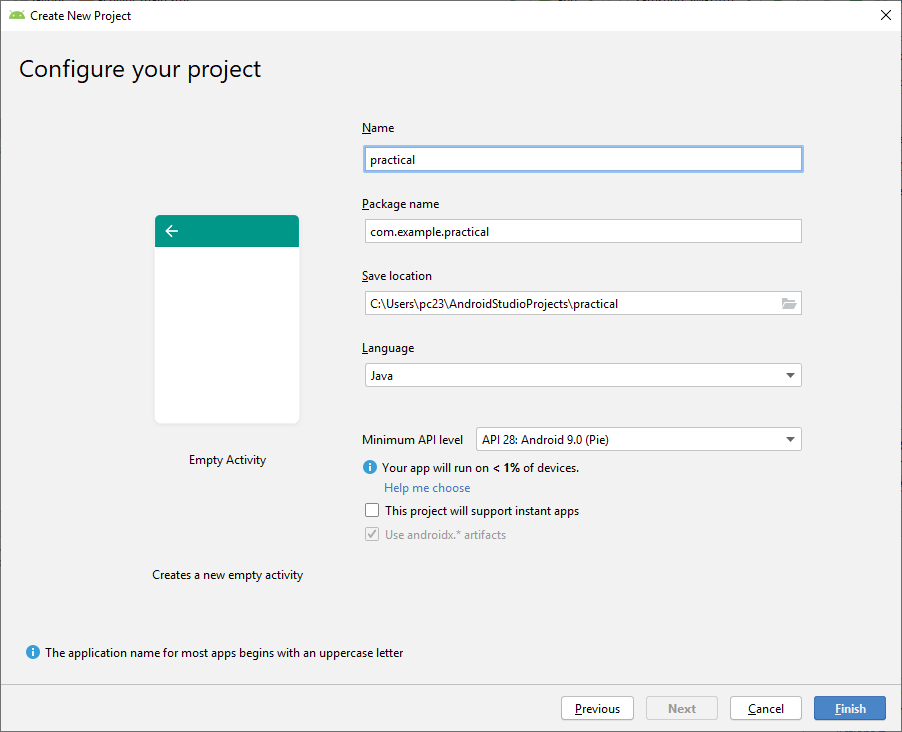
**Practical N0. 01**

Introduction to Android, Introduction to Android Studio IDE, Application Fundamentals: Creating a Project, Android Components, Activities, Services, Content Providers, Broadcast Receivers, Interface overview, Creating Android Virtual device, USB debugging mode, Android Application Overview. Simple “Hello World” program.

**Creating a project:**







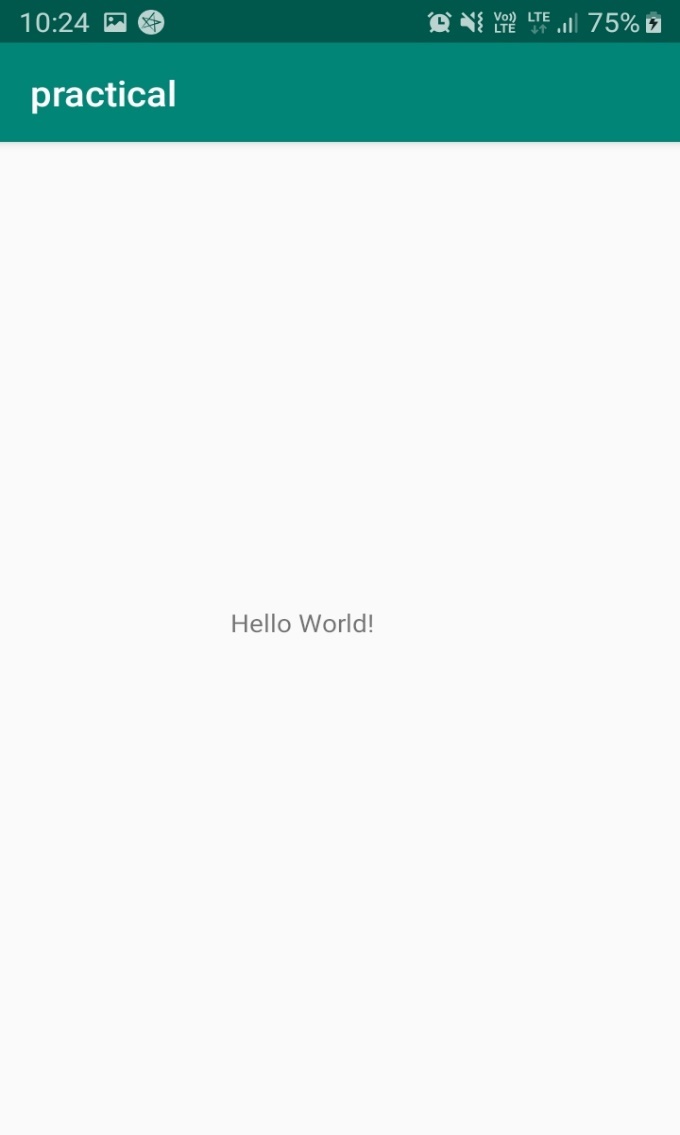
**Activity\_Main.Java:**

**package** com.example.practical;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 }  
}

**Activity\_Main.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/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="116dp"  
 android:layout\_height="37dp"  
 android:text="Hello World!"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />

