

MOBILE APPLICATION DEVELOPMENT LABORATORY

Practical Report File

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

BACHELOR OF TECHNOLOGY

INFORMATION TECHNOLOGY



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1 Android User Interface Design: Implement Your Name in Android Studio.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://
    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="Vinay Kumar"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.helloworld;

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:-

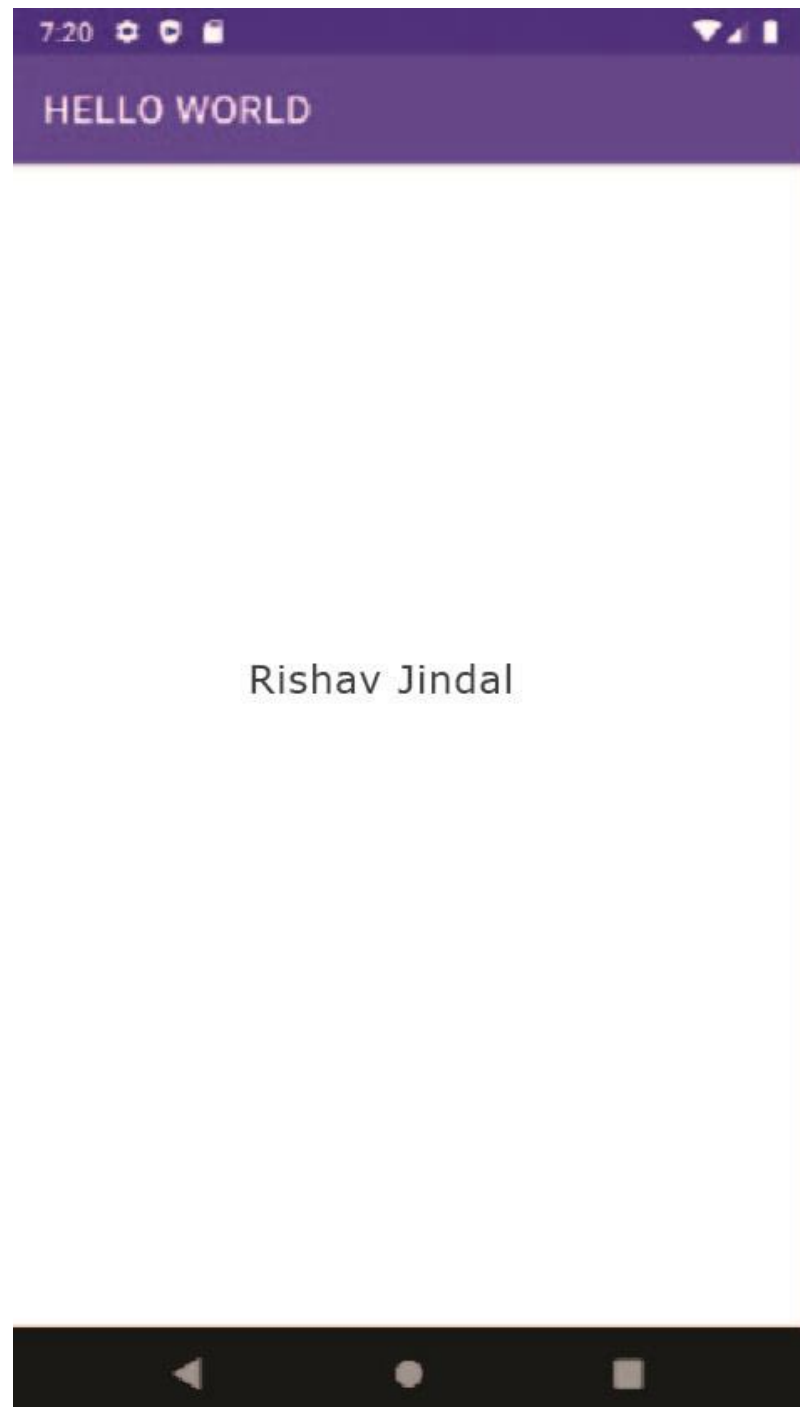


Fig 1. Output for Your Name

2 Write your name and Button Eg. Your Name Welcome ! and round shape button named Go

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res-auto"
    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:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" android:text="Vinay Kumar"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button android:id="@+id/button" android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="179dp"
        android:background="@drawable/round_btn" android:text="Round
        Button" android:textColor="#000"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

