| EX No -01 | Activity LifeCycle |
|---|---|

## Aim:

To write a program of Activity LifeCycle in Android Studio.

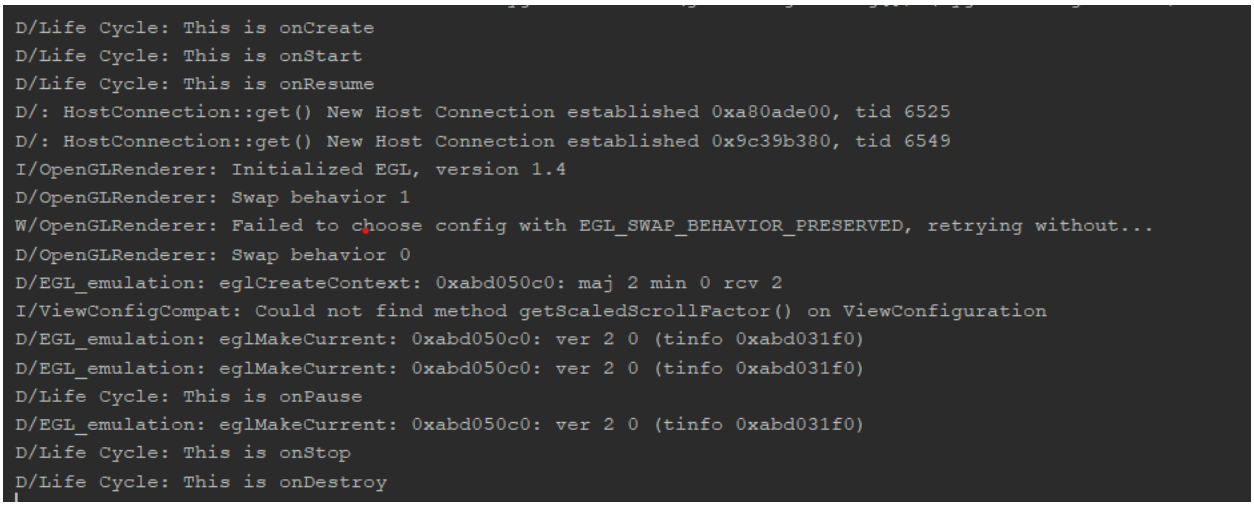
## Java Code:

```
package com.example.lifecycle;

import androidx.appcompat.app.AppCompatActivity;
import androidx.lifecycle.Lifecycle;

import android.os.Bundle;
import android.util.Log;

public class MainActivity extends AppCompatActivity {

  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     //Called when the activity is first created.
     // Set up the activity's UT, initialize variable, etc.
     setContentView(R.layout.activity_main);
     Log.d("Life Cycle", "This is onCreate");

  }
  @Override
  protected void onStart() {
     super.onStart();
     //Called when the activity becomes visible to the user.
     Log.d("Life Cycle", "This is onStart");
```

```
}
@Override
protected void onResume() {
    super.onResume();
    //Called when the activity starts interacting with the user.
    // Resume any paused operations, such as video playback or data updates.
    Log.d("Life Cycle","This is onResume");
}
@Override
protected void onPause() {
    super.onPause();
    // Called when the activity is partially obscured or hidden.
    // Save any UI state, stop animations, etc., as the activity might be killed.
    Log.d("Life Cycle", "This is onPause");
}
@Override
protected void onStop() {
    super.onStop();
    // Called when the activity is no longer visible to the user.
    // Release resources that are not needed when the activity is not visible.
    Log.d("Life Cycle", "This is onStop");
}
@Override
protected void onRestart() {
    super.onRestart();
    // Called after onStop() when the activity is being restarted.
    Log.d("Life Cycle", "This is onRestart");
}
@Override
protected void onDestroy() {
    super.onDestroy();
```

```
    // Called before the activity is destroyed.
    // Release any remaining resoureces, save date, etc.
    Log.d("Life Cycle", "This is onDestroy");

  }

}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 02 | Screen Orientation |
|---|---|

## Aim:

To write a program of Screen Orientation in Android Studio.

## XML Code:

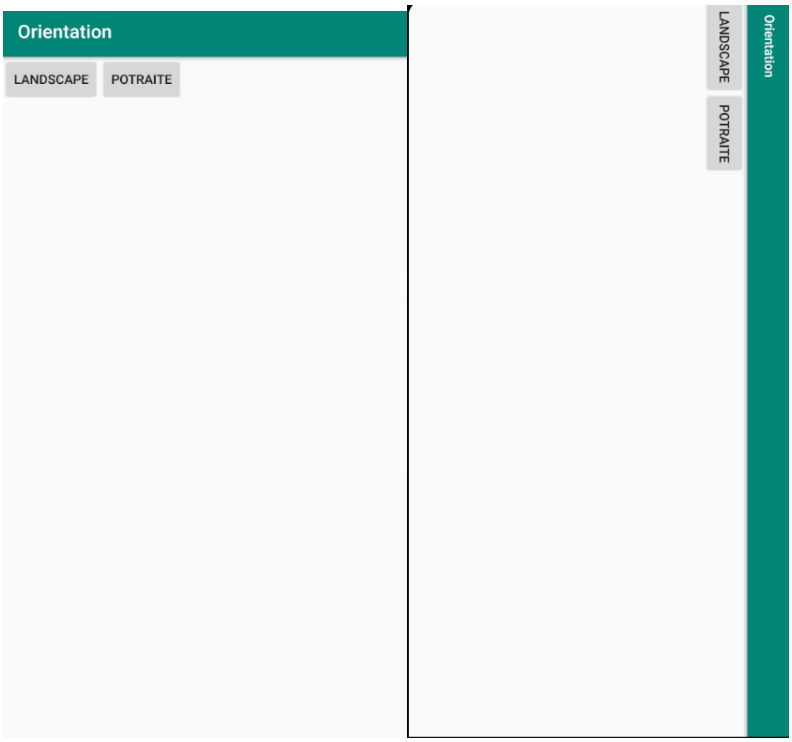
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools" android:layout_width="match_parent"
android:layout_height="match_parent" tools:context=".MainActivity">
  <Button android:id="@+id/b1" android:layout_width="wrap_content"
android:layout_height="wrap_content" android:text="landscape"/>
  <Button android:id="@+id/b2" android:layout_width="wrap_content"
android:layout_height="wrap_content" android:text="potraite"/>
</LinearLayout>
```