**Output:**

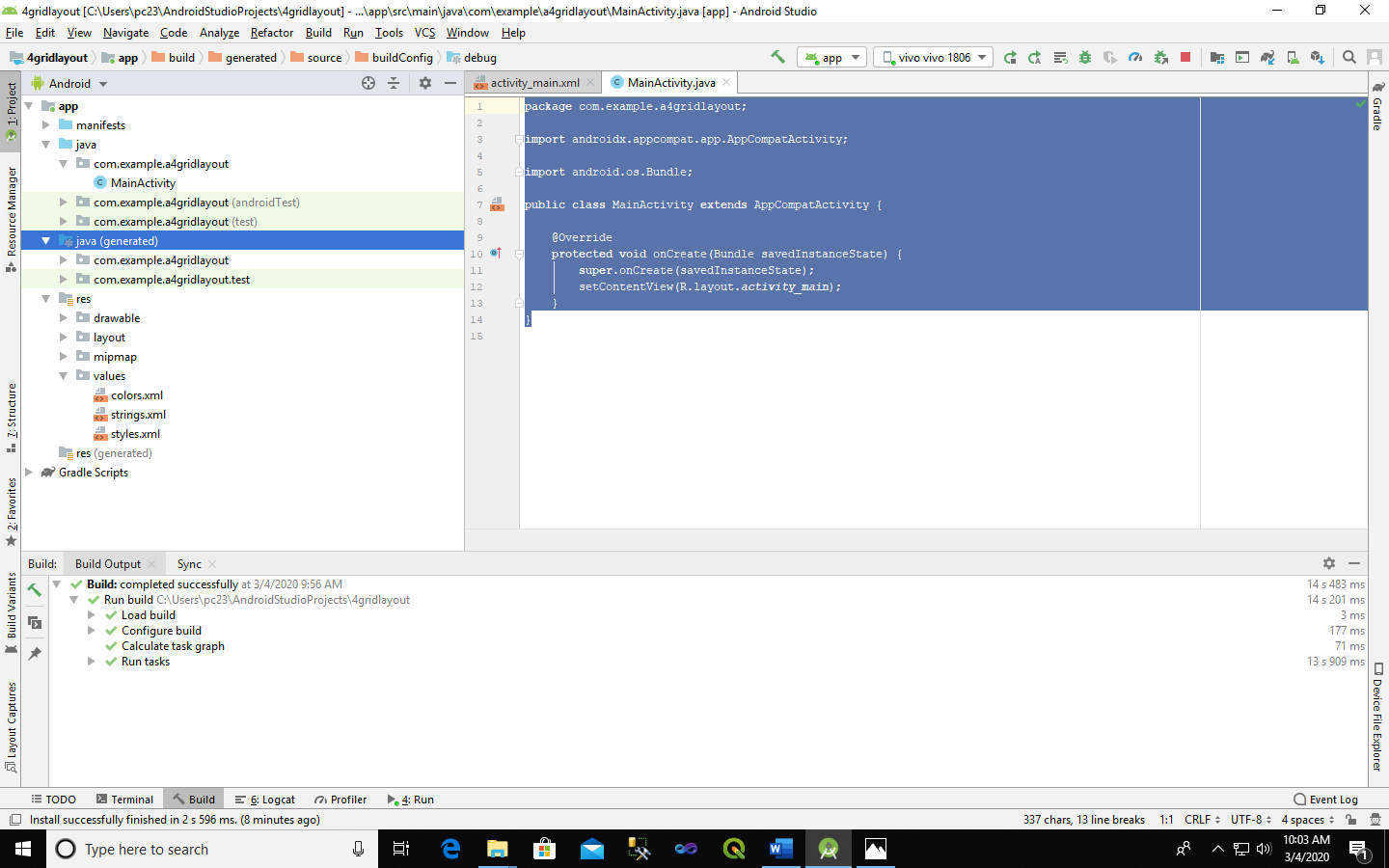


**Practical N0. 02**

**Programming Resources**

Android Resources: (Color, Theme, String, Drawable, Dimension, Image).

**Color:**



**Color.xml:**

*<?***xml version="1.0" encoding="utf-8"***?>*<**resources**>  
 <**color name="colorPrimary"**>#008577</**color**>  
 <**color name="colorPrimaryDark"**>#00574B</**color**>  
 <**color name="colorAccent"**>#D81B60</**color**>  
</**resources**>

**Style.xml**

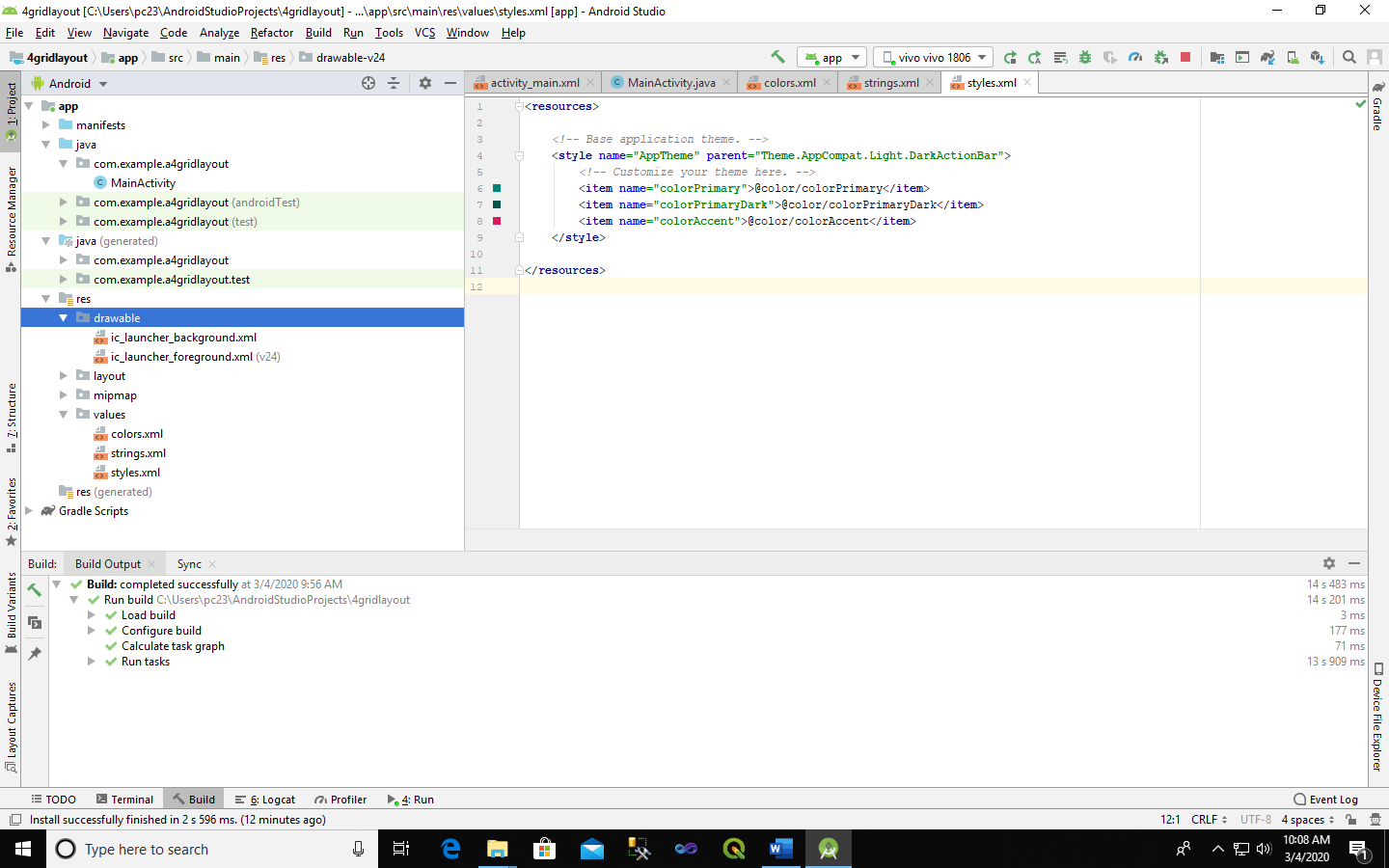
<**resources**>  
 <**style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar"**>  
 *<!-- Customize your theme here. -->* <**item name="colorPrimary"**>@color/colorPrimary</**item**>  
 <**item name="colorPrimaryDark"**>@color/colorPrimaryDark</**item**>  
 <**item name="colorAccent"**>@color/colorAccent</**item**>  
 </**style**>  
  