round_btn.xml

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"> <solid android:color="#fff"/>
    <corners android:topRightRadius="45dp"
        android:topLeftRadius="45dp"
        android:bottomLeftRadius="45dp"
        android:bottomRightRadius="45dp" /></shape>
```

MainActivity.java

```
package com.example.roundedbutton;

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:-



Rishav Jindal

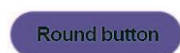


Fig 2. Output for Our name with round shape button

3 Change the Icon of your APK file in Android Studio.

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools" package="com.example.helloworld">

    <application android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher" android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.HelloWorld"
        tools:targetApi="31"> <activity android:name=".MainActivity"
            android:exported="true"> <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" /> </intent-filter>
            </activity>
        </application>

</manifest>
```

OUTPUT:-

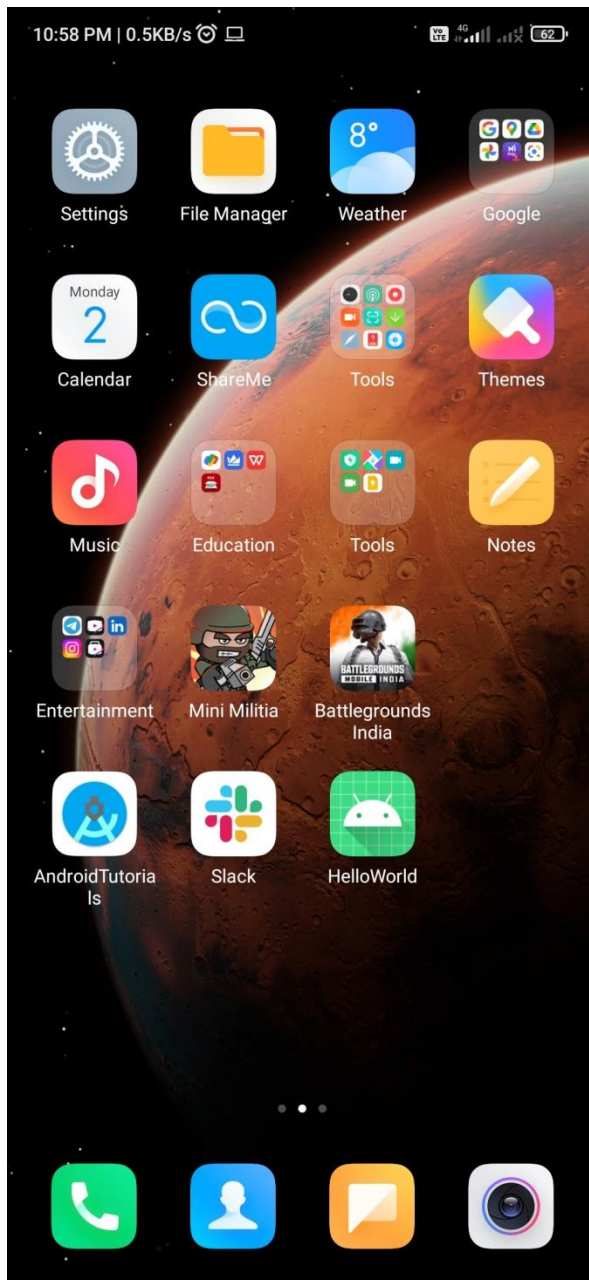


Fig 3. Output for APK Icon change

4 Android User Interface Design: To implement basic calculator in android studio.

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">

    <EditText
        android:id="@+id/et1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="100dp"
        android:layout_marginRight="20dp"
        android:ems="10"
        android:hint="Enter 1st Number"
        android:inputType="number"
        android:textSize="20sp" />

    <EditText
        android:id="@+id/et2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="20dp"
        android:layout_marginRight="20dp"
        android:ems="10"
        android:hint="Enter 2nd Number"
        android:inputType="number"
        android:textSize="20sp" />

    <Button
        android:id="@+id/add"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="20dp"
        android:layout_marginRight="20dp"
        android:text="Addition"
        android:textSize="20sp" />
```

```

<Button
    android:id="@+id/sub"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="20dp"
    android:layout_marginRight="20dp"
    android:text="Subtraction"
    android:textSize="20sp" />

<Button
    android:id="@+id/mul"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="20dp"
    android:layout_marginRight="20dp"
    android:text="Multiplication"
    android:textSize="20sp" />

<Button
    android:id="@+id/div"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="20dp"
    android:layout_marginRight="20dp"
    android:text="Division"
    android:textSize="20sp" />

<TextView
    android:id="@+id/tv"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="20dp"
    android:layout_marginRight="20dp"
    android:background="#CDDC39"
    android:hint="Result"
    android:textColor="#BA0E0E0E"
    android:textSize="24sp" />
<!--add-->
<Button
    android:id="@+id/btn1"
    android:layout_width="393dp"
    android:layout_height="96dp"
    android:text="GO to Next Page" /> </LinearLayout>