## Java Code:

```
package com.example.orientation;

import androidx.appcompat.app.AppCompatActivity;

import android.content.pm.ActivityInfo;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {
  Button bb;
  Button bb1;
```

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

     bb = (Button) findViewById(R.id.b1);
     bb.setOnClickListener(new android.view.View.OnClickListener() {
        @Override
        public void onClick(android.view.View V) {
           setRequestedOrientation(ActivityInfo.SCREEN_ORIENTATION_LANDSCAPE);
        }
     });

     bb1 = (Button) findViewById(R.id.b2);
     bb1.setOnClickListener(new android.view.View.OnClickListener() {
        @Override
        public void onClick(android.view.View V) {
           setRequestedOrientation(ActivityInfo.SCREEN_ORIENTATION_PORTRAIT);
        }
     });
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 03 | Changing the TextView Color using the button |
|---|---|

## Aim:

To write a program of Changing the TextView Color using the button in Android Studio.

## XML Code:

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

    <TextView
        android:id="@+id/tv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_marginEnd="160dp"
        android:text="Hello world"
        android:textSize="20dp"
        android:padding="100dp"
        android:gravity="center"
        tools:ignore="MissingConstraints" />
    <Button
        android:id="@+id/b1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

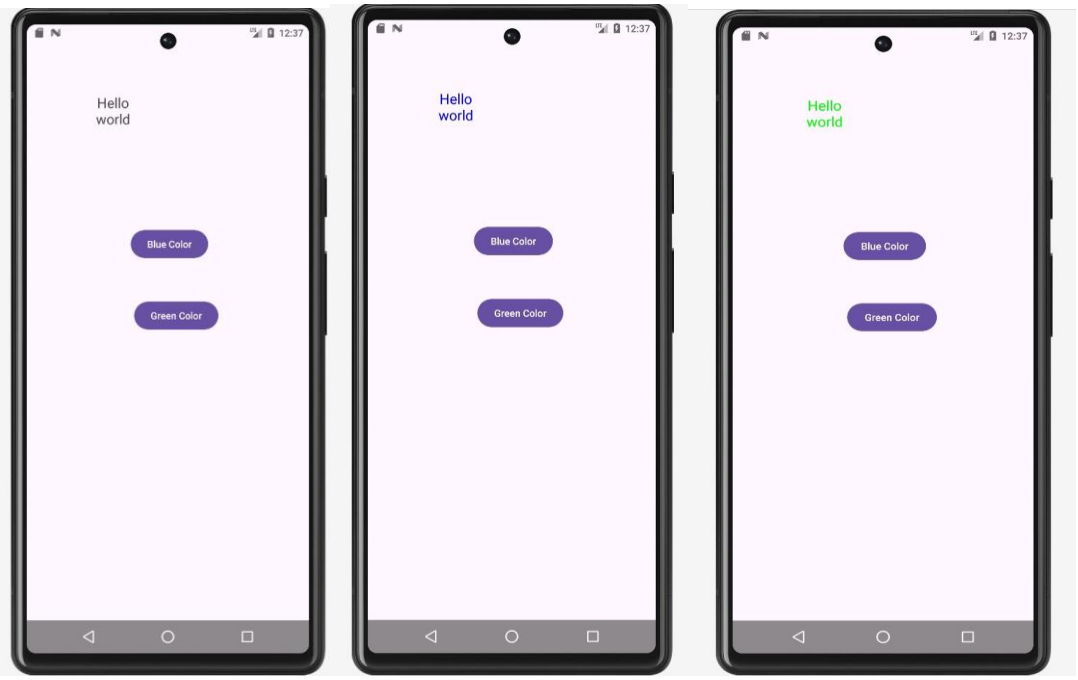
```
        android:layout_below="@+id/tv1"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="44dp"
        android:layout_marginEnd="147dp"
        android:text="Blue Color"
        tools:ignore="MissingConstraints" />
    <Button
        android:id="@+id/b2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/b1"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="56dp"
        android:layout_marginEnd="132dp"
        android:text="Green Color"
        tools:ignore="MissingConstraints" />
</RelativeLayout>
```