</**resources**>

**String.xml:**

<**resources**>  
  
 *<!-- Base application theme. -->* <**style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar"**>  
 *<!-- Customize your theme here. -->* <**item name="colorPrimary"**>@color/colorPrimary</**item**>  
 <**item name="colorPrimaryDark"**>@color/colorPrimaryDark</**item**>  
 <**item name="colorAccent"**>@color/colorAccent</**item**>  
 </**style**>  
  
</**resources**>

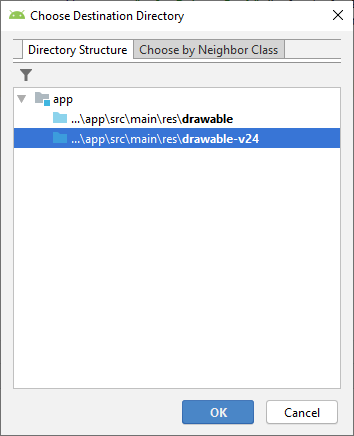
**Drawable:**

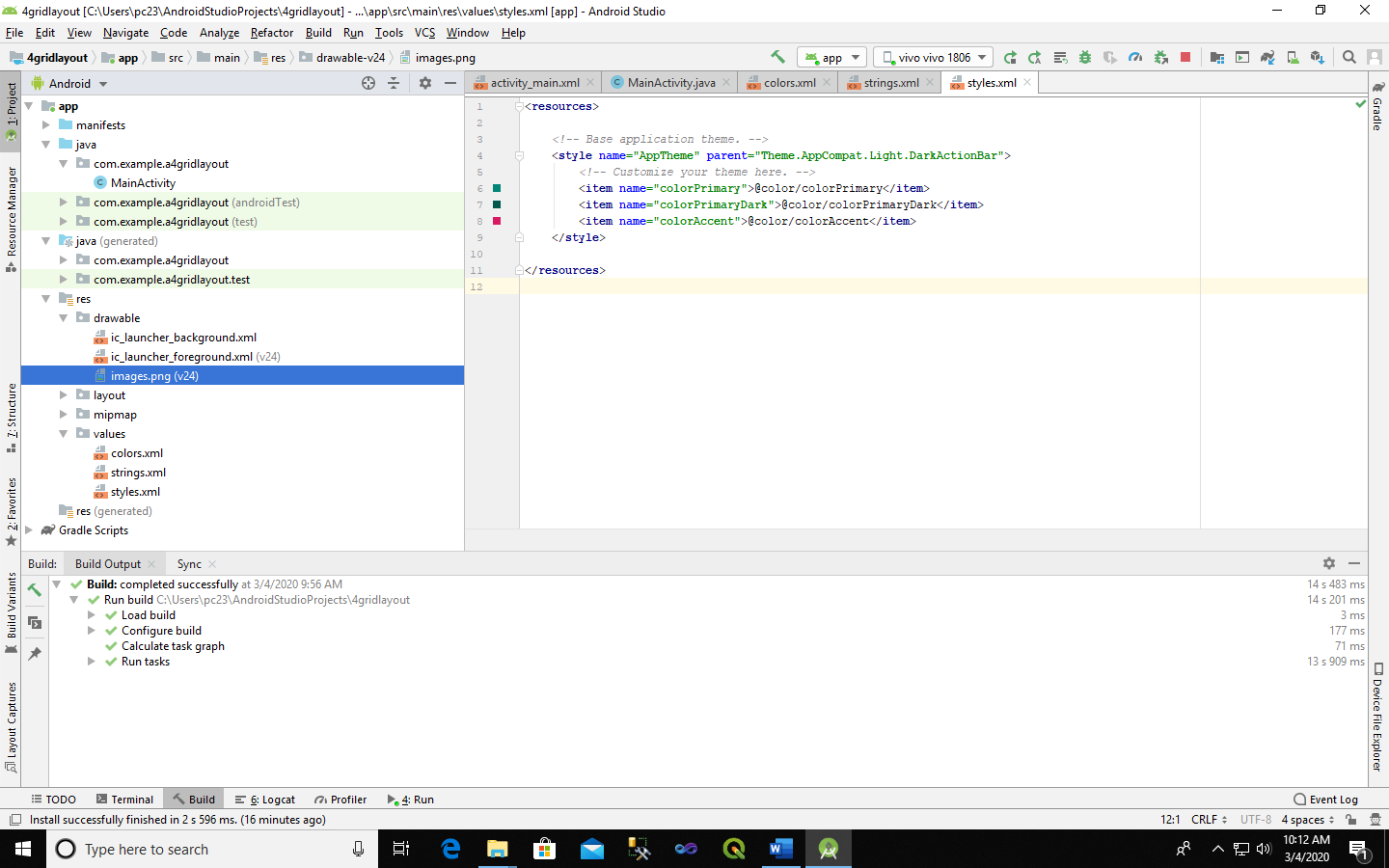
1.Right click on drawable folder



2.Copy the image if you want to create image drawable.

3.Paste that image file inside the drawable folder.