```

MainActivity.java

```
package com.example.calculator;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    EditText et1,et2;
    TextView tv;
    Button div,sub,add,mul;
    // add
    Button btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        et1=findViewById(R.id.et1);
        et2=findViewById(R.id.et2);
        tv=findViewById(R.id.tv);
        div=findViewById(R.id.div);
        sub=findViewById(R.id.sub);
        add=findViewById(R.id.add);
        mul=findViewById(R.id.mul);
        // add
        btn=(Button)findViewById(R.id.btn1);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent =new Intent(MainActivity.this,page1.class);
                startActivity(intent);
            }
        });

        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int f,s,a;
                f=Integer.parseInt(et1.getText().toString());
```

```

        s=Integer.parseInt(et2.getText().toString());
        a=f+s;
        tv.setText("Result="+a);
    }
});
sub.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        int f,s,a;
        f=Integer.parseInt(et1.getText().toString());
        s=Integer.parseInt(et2.getText().toString());
        a=f-s;
        tv.setText("Result="+a);
    }
});
mul.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        int f,s,a;
        f=Integer.parseInt(et1.getText().toString());
        s=Integer.parseInt(et2.getText().toString());
        a=f*s;
        tv.setText("Result="+a);
    }
});
div.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        int f,s,a;
        f=Integer.parseInt(et1.getText().toString());
        s=Integer.parseInt(et2.getText().toString());
        a=f/s;
        tv.setText("Result="+a);
    }
});
}
}

```

OUTPUT:-

The image shows a web-based calculator interface. At the top, there is a black header with the word "Calculator" in white. Below the header, the background is light blue. The text "ENTER TWO NUMBERS" is displayed in a large, bold, italicized black font. Underneath, there are two input fields with the placeholder text "Enter First Number" and "Enetr Second Number" (note the typo). Below the input fields, there are five buttons: a plus sign (+), a minus sign (-), a multiplication sign (*), a division sign (/), and a "CLEAR" button. Below the buttons, the text "RESULT" is displayed in a large, bold, italicized black font. At the bottom, there is a result display showing "0.00".