## Java Code:

```
package com.example.text_change_color;

import android.os.Bundle;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    TextView t1;
    Button b1,b2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        t1=findViewById(R.id.tv1);
        b1=findViewById(R.id.b1);
        b2=findViewById(R.id.b2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                t1.setTextColor(Color.BLUE);
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                t1.setTextColor(Color.GREEN);
            }
        });
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 04 | Simple Calculator |
|---|---|

## Aim:

To write a program of Simple Calculator in Android Studio.

## XML Code:

```
<?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">

  <TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Calculator"
    android:layout_gravity="center"
    android:layout_marginTop="50dp" />

  <EditText
    android:id="@+id/num1"
    android:hint="Enter number"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp" />
```

```
<EditText
    android:id="@+id/num2"
    android:hint="Enter number"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp" />

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_marginTop="30dp">

    <Button
        android:id="@+id/add"
        android:text="+"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:layout_marginEnd="5dp"/>

    <Button
        android:id="@+id/sub"
        android:text="-"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:layout_marginEnd="5dp"/>

    <Button
        android:id="@+id/mul"
```

```
        android:text="*"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:layout_marginEnd="5dp"/>

    <Button
        android:id="@+id/div"
        android:text="/"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:layout_marginEnd="5dp"/>

  </LinearLayout>

  <TextView
    android:id="@+id/answer"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="30dp" />

</LinearLayout>
```

## Java Code:

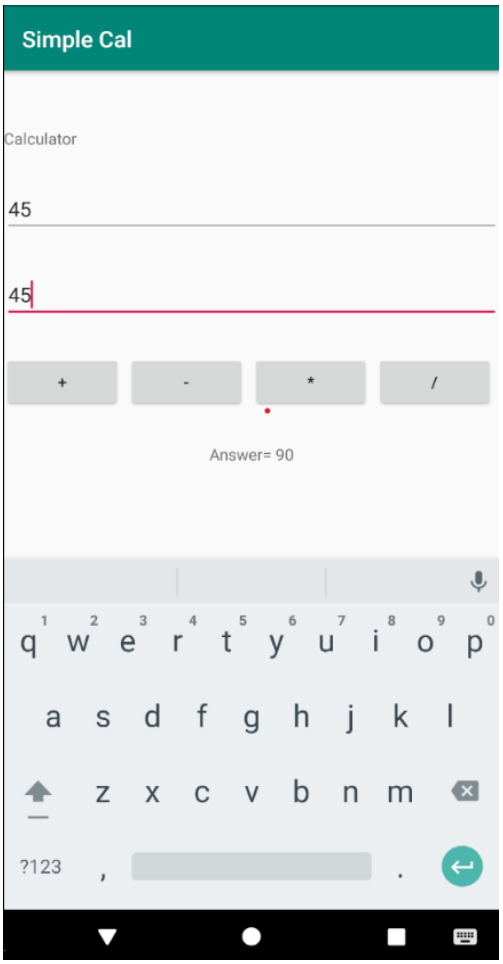
```
package com.example.simplecal;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {
  Button buttonAdd, buttonSub, buttonMul, buttonDiv;
  EditText editTextN1, editTextN2;
  TextView textView;
  int no1, no2;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     buttonAdd = findViewById(R.id.add);
     buttonSub = findViewById(R.id.sub);
     buttonMul = findViewById(R.id.mul);
     buttonDiv = findViewById(R.id.div);
     editTextN1 = findViewById(R.id.num1);
     editTextN2 = findViewById(R.id.num2);
     textView = findViewById(R.id.answer);

     buttonAdd.setOnClickListener(this);
     buttonSub.setOnClickListener(this);
     buttonMul.setOnClickListener(this);
     buttonDiv.setOnClickListener(this);
  }

  public int getIntFromEditText(EditText editText) {
```

```
    if (editText.getText().toString().equals("")) {
        Toast.makeText(this, "Enter a number", Toast.LENGTH_LONG).show();
        return 0;
    } else {
        return Integer.parseInt(editText.getText().toString());
    }
}

@Override
public void onClick(View view) {
    no1 = getIntFromEditText(editTextN1);
    no2 = getIntFromEditText(editTextN2);
    switch (view.getId()) {
        case R.id.add:
            textView.setText("Answer= " + (no1 + no2));
            break;
        case R.id.sub:
            textView.setText("Answer= " + (no1 - no2));
            break;
        case R.id.mul:
            textView.setText("Answer= " + (no1 * no2));
            break;
        case R.id.div:
            if (no2 == 0) {
                Toast.makeText(this, "Cannot divide by zero", Toast.LENGTH_LONG).show();
            } else {
                textView.setText("Answer= " + (no1 / no2));
            }
            break;
    }
}
```

}

## Output:




## Result:

The code has been executed successfully.

| EX No - 05 (i) | Linear Layouts |
|---|---|

## Aim:

To write a program of Linear Layouts in Android Studio.

## XML Code:

```
<?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:gravity="center"
    android:background="#BDA0F3"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/tv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="LOGIN"
        android:textColor="#580AE4"
        android:textSize="60dp"
        android:layout_gravity="center"
        android:textStyle="bold"
        />

    <EditText
        android:id="@+id/et"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:hint='Enter your name'
        />

    <Button
        android:id="@+id/btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SUBMIT"
         />
</LinearLayout>
```

## Java Code:

```
import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

    TextView t;
    Button b;
    EditText e;

    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        t = findViewById(R.id.tv);
        b = findViewById(R.id.btn);
        e = findViewById(R.id.et);

        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(getApplicationContext(),"Entered Text is
Submited!",Toast.LENGTH_LONG).show();
            }
        });
    }
}
```

## Output:


## Result:

The code has been executed successfully.

| EX No - 05 (ii) | Relative Layouts |
|---|---|

## Aim:

To write a program of Relative Layouts in Android Studio.

## XML Code:

```
<?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:gravity="center"
    android:background="#E9B1F3"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/tv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="LOGIN"
        android:textColor="#9C27B0"
        android:layout_marginTop="20dp"
        android:textSize="60dp"
        android:layout_gravity="center"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
```

```
    <EditText
        android:id="@+id/et"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="90dp"
        android:layout_marginLeft="20dp"
        android:hint='Enter your name'
        />

    <Button
        android:id="@+id/btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="150dp"
        android:text="SUBMIT"
        />
</RelativeLayout>
```

## Java Code:

```
package com.example.a2_relative_layout;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
```

```
public class MainActivity extends AppCompatActivity {

    TextView t;
    Button b;
    EditText e;

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

        t = findViewById(R.id.tv);
        b = findViewById(R.id.btn);
        e = findViewById(R.id.et);

        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(getApplicationContext(),"Entered Text is
Submited!",Toast.LENGTH_LONG).show();
            }
        });
    }
}
```

## Output:


## Result:

The code has been executed successfully.

| EX No - 05 (iii) | Absolute Layouts |
|---|---|

## Aim:

To write a program of Absolute Layouts in Android Studio.

## XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayout xmlns:android="http://schemas.android.com/apk/res/android"
  android:layout_width="match_parent"
  android:layout_height="match_parent">

  <EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Enter text"
    android:layout_x="100dp"
    android:layout_y="100dp" />

  <Button
    android:id="@+id/addButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Add Text"
    android:layout_x="100dp"
    android:layout_y="150dp" />

  <TextView
    android:id="@+id/TextView"
    android:layout_width="wrap_content"
```

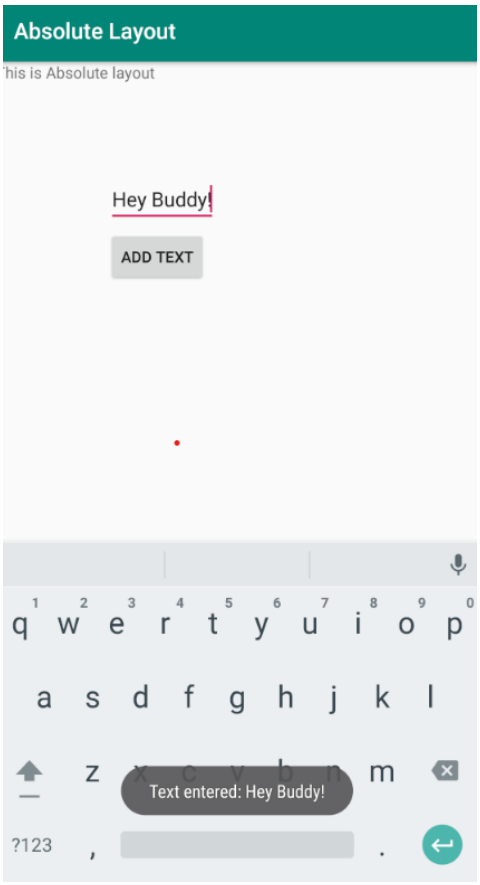
```
        android:layout_height="wrap_content"
        android:text="This is Absolute layout">

    </TextView>

</AbsoluteLayout>
```