**Dimension, Image:**

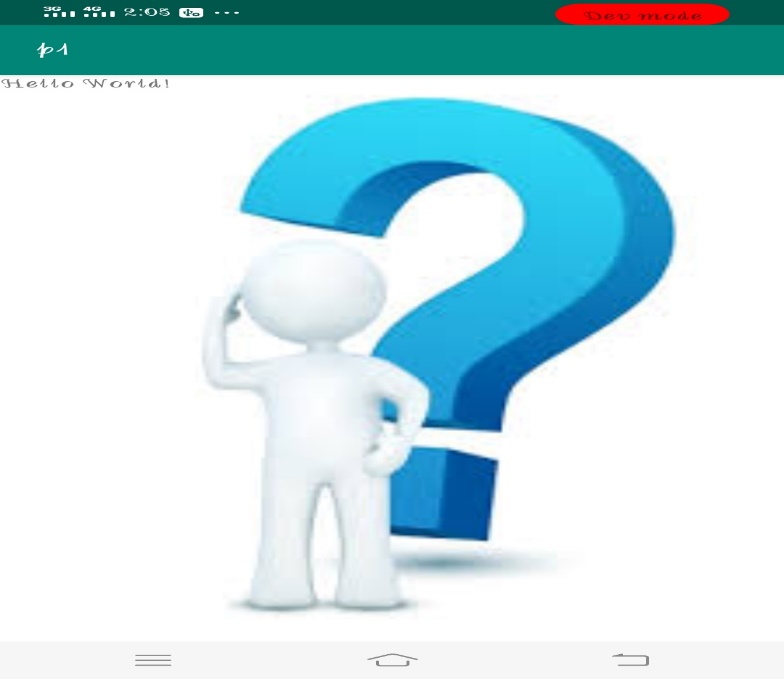
**Main\_Activity.Java:**

**package** com.example.p1;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 }  
}

**activity\_main.xml:**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"  
 android:background="@drawable/pract2"**>  
  
 <**TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello World!"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"**/>  
  
</**LinearLayout**>

**Output:**



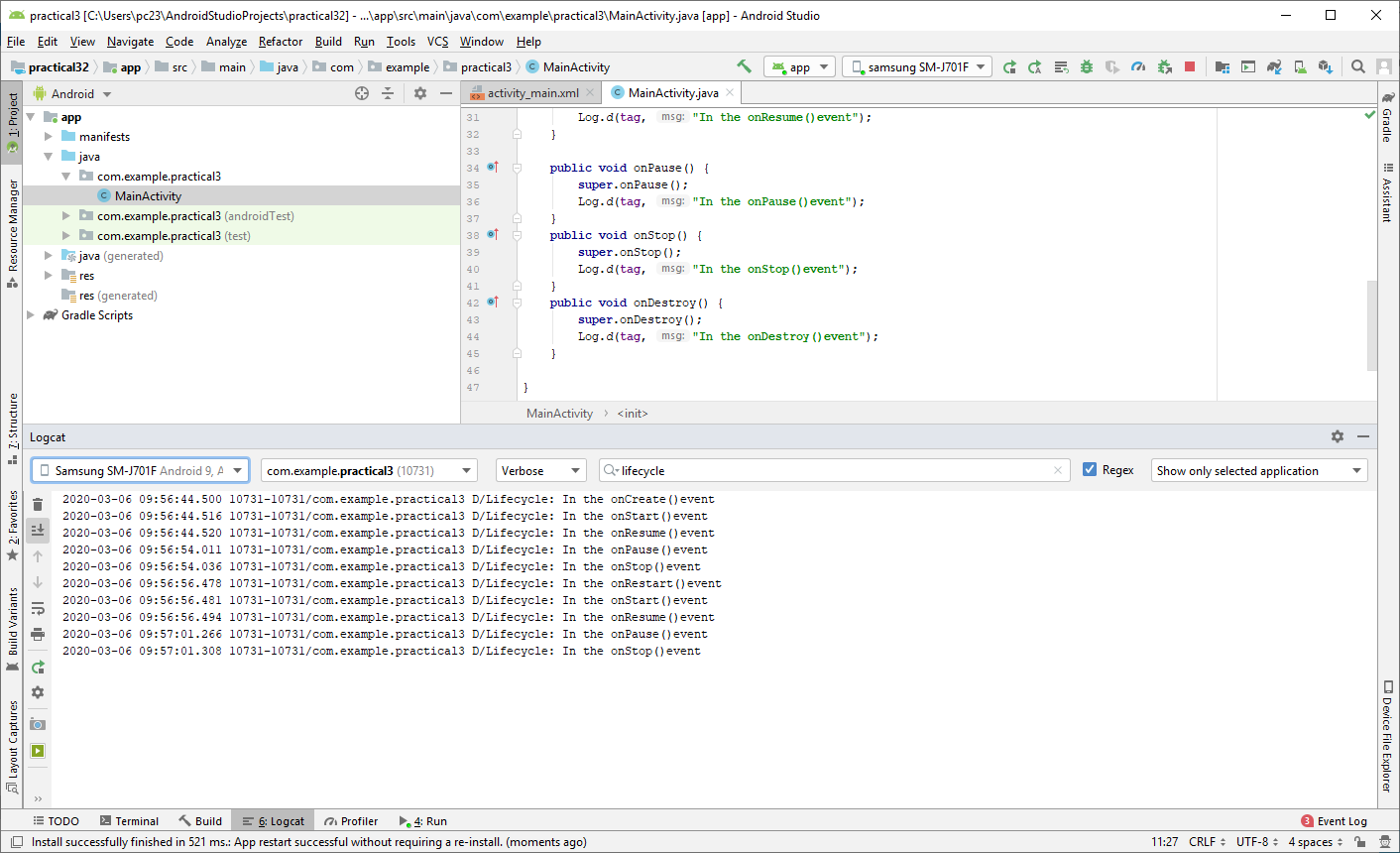
**Practical N0. 03**

**Programming Activities and fragments**

**The Lifecycle methods of android activity:**

**package** com.example.practical3;  
  
**import** android.os.Bundle;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.util.Log;  
**public class** MainActivity **extends** AppCompatActivity {  
String **tag**;  
  
 {  
 **tag** = **"Lifecycle"**;  
 }  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 Log.*d*(**tag**,**"In the onCreate()event"**);  
 }  
 **public void** onStart() {  
 **super**.onStart();  
 Log.*d*(**tag**,**"In the onStart()event"**);  
  