Fig 4. Output for calculator

5 Android User Interface Design: To implement different type of layouts like relative, grid, linear and table.

activity_main.xml

```
<!-- Parent Layout -->
<LinearLayout 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" android:background="@color/whiteColor"
    android:orientation="vertical" android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin" tools:context=".MainActivity"> <!-- first Child
    Layout -->

    <!-- create a Linear Layout with horizontal orientation and weightSum pr
    <LinearLayout android:id="@+id/firstLayout"
        android:layout_width="match_parent"
        android:layout_height="50dp"
        android:layout_marginTop="20dp"
        android:orientation="horizontal" android:weightSum="2">

        <!-- place one TextView and one EditText inside layout using weight prop

        <TextView
            android:layout_width="0dp" android:layout_height="50dp"
            android:layout_marginRight="10dp"
            android:layout_weight="0.6" android:gravity="center_vertical"
            android:paddingLeft="10dp" android:text="User Name"
            android:textColor="@color/blackColor" />

        <EditText android:id="@+id/firstName"
            android:layout_width="0dp"
            android:layout_height="50dp"
            android:layout_marginLeft="10dp"
            android:layout_weight="1.4"
            android:background="@color/editTextBack"
            android:hint="User Name"
            android:imeOptions="actionNext"
            android:paddingLeft="10dp"
            android:singleLine="true"
            android:textColor="@color/blackColor" />
    </LinearLayout>

    <!-- create a Linear Layout with horizontal orientation and weightSum pr
```

<!-- second Child Layout -->

```
<LinearLayout android:id="@+id/secondLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:orientation="horizontal" android:weightSum="2">
```

<!-- place one TextView and one EditText inside layout using weight prop

```
<TextView android:layout_width="0dp"
    android:layout_height="50dp"
    android:layout_marginRight="10dp"
    android:layout_weight="0.6"
    android:gravity="center_vertical"
    android:paddingLeft="10dp" android:text="Phone No."
    android:textColor="@color/blackColor" />
```

```
<EditText android:id="@+id/lastName"
    android:layout_width="0dp"
    android:layout_height="50dp"
    android:layout_marginLeft="10dp"
    android:layout_weight="1.4"
    android:background="@color/editTextBack"
    android:hint="Phone No."
    android:imeOptions="actionNext"
    android:paddingLeft="10dp" android:singleLine="true"
    android:textColor="@color/blackColor" />
</LinearLayout>
```

<!-- create a Linear Layout with horizontal orientation and weightSum pr

<!-- third Child Layout -->

```
<LinearLayout android:id="@+id/thirdLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:orientation="horizontal" android:weightSum="2">
```

<!-- place one TextView and one EditText inside layout using weight prop

```
<TextView android:layout_width="0dp"
    android:layout_height="50dp"
    android:layout_marginRight="10dp"
    android:layout_weight="0.6"
    android:gravity="center_vertical"
```

```
android:paddingLeft="10dp" android:text="Email Id"
android:textColor="@color/blackColor" />
```

```
<EditText android:id="@+id/address"
android:layout_width="0dp"
android:layout_height="50dp"
android:layout_marginLeft="10dp"
android:layout_weight="1.4"
android:background="@color/editTextBack"
android:hint="Email Id" android:imeOptions="actionNext"
android:paddingLeft="10dp" android:singleLine="true"
android:textColor="@color/blackColor" />
</LinearLayout>
<!-- fourth Child Layout -->
```

```
<LinearLayout android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginTop="20dp" android:orientation="horizontal"
android:weightSum="2">
```

```
<Button android:layout_width="0dp"
android:layout_height="wrap_content"
android:layout_marginRight="10dp"
android:layout_weight="1"
android:background="@color/greenColor"
android:text="Cancel"
android:textColor="@color/whiteColor" />
```

```
<Button android:layout_width="0dp"
android:layout_height="wrap_content"
android:layout_marginLeft="10dp"
android:layout_weight="1"
android:background="@color/greenColor"
android:text="Submit"
android:textColor="@color/whiteColor" />
</LinearLayout>
</LinearLayout>
```

MainActivity.java

```
package com.example.nestedlayout;

import androidx.appcompat.app.AppCompatActivity; import
android.os.Bundle; import android.view.Menu; import
android.view.MenuItem;

public class MainActivity extends AppCompatActivity {

    @Override protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    @Override public boolean onCreateOptionsMenu(Menu menu) {

        getMenuInflater().inflate(R.menu.menu_main, menu); return true;
    }

    @Override public boolean onOptionsItemSelected(MenuItem item) {

        int id = item.getItemId();

        if (id == R.id.action_settings) { return true;
        }

        return super.onOptionsItemSelected(item);
    }
}
```