## Java Code:

```
package com.example.absolutelayout;

import android.os.Bundle;
import android.view.View;
import android.widget.AbsoluteLayout;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import java.util.Random;

public class MainActivity extends AppCompatActivity {

    private AbsoluteLayout layout;
    private EditText editText;
    private Button addButton;
    private Random random;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);

        editText = findViewById(R.id.editText);
        addButton = findViewById(R.id.addButton);
        random = new Random();

        addButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String text = editText.getText().toString().trim();
                if (!text.isEmpty()) {
                    // Show a toast message with the text from the EditText
                    Toast.makeText(MainActivity.this, "Text entered: " + text,
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 05 (iv) | Frame Layouts |
|---|---|

## Aim:

To write a program of Frame Layouts in Android Studio.

## XML Code:

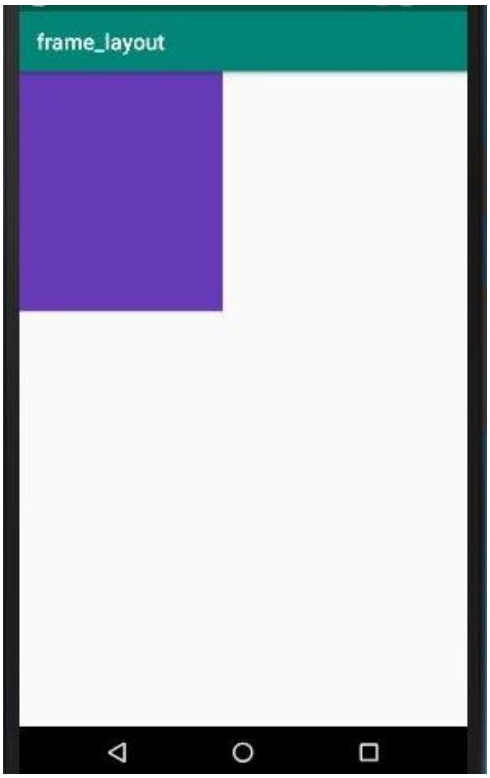
```
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Frame Layout!"
        android:id="@+id/t"
        android:textColor="#ffffff"
        android:textSize="23dp"
        android:textStyle="bold"
        />
    <ImageView
        android:layout_width="187dp"
        android:layout_height="221dp"
        android:layout_below="@+id/t"
        android:src="@color/purple"/>

    <ImageView
        android:layout_width="187dp"
        android:layout_height="221dp"
```

```
        android:layout_below="@+id/t"
        android:src="@color/purple"/>
</FrameLayout>
```

## Java Code:

```
package com.example.frame_layout;

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:




## Result:

The code has been executed successfully.

| EX No - 05 (v) | Table Layouts |
|---|---|

## Aim:

To write a program of Table Layouts in Android Studio.

## XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<TableLayout 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">

    <TableRow>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="STUDENT"
            android:padding="10dp"
            android:layout_column="1" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="SRIVARSHINI"
            android:padding="10dp"
            android:layout_column="2" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```
            android:text="SNEHA"
            android:padding="10dp"
            android:layout_column="3" />
    </TableRow>
    <TableRow>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="TAMIL"
            android:padding="10dp"
            android:layout_column="1" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="97"
            android:padding="10dp"
            android:layout_column="2"
/>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="96"
            android:padding="10dp"
            android:layout_column="3" />
    </TableRow>
    <TableRow>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="ENGLISH"
            android:padding="10dp"
```

```
        android:layout_column="1"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="95"
        android:padding="10dp"
        android:layout_column="2" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="97"
        android:padding="10dp"
        android:layout_column="3" />
</TableRow>
<TableRow>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="MATHEMATICS"
        android:padding="10dp"
        android:layout_column="1" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="95"
        android:padding="10dp"
        android:layout_column="2" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
        android:text="95"
        android:padding="10dp"
        android:layout_column="3" />
</TableRow>
<TableRow>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SCIENCE"
        android:padding="10dp"
        android:layout_column="1" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="99"
        android:padding="10dp"
        android:layout_column="2" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="92"
        android:padding="10dp"
        android:layout_column="3" />
</TableRow>
<TableRow>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SOCIAL SCIENCE"
        android:padding="10dp"
        android:layout_column="1" />
```

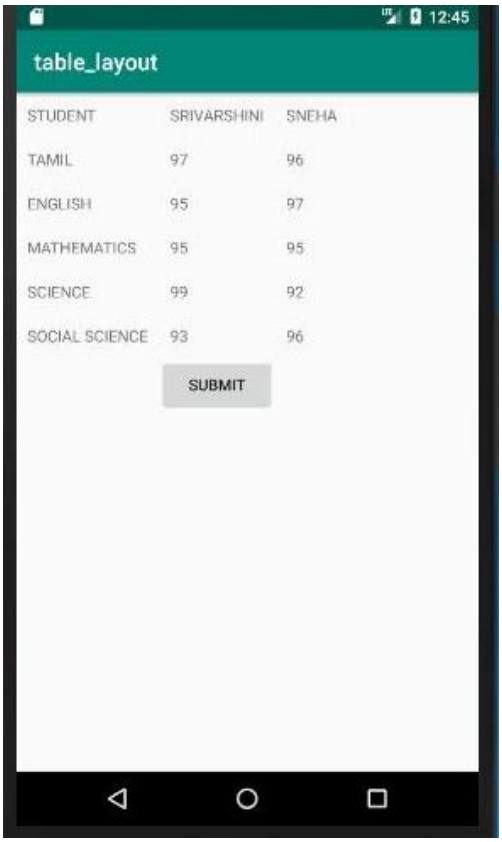
```
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="93"
            android:padding="10dp"
            android:layout_column="2" />
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="96"
            android:padding="10dp"
            android:layout_column="3" />
    </TableRow>
    <TableRow>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Submit"
            android:id="@+id/b1"
            android:layout_column="2"/>
    </TableRow>
</TableLayout>
```

## Java Code:

```
package com.example.table_layout;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
   Button bb;

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

      bb = findViewById(R.id.b1);

      bb.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            Toast.makeText(getApplicationContext(),"Marks
submitted",Toast.LENGTH_LONG).show();
         }
      });
   }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 06 | Implicit and Explicit Intent |
|---|---|

## Aim:

To write a program of Implicit and Explicit Intent in Android Studio.