 }  
 **public void** onRestart() {  
 **super**.onRestart();  
 Log.*d*(**tag**, **"In the onRestart()event"**);  
 }  
 **public void** onResume() {  
 **super**.onResume();  
 Log.*d*(**tag**, **"In the onResume()event"**);  
 }  
  
 **public void** onPause() {  
 **super**.onPause();  
 Log.*d*(**tag**, **"In the onPause()event"**);  
 }  
 **public void** onStop() {  
 **super**.onStop();  
 Log.*d*(**tag**, **"In the onStop()event"**);  
 }  
 **public void** onDestroy() {  
 **super**.onDestroy();  
 Log.*d*(**tag**, **"In the onDestroy()event"**);  
 }  
}

**Output:**



**Practical N0. 04**

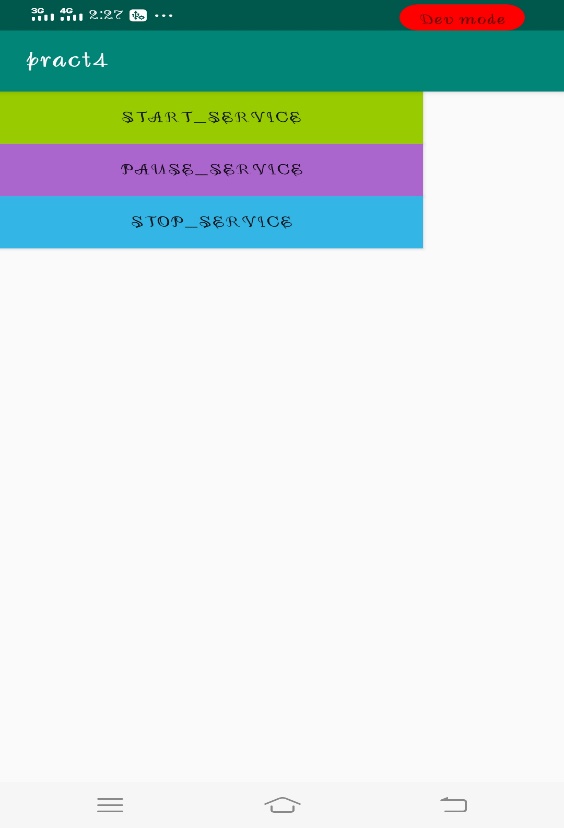
**Programs related to different Layouts**

Linear Layout, Relative Layout.

1. **linear layout:**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
android:layout\_width="fill\_parent"  
android:layout\_height="fill\_parent"  
android:orientation="vertical"** >  
  
 <**Button  
 android:id="@+id/btnStartService"  
 android:layout\_width="270dp"  
 android:layout\_height="wrap\_content"  
 android:background="@android:color/holo\_green\_light"  
 android:text="start\_service"  
 android:textColorHighlight="#FFFFFF"** />  
  
 <**Button  
 android:id="@+id/btnPauseService"  
 android:layout\_width="270dp"  
 android:layout\_height="wrap\_content"  
 android:background="@android:color/holo\_purple"  
 android:text="pause\_service"** />  
  
 <**Button  
 android:id="@+id/btnStopService"  
 android:layout\_width="270dp"  
 android:layout\_height="wrap\_content"  
 android:background="@android:color/holo\_blue\_light"  
 android:text="stop\_service"** />  
  
</**LinearLayout**>

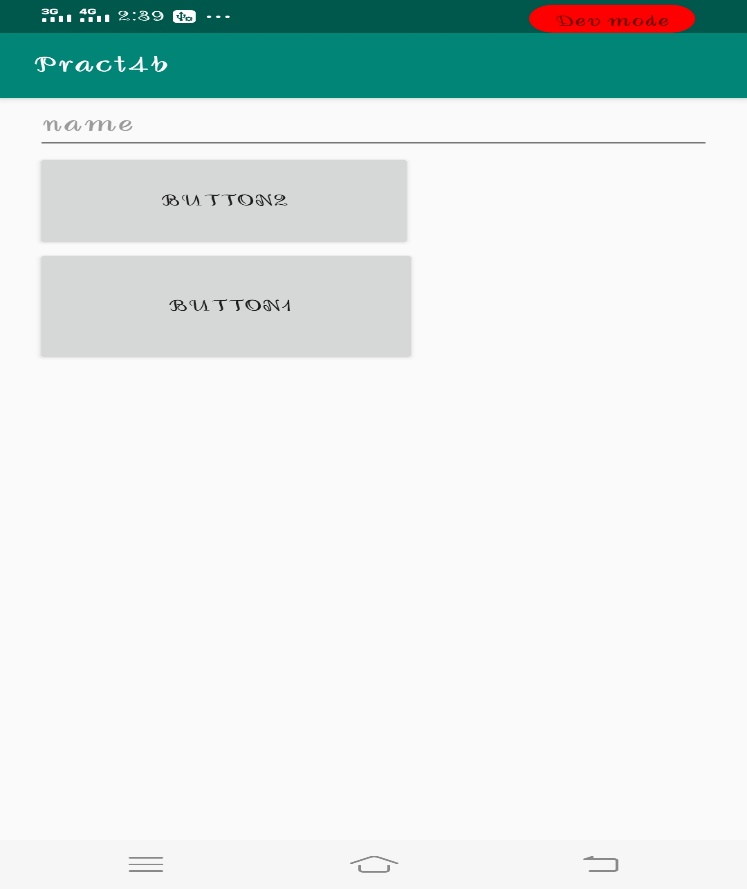
**Output:**



1. **Relative:**

<**RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="fill\_parent"  
 android:paddingLeft="16dp"  
 android:paddingRight="16dp"** >  
  
 <**EditText  
 android:id="@+id/name"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="@string/reminder"** />  
  
 <**LinearLayout  
 android:orientation="vertical"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="fill\_parent"  
 android:layout\_alignParentStart="true"  
 android:layout\_below="@+id/name"**>  
  
 <**Button  
 android:id="@+id/button"  
 android:layout\_width="184dp"  
 android:layout\_height="82dp"  
 android:text="Button2"** />  
  
 <**Button  
 android:id="@+id/button2"  
 android:layout\_width="186dp"  
 android:layout\_height="98dp"  
 android:text=" Button1"** />  
  
 </**LinearLayout**>  
  
</**RelativeLayout**>

**Output:**



**Practical N0. 05**

**Programs related to different Layouts**

Frame, Grid View.