OUTPUT:-

The screenshot shows a mobile application interface for signing up. At the top, a status bar displays the time as 10:59 PM, a download speed of 4.3KB/s, and various connectivity icons. The main title 'Sign Up' is centered in a large, white font. Below the title, there are four input fields, each with a placeholder text and an icon: 'Username' with a person icon, 'Email' with an envelope icon, 'Password' with an 'i' icon, and 'confirm-Password' with an 'i' icon. These fields are arranged vertically. Below the input fields, there are three buttons: 'INSERT' and 'DELETE' are purple with white text, and 'REGISTER' is teal with white text. At the bottom, there is a large teal button with the text 'NEXT'. The background of the app is a light pink color with a subtle pattern.

Figure 5. Nested Layouts

6 Create an Apk File with page of intent in an application.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:background="@drawable/img"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/signintitle"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:text="Sign In"
        android:textColor="@color/white"
        android:textSize="35dp"
        android:textStyle="bold" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/email"
        android:layout_below="@id/signintitle"
        android:hint="Email"
        android:textColorHint="@color/white"
        android:textColor="@color/white"
        android:layout_margin="10dp"
        android:padding="20dp"
        android:background="#30ffffff"
        android:drawableLeft="@drawable/ic_baseline_email_24"
        android:drawablePadding="20dp"/>

    <EditText
        android:id="@+id/password"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/email"
        android:layout_marginTop="15dp"
        android:layout_marginBottom="10dp"
        android:background="#30ffffff"
        android:drawableLeft="@drawable/ic_baseline_info_24"
        android:drawablePadding="20dp"
```

```

        android:hint="Password"
        android:inputType="textPassword"
        android:padding="20dp"
        android:textColor="@color/white"
        android:textColorHint="@color/white" />

<!-- <TextView-->
<!--     android:layout_width="wrap_content"-->
<!--     android:layout_height="wrap_content"-->
<!--     android:id="@+id/forgotPassword"-->
<!--     android:layout_marginTop="16dp"-->
<!--     android:text="Forgot Password"-->
<!--     android:textColor="@color/white"-->
<!--     android:textSize="20sp"-->
<!--     />-->

<!-- <com.google.android.material.button.MaterialButton-->
<Button
    android:id="@+id/signinbtn"
    android:layout_width="match_parent"
    android:layout_height="73dp"
    android:layout_below="@id/password"
    android:layout_marginTop="28dp"
    android:backgroundTint="@color/design_default_color_secondary"
    android:text="Sign In"
    android:textSize="20dp" />

<!-- <com.google.android.material.button.MaterialButton-->
<Button
    android:id="@+id/newuserbtn"
    android:layout_width="match_parent"
    android:layout_height="73dp"
    android:layout_below="@id/signinbtn"
    android:layout_marginTop="28dp"
    android:backgroundTint="@color/design_default_color_secondary"
    android:text="Create new user"
    android:textSize="20dp" />

</RelativeLayout>

```

MainActivity.java

```
package com.example.helloworld;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import com.google.android.material.button.MaterialButton;