## XML 1 Code:

```
<?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"
  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="External Intent"
    android:id='@+id/Bm1'/>

  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Internal Intent"
```

```
    android:id='@+id/Bm2'/>
</LinearLayout>
```

## XML 2 Code:

```
<?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"
  tools:context=".intent2"
  android:orientation="horizontal">

  <TextView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:text='Welcome to second page.' />

  <Button
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:text="Click"/>
</LinearLayout>
```

## Java 1 Code:

```
package com.example.intent;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
```

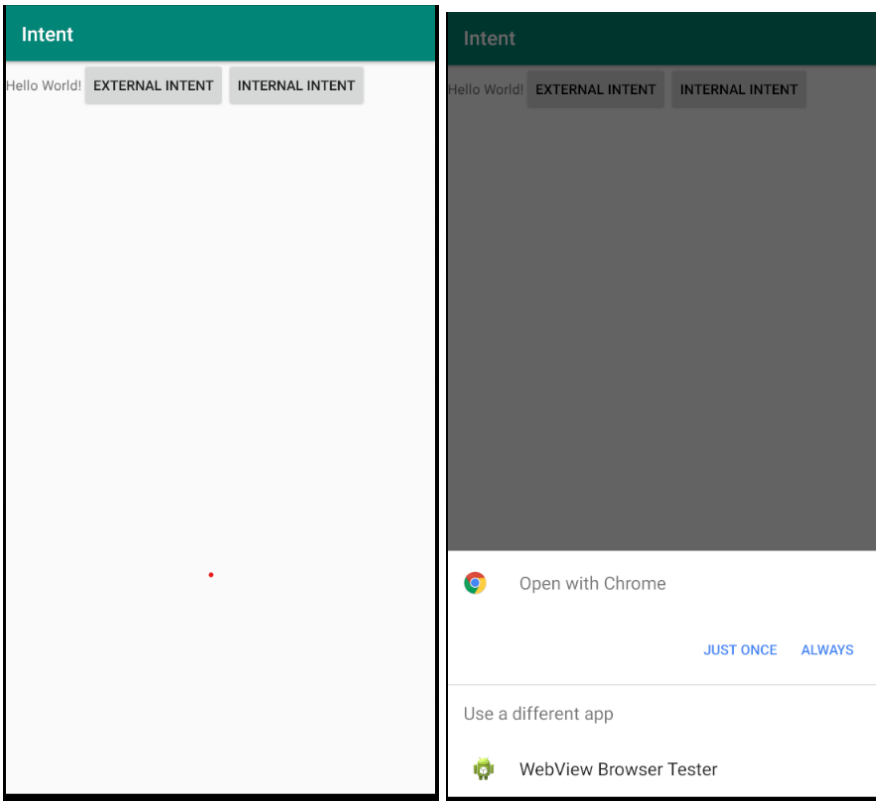
```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

  Button bm1, bm2;

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

    bm1 = findViewById(R.id.Bm1);
    bm2 = findViewById(R.id.Bm2); // Initialize bm2 button

    // External Intent:
    bm1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent in1 = new Intent(getApplicationContext(), intent2.class);
        startActivity(in1);
      }
    });

    // Internal Intent:
    bm2.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent intent = new Intent(Intent.ACTION_VIEW);
        intent.setData(Uri.parse("http://www.google.com"));
```

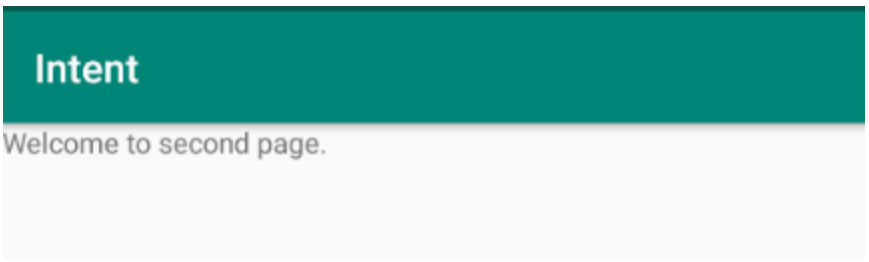
```
            startActivity(intent);
        }
    });
  }
}
```