**Frame:**

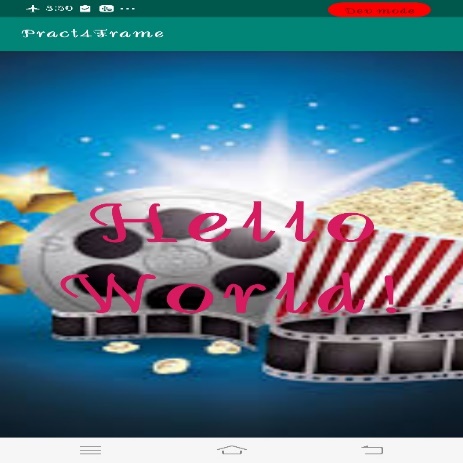
**Activity\_main.xml:**

*<?***xml version="1.0" encoding="utf-8"***?>*<**FrameLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"**>  
  
 <**ImageView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:scaleType="centerCrop"  
 android:src="@drawable/images"**/>  
  
 <**TextView  
 android:textSize="100dp"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello World!"  
 android:gravity="center"  
 android:textColor="@color/colorAccent"  
 android:layout\_marginTop="220dp"** />  
  
</**FrameLayout**>

**Activity\_main.java:**

**package** com.example.pract4frame;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 }  
  
}

**Output:**



1. **Grid layout:**

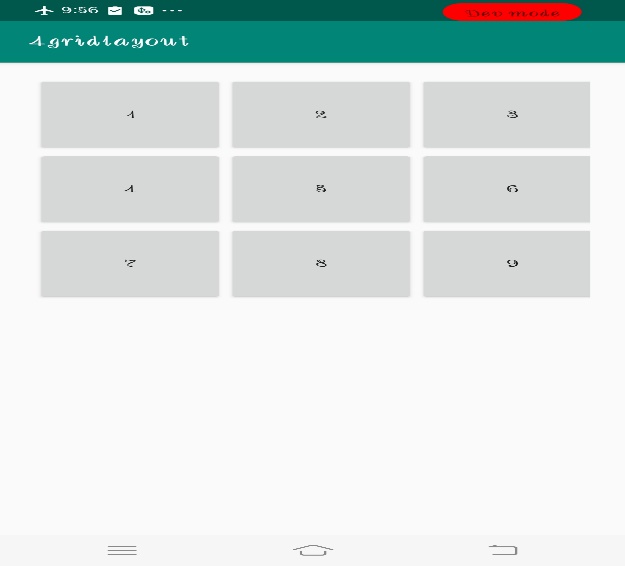
main\_activity.xml:

*<?***xml version="1.0" encoding="utf-8"***?>*<**GridLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"  
 android:rowCount="3"  
 android:columnCount="3"  
 android:padding="20dp"**>  
  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="1"**/>  
  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="2"**/>  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="3"**/>  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="4"**/>  
  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="5"**/>  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="6"**/>  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="7"**/>  
  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="8"**/>  
 <**Button  
 android:layout\_width="110dp"  
 android:layout\_height="100dp"  
 android:text="9"**/>  
</**GridLayout**>