public class MainActivity extends AppCompatActivity {
    Button btn,btn2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        database g=new database(this);
        SQLiteDatabase db=g.getReadableDatabase();
        btn=(Button)findViewById(R.id.newuserbtn);
        btn2=(Button)findViewById(R.id.signinbtn);
        btn.setOnClickListener(new View
            .OnClickListener(){
                @Override
                public void onClick(View view) {
                    Intent intent =new Intent(MainActivity.this,Registration.class);
                    startActivity(intent);
                }
            });
        btn2.setOnClickListener(new View
            .OnClickListener(){
                @Override
                public void onClick(View view) {
                    Intent intent =new Intent(MainActivity.this,Navbar.class);
                    startActivity(intent);
                }
            });
    }
}
```

OUTPUT:-

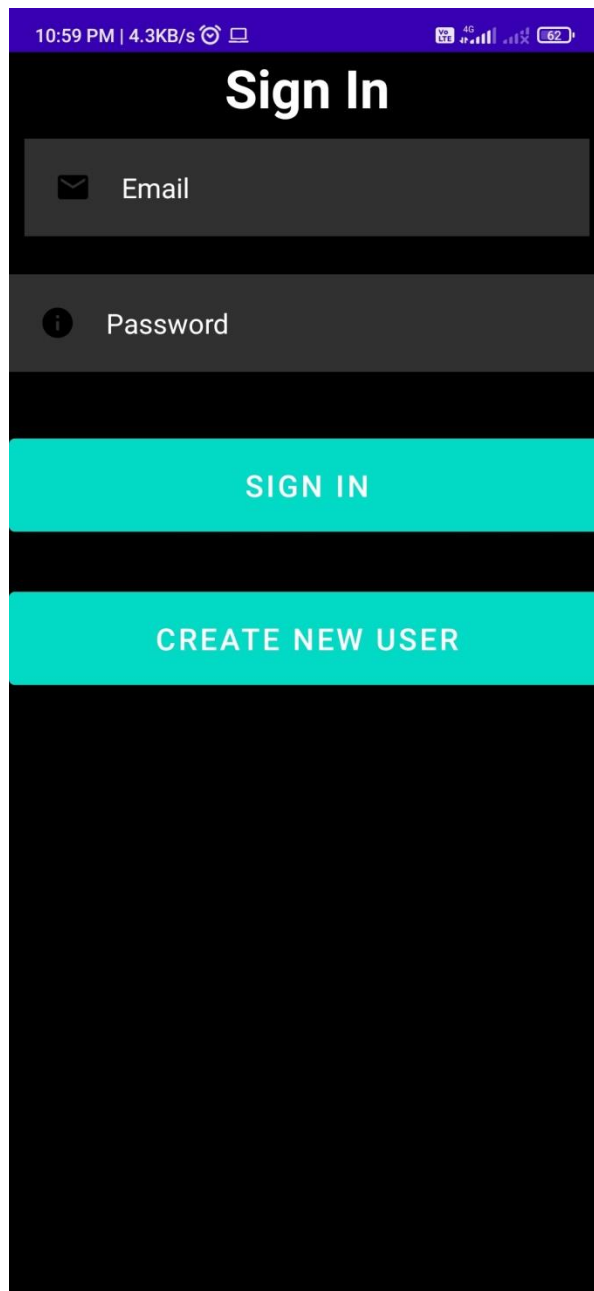









Fig 6.1 Intent main output


10:59 PM | 4.3KB/s   VoLTE 4G   62

Sign Up

 Username

 Email

 Password

 confirm-Password

INSERT

DELETE

REGISTER

NEXT

Fig 6.2 Intent inner output

7 Create an Apk file with page of fragment in an application

Fragment_red_fragment.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=".red_fragment"
    android:background="#ff0000">

    <TextView
        android:id="@+id/textView"
        android:layout_width="374dp"
        android:layout_height="157dp"
        android:layout_gravity="center"
        android:text="RED"
        android:textColor="#ffffff"
        android:textSize="32dp" />

</FrameLayout>
```

Fragment_Blue_fragment.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"
    android:background="#2196F3"
    tools:context=".blue_fragment">

    <TextView
        android:id="@+id/textView"
        android:layout_width="374dp"
        android:layout_height="157dp"
        android:layout_gravity="center"
        android:text="BLUE"
        android:textColor="#ffffff"
        android:textSize="32dp" />