## Java 2 Code:

```
package com.example.intent;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class intent2 extends AppCompatActivity {

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_intent2);
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 07 | Toast |
|---|---|

## Aim:

To write a program of Toast in Android Studio.

## XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Use LinearLayout as the root layout -->
<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"
  tools:context=".MainActivity"
  android:orientation="horizontal">

  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Enter your name"/>

  <EditText
    android:id="@+id/t1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>

  <Button
    android:id="@+id/b1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

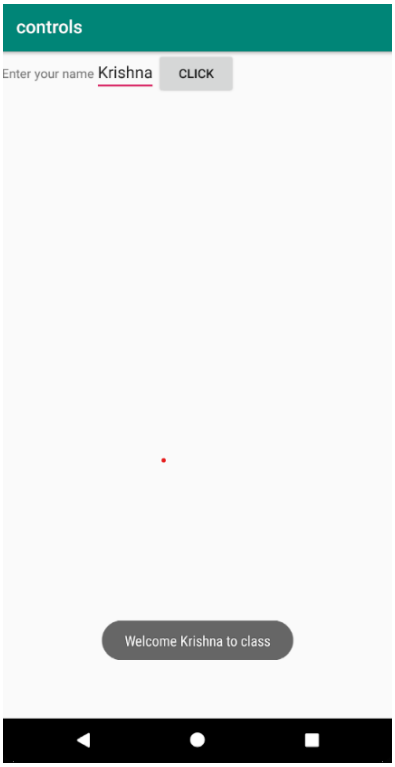
```
    android:text="Click"/>

</LinearLayout>
```

## Java Code:

```
package com.example.controls;

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;

public class MainActivity extends AppCompatActivity {
  EditText e1;
  Button bb;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     e1=(EditText)findViewById(R.id.t1);
     bb=(Button)findViewById(R.id.b1);
     bb.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
           String S1 = e1.getText().toString();
           Toast.makeText(getApplicationContext(),"Welcome " + S1 + " to class",
Toast.LENGTH_LONG).show();
        }
```

```
        });
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 08 | Checkbox |
|---|---|

## Aim:

To write a program of Checkbox in Android Studio.

## XML Code:

```
<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">
    <CheckBox
        android:id="@+id/c1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Tamilnadu"
        tools:layout_editor_absoluteX="104dp"
        tools:layout_editor_absoluteY="241dp"/>
    <CheckBox
        android:id="@+id/c2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Kerala"
        tools:layout_editor_absoluteX="139dp"
        tools:layout_editor_absoluteY="289dp"/>
    <CheckBox
        android:id="@+id/c3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Delhi"
```

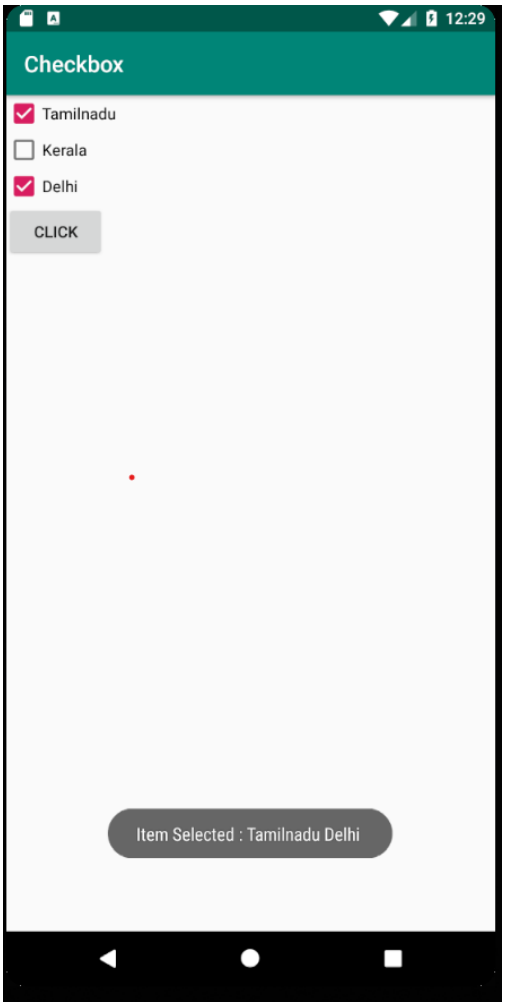
```
            tools:layout_editor_absoluteX="174dp"
            tools:layout_editor_absoluteY="219dp"/>
        <Button
            android:id="@+id/b1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Click"/>
</LinearLayout>
```

## Java Code:

```
package com.example.checkbox;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
  CheckBox ch1,ch2,ch3;
  Button bt1;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     bt1=(Button)findViewById(R.id.b1);
     ch1=(CheckBox)findViewById(R.id.c1);
     ch2=(CheckBox)findViewById(R.id.c2);
     ch3=(CheckBox)findViewById(R.id.c3);
```

```
    bt1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

            String s1="Item Selected : ";
            if(ch1.isChecked()){
                s1+=ch1.getText().toString()+" ";
            }
            if(ch2.isChecked()){
                s1+=ch2.getText().toString()+" ";
            }
            if(ch3.isChecked()){
                s1+=ch3.getText().toString()+" ";
            }
            Toast.makeText(getApplicationContext(),s1, Toast.LENGTH_LONG).show();
        }
    });

  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 09 | RadioGroup and RadioButton |
|---|---|

## Aim:

To write a program for RadioGroup and RadioButton Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity"
  android:orientation="vertical">
  <TextView
    android:id="@+id/t1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="EB TYPE"
    />
  <RadioGroup
    android:id="@+id/rg"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>
    <RadioButton
      android:id="@+id/r1"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="commercial"/>
    <RadioButton
```