**mainActvity.java:**

**package** com.example.a4gridlayout;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 }  
}

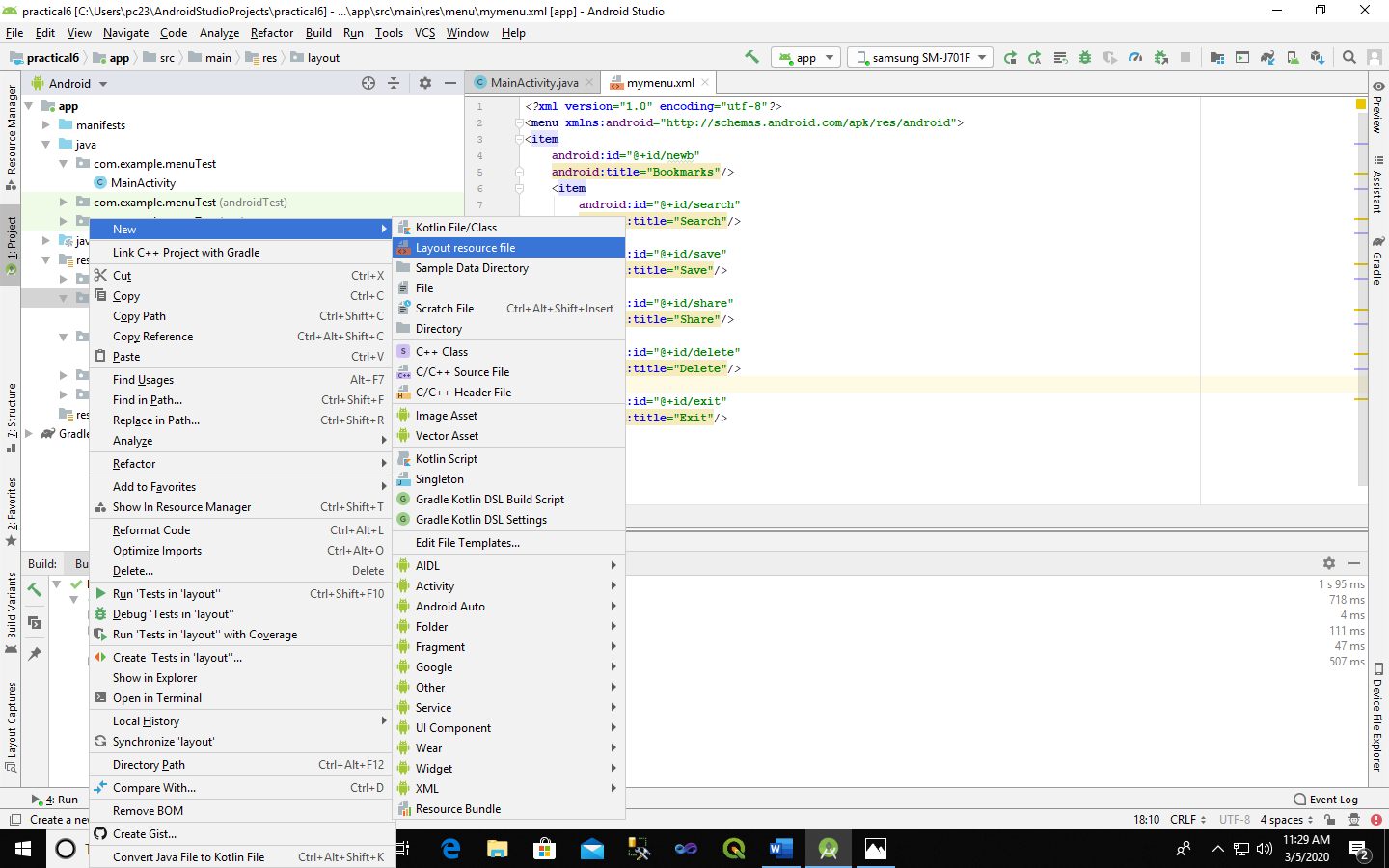
**Output:**

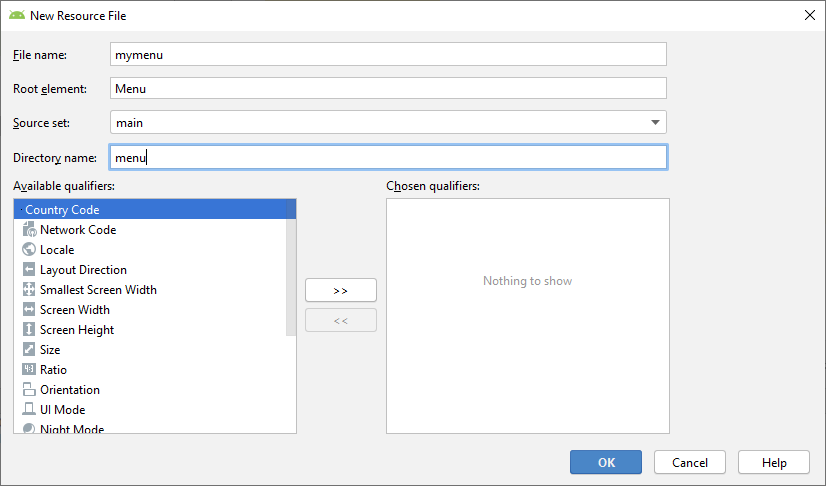


**Practical N0. 06**

**Programming menus, dialog, dialog fragments**

**Creating Menus:**





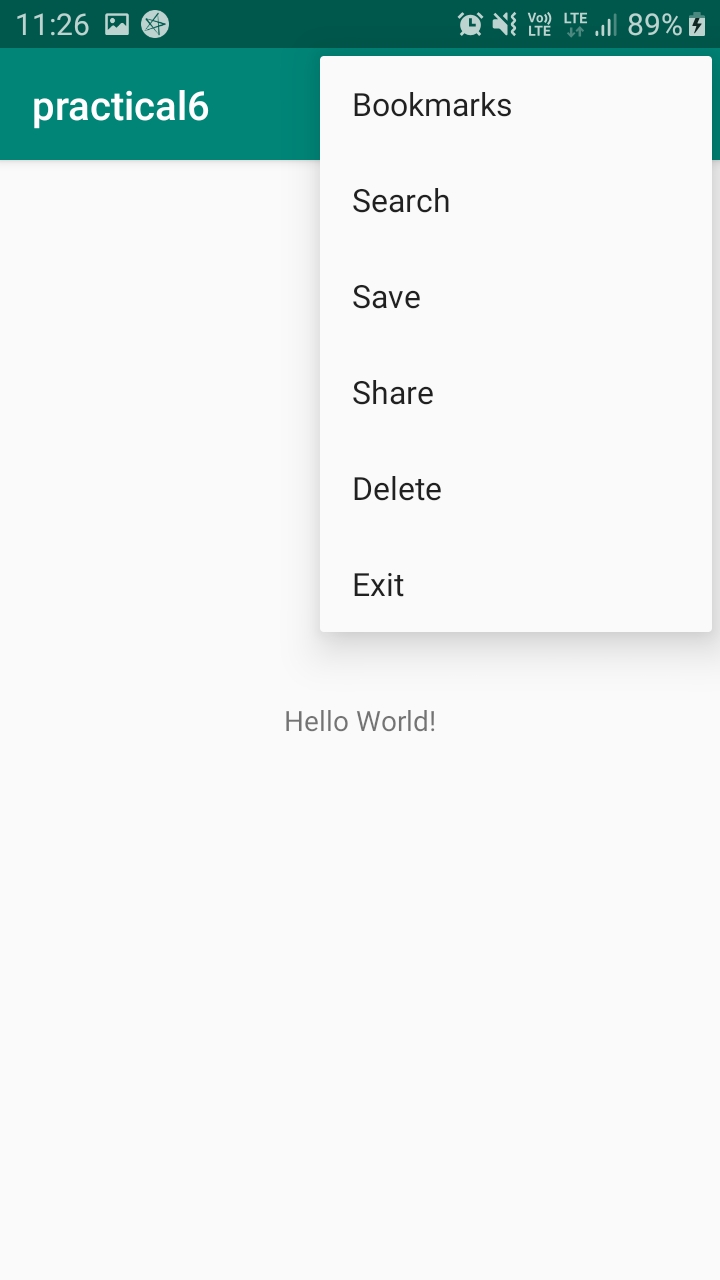
**menu.xml:**

*<?***xml version="1.0" encoding="utf-8"***?>*<**menu xmlns:android="http://schemas.android.com/apk/res/android"**>  
<**item  
 android:id="@+id/newb"  
 android:title="Bookmarks"**/>  
 <**item  
 android:id="@+id/search"  
 android:title="Search"**/>  
 <**item  
 android:id="@+id/save"  
 android:title="Save"**/>  
 <**item  
 android:id="@+id/share"  
 android:title="Share"**/>  
 <**item  
 android:id="@+id/delete"  
 android:title="Delete"**/>  
 <**item  
 android:id="@+id/exit"  
 android:title="Exit"**/>  
</**menu**>

**MainActivity.Java:**

**package** com.example.menuTest;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
  
**import** android.view.Menu;  
**import** android.view.MenuInflater;  
**import** android.view.MenuItem;  
**import** android.widget.Toast;  
**public class** MainActivity **extends** AppCompatActivity {  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 }  
 **public boolean** onCreateOptionsMenu(Menu menu)  
 {  
 MenuInflater mi=getMenuInflater();  
 mi.inflate(R.menu.***mymenu***,menu);  
 **return true**;  
  