</FrameLayout>
```


</FrameLayout>

navigation.java

```
package com.example.helloworld;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.FragmentTransaction;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.LinearLayout;

public class navigation extends AppCompatActivity {
    Button btnred,btnyellow;
    LinearLayout layout1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_navigation);

        btnred=findViewById(R.id.red);
        btnyellow=findViewById(R.id.yellow);
        layout1=findViewById(R.id.layout);

        btnred.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view){
                blue_fragment firstfragment =new blue_fragment();
                FragmentTransaction transaction=getSupportFragmentManager().beginTransaction();
                transaction.replace(R.id.layout,firstfragment);
                transaction.commit();
            }
        });

        btnyellow.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view){
                red_fragment secondfragment;
                secondfragment = new red_fragment();
                FragmentTransaction transaction=getSupportFragmentManager().beginTransaction();
                transaction.replace(R.id.layout,secondfragment);
                transaction.commit();
            }
        });
    }
}
```

```
    }}  
}
```

blue_fragment.java

```
package com.example.helloworld;  
  
import android.os.Bundle;  
  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
public class blue_fragment extends Fragment {  
  
    @Override  
    public View onCreateView(LayoutInflater inflater, ViewGroup container,  
                             Bundle savedInstanceState) {  
        // Inflate the layout for this fragment  
        return inflater.inflate(R.layout.fragment_blue_fragment, container, false);  
    }  
}
```

red_fragment.java

```
package com.example.helloworld;  
  
import android.os.Bundle;  
  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
public class red_fragment extends Fragment {  
  
    @Override  
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
```

```
Bundle savedInstanceState) {  
    // Inflate the layout for this fragment  
    return inflater.inflate(R.layout.fragment_red_fragment, container, false);  
}  
}
```

OUTPUT:-

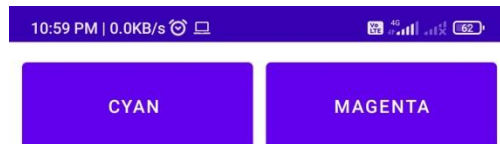


Fig 7.1 Fragments



7.2 Cyan Fragment



7.3 Magenta Fragment

8 Persistent Data Storage: To perform database connectivity of android app using SQLite.

Activity_registratin.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:background="@drawable/img"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/signuptitle"
        android:text="Sign Up"
        android:textSize="35dp"
        android:textStyle="bold"
        android:textColor="@color/white"
        android:gravity="center"
        android:layout_margin="25dp"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/username"
        android:layout_below="@id/signuptitle"
        android:hint="Username"
        android:textColorHint="@color/white"
        android:textColor="@color/white"
        android:layout_margin="10dp"
        android:padding="20dp"
        android:background="#30ffffff"
        android:drawableLeft="@drawable/ic_baseline_person_24"
        android:drawablePadding="20dp"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/email"
        android:layout_below="@id/username"
        android:hint="Email"
        android:textColorHint="@color/white"
        android:textColor="@color/white">
```

```
android:layout_margin="10dp"
android:padding="20dp"
android:background="#30ffffff"
android:drawableLeft="@drawable/ic_baseline_email_24"
android:drawablePadding="20dp"/>
```

<EditText

```
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/password"
android:layout_below="@id/email"
android:hint="Password"
android:textColorHint="@color/white"
android:textColor="@color/white"
android:layout_margin="10dp"
android:padding="20dp"
android:background="#30ffffff"
android:drawableLeft="@drawable/ic_baseline_info_24"
android:drawablePadding="20dp"
android:inputType="textPassword"/>
```

<EditText

```
android:id="@+id/repassword"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@id/password"
android:layout_marginStart="10dp"
android:layout_marginTop="10dp"
android:layout_marginEnd="10dp"
android:layout_marginBottom="10dp"
android:background="#30ffffff"
android:drawableLeft="@drawable/ic_baseline_info_24"
android:drawablePadding="20dp"
android:hint="confirm-Password"
android:inputType="textPassword"
android:padding="20dp"
android:textColor="@color/white"
android:textColorHint="@color/white" />
```

<LinearLayout

```
android:id="@+id/data"
android:layout_width="match_parent"
android:layout_height="74dp"
android:layout_below="@id/repassword"
android:layout_marginTop="6dp"
android:orientation="horizontal">
```

<Button

```

        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="58dp"
        android:layout_marginLeft="10dp"
        android:layout_weight="1"
        android:paddingStart="10dp"
        android:text="Insert" />

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="61dp"
    android:layout_marginLeft="10dp"
    android:layout_marginRight="10dp"
    android:layout_weight="1"
    android:text="Delete" />
</LinearLayout>

<com.google.android.material.button.MaterialButton
    android:id="@+id/signupbtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/data"
    android:layout_centerHorizontal="true"
    android:backgroundTint="@color/design_default_color_secondary"
    android:text="REGISTER"
    android:textSize="20dp" />

<Button
    android:id="@+id/frag"
    android:layout_width="match_parent"
    android:layout_height="73dp"
    android:layout_below="@id/signupbtn"
    android:layout_marginTop="28dp"
    android:backgroundTint="@color/design_default_color_secondary"
    android:text="next"
    android:textSize="20dp" />

</RelativeLayout>

```

Activity_registration.java

```

package com.example.helloworld;

import androidx.appcompat.app.AppCompatActivity;

```



```

import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import com.google.android.material.button.MaterialButton;

public class Registration extends AppCompatActivity {
    Button btn1,b1,b2,b3,b4;
    database g;
    EditText username,email,password;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_registration);
        btn1=(Button)findViewById(R.id.frag);
//        database g=new database(this);
//        SQLiteDatabase db=g.getReadableDatabase();
        btn1.setOnClickListener(new View
            .OnClickListener(){
                @Override
                public void onClick(View view) {
                    Intent intent =new Intent(Registration.this,navigation.class);
                    startActivity(intent);
                    String Username=username.getText().toString();
                    String Email=email.getText().toString();
                    String Password=password.getText().toString();
                }
            });

        EditText username = (EditText) findViewById(R.id.username);

        MaterialButton regbtn = (MaterialButton) findViewById(R.id.signupbtn);

        regbtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String username1 = username.getText().toString();
                Toast.makeText(Registration.this,"Username is"+username1,Toast.LENGTH_SHORT).show();
            }
        }); s

```

```
}  
}
```

database.java

```
package com.example.helloworld;  
  
import android.content.Context;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
  
import androidx.annotation.Nullable;  
  
public class database extends SQLiteOpenHelper  
{  
    private static final String dbname="signup.db";  
  
    public database(@Nullable Context context) {  
        super(context, dbname, null, 1);  
    }  
  
    @Override  
    public void onCreate(SQLiteDatabase sqLiteDatabase) {  
  
        String q = "Create table users (_id integer primary key autoincrement, name text, username text,  
password text,confirm_password text)";  
        sqLiteDatabase.execSQL(q);  
    }  
    @Override  
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {  
  
    }  
}
```

OUTPUT:-

The image shows a mobile application interface for a registration form. At the top, the status bar displays the time as 10:59 PM, a data speed of 4.3KB/s, and battery level at 62%. The app's title bar is purple. The main screen has a pink background with a white 'Sign Up' title. Below the title are four input fields: 'Username' with a person icon, 'Email' with an envelope icon, 'Password' with an information icon, and 'confirm-Password' with an information icon. Below these fields are two purple buttons labeled 'INSERT' and 'DELETE'. A teal button labeled 'REGISTER' is centered below them. At the bottom, a wide teal button labeled 'NEXT' spans the width of the form area.


Figure 8.1 Registration Form


11:00 PM | 0.0KB/s


4G


62

Sign Up

 Rishav Jindal

 rishubhikhi@gmail.com



|

INSERT

DELETE


REGISTER


NEXT


Fig 8.2 Filling out details


11:01 PM | 0.0KB/s

Sign Up

 Rishav Jindal

 rishubhikhi@gmail.com





INSERT DELETE

REGISTER

NEXT

Username isRishav Jindal

Fig 8.3 Showing username