 }  
  
 **public boolean** onOptionsItemSelected(MenuItem item)  
 {  
 **switch**(item.getItemId())  
 {  
 **case** R.id.***newb***:  
 Toast.*makeText*(**this**,**"New Selected"**,Toast.***LENGTH\_SHORT***).show();  
 **return true**;  
 **case** R.id.***share***:  
 Toast.*makeText*(**this**,**"Share Selected"**,Toast.***LENGTH\_SHORT***).show();  
 **return true**;  
 **case** R.id.***delete***:  
 Toast.*makeText*(**this**,**"Delete Selected"**,Toast.***LENGTH\_SHORT***).show();  
 **return true**;  
 **case** R.id.***save***:  
 Toast.*makeText*(**this**,**"Save Selected"**,Toast.***LENGTH\_SHORT***).show();  
 **return true**;  
 **case** R.id.***search***:  
 Toast.*makeText*(**this**,**"Search Selected"**,Toast.***LENGTH\_SHORT***).show();  
 **return true**;  
 **case** R.id.***exit***:  
 Toast.*makeText*(**this**,**"Exit Selected"**,Toast.***LENGTH\_SHORT***).show();  
 **return true**;  
  
  
 }  
 **return super**.onOptionsItemSelected(item);  
  
 }  
 }

**Output:**



**Practical N0. 07**

**Database Programming with SQLite**

**activity\_main.xml:**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout 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"**>  
<**LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal"**>  
 <**TextView  
 android:id="@+id/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentTop="true"  
 android:text="User Name"** />  
  
 <**EditText  
 android:id="@+id/txtuseName"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:hint="Enter UserName"  
 android:inputType="textShortMessage"**/>  
</**LinearLayout**>  
 <**LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal"**>  
 <**TextView  
 android:id="@+id/Ipass"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="50dp"  
 android:text="Password"** />  
 <**EditText  
 android:id="@+id/txtpass"  
 android:layout\_width="200dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="50dp"  
 android:hint="Enter Password"  
 android:ems="10"  
 android:inputType="textPassword"** />  
 </**LinearLayout**>  
  
 <**Button  
 android:id="@+id/login"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="50dp"  
 android:onClick="login\_fun"  
 android:text="Login"** />  
  
 <**Button  
 android:id="@+id/drop"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:onClick="drop\_fun"  
 android:text="Drop"** />  
  
 <**Button  
 android:id="@+id/register"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:onClick="register\_fun"  
 android:text="Register"** />  
  
</**LinearLayout**>

**MainActivity.java:**

**package** com.example.databaseapp;  
**import** android.content.Context;  
**import** android.database.Cursor;  
**import** android.database.sqlite.\*;  
**import** android.database.sqlite.SQLiteDatabase;  
**import** android.database.sqlite.SQLiteException;  
**import** android.database.sqlite.SQLiteOpenHelper;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.Toast;  
**import** java.util.\*;  
  
*//SQLiteDatebase MyDB= openOrCreateDatabase("MyDB", MODE\_PRIVATE,null);***class** MyDB **extends** SQLiteOpenHelper{  
 MyDB(Context c){  
 **super**(c,**"logindb"**,**null**,1);  
 }  
 @Override  
 **public void** onCreate(SQLiteDatabase db){  
 String str=**"create table login(username text, password text)"**;  
 db.execSQL(str);  
 }  
 @Override  
 **public void** onUpgrade(SQLiteDatabase db,**int** oldVersion, **int** newVersion){  
 String dr=**"drop table if exists login"**;  
 db.execSQL(dr);  
 onCreate(db);  
 }  
}  
  
**public class** MainActivity **extends** AppCompatActivity {  
MyDB **mdb**;  
EditText **userName**,**password**;  
Button **bregister**,**bdrop**,**blogin**;  
SQLiteDatabase **db**;  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **userName** = (EditText) findViewById(R.id.***txtuseName***);  
 **password** = (EditText) findViewById(R.id.***txtpass***);  
 **blogin** = (Button) findViewById(R.id.***login***);  
 **bregister** = (Button) findViewById(R.id.***register***);  
 **bdrop** = (Button) findViewById(R.id.***drop***);  
 **mdb** = **new** MyDB(**this**);  
 }  
 *//Functio login* **public void** login\_fun(View v){  
 String un= String.*valueOf*(**userName**.getText());  
 String pas= String.*valueOf*(**password**.getText());  
 **db**=**mdb**.getReadableDatabase();  
 String q=**"Select \* from login where userName='"**+un+**"' and password='"**+pas+**"'"**;  
 **try** {  
 Cursor c = **db**.rawQuery(q,**null**);  
 **if**(c.getCount()==0)  
 {  
 Toast.*makeText*(getApplicationContext(),**"UserName of Password Wrong or user doesn't exist"**,Toast.***LENGTH\_SHORT***).show();  
 }  
 **else** {  
 **while**(c.moveToNext()){  
 String uname=c.getString(0);  
 String passw=c.getString(1);  
 Toast.*makeText*(getApplicationContext(),**"Username:"**+uname+**"\npassword:"** +passw, Toast.***LENGTH\_LONG***).show();  
 **if**(un.contentEquals(uname)&&pas.contentEquals(passw)){  
 Toast.*makeText*(getApplicationContext(),**"Welcome User:"**+un,Toast.***LENGTH\_LONG***).show();  
 c.close();  
 }  
 }  
 }  
 }**catch** (SQLiteException sqle){  
 sqle.printStackTrace();  
 }  
 }  
 *//End of LOgin fun  
  
 //unction Register* **public void** register\_fun(View v){  
 String un= String.*valueOf*(**userName**.getText());  
 String pas= String.*valueOf*(**password**.getText());  
 **db**=**mdb**.getWritableDatabase();  
 String q=**"insert into login values('"**+un+**"', '"**+pas+**"')"**;  
 **db**.execSQL(q);  
 Toast.*makeText*(getApplicationContext(),**"User Registered"**,Toast.***LENGTH\_LONG***).show();  
 }  
  
 *//end of register function  
  
 //Drop Function* **public void** drop\_fun(View v){  
 **db**=**mdb**.getWritableDatabase();  
 **mdb**.onUpgrade(**db**,1,2);  
 Toast.*makeText*(getApplicationContext(),**"All user deleted"**,Toast.***LENGTH\_SHORT***).show();  
 }  
}

**Output:**