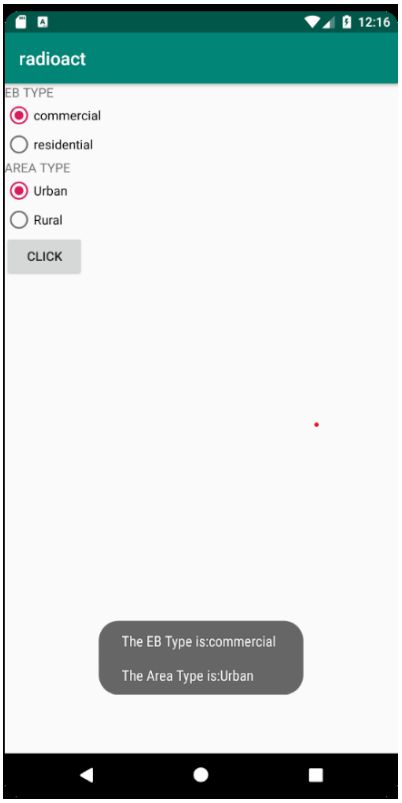
```
        android:id="@+id/r2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="residential"/>
    </RadioGroup>
    <TextView
      android:id="@+id/t2"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="AREA TYPE"/>
    <RadioGroup
      android:id="@+id/rg2"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"/>
      <RadioButton
        android:id="@+id/r3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Urban"/>
      <RadioButton
        android:id="@+id/r4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Rural"/>
    </RadioGroup>
    <Button
      android:id="@+id/b1"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="click"/>
</LinearLayout>
```

## Java Code:

```
package com.example.radioact;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Button bb = (Button)findViewById(R.id.b1);
    final RadioGroup rgp = (RadioGroup)findViewById(R.id.rg);
    final RadioGroup rgp1 = (RadioGroup)findViewById(R.id.rg2);
    bb.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        int s = rgp.getCheckedRadioButtonId();
        RadioButton rb = (RadioButton)findViewById(s);
        int s1 = rgp1.getCheckedRadioButtonId();
        RadioButton rb2 = (RadioButton)findViewById(s1);
        Toast.makeText(getApplicationContext(),"The EB Type is:"+rb.getText()+"\n\n"+"The
Area Type is:"+rb2.getText(),Toast.LENGTH_LONG).show();
      }
```

```
        });
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 10 | AutoCompleteTextView |
|---|---|

## Aim:

To write a program of AutoCompleteTextView in Android Studio.

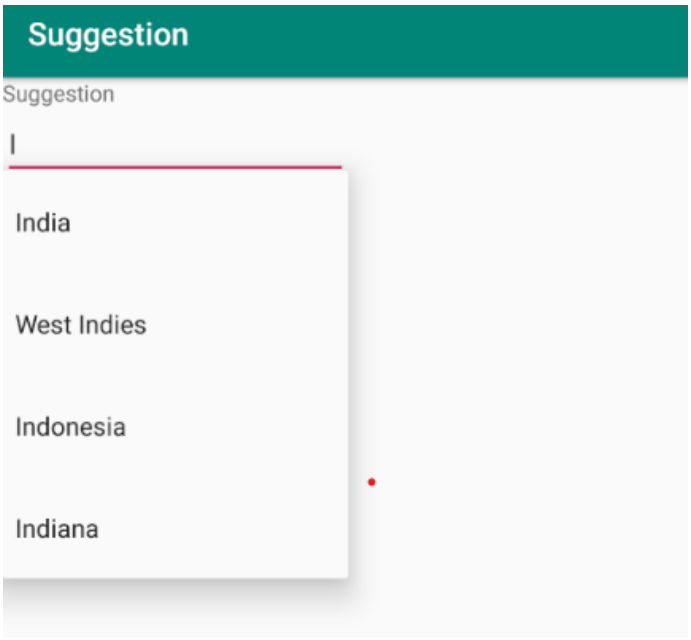
**XML Code:**

```
<?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">

  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Suggestion"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"/>

  <AutoCompleteTextView
    android:id="@+id/at1"
    android:layout_width="217dp"
    android:layout_height="wrap_content"/>

</LinearLayout>
```

## Java Code:

```
package com.example.suggestion;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.AutoCompleteTextView;

public class MainActivity extends AppCompatActivity {

  String[] country = {"India", "Australia", "West Indies", "Indonesia", "Indiana", "South Africa",
"Bangladesh", "SriLanka", "Singapore"};

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    ArrayAdapter<String> adapter = new
ArrayAdapter<String>(this,android.R.layout.simple_dropdown_item_1line,country);
    AutoCompleteTextView textView = (AutoCompleteTextView)findViewById(R.id.at1);
    textView.setThreshold(1);
    textView.setAdapter(adapter);
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 11 | Seekbar |
|---|---|

## Aim:

To write a program for SeekBar in Android Studio.

## XML Code:

```
<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"
    tools:context=".MainActivity">
    <ScrollView
        android:layout_width="fill_parent"
        android:layout_height="fill_parent">
        <LinearLayout
            android:layout_width="fill_parent"
            android:layout_height="fill_parent"
            android:orientation="vertical">
             <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Hello World!"
                android:id="@+id/t1"/>
            <Button
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="click1"/>
        </LinearLayout>
    </ScrollView>
```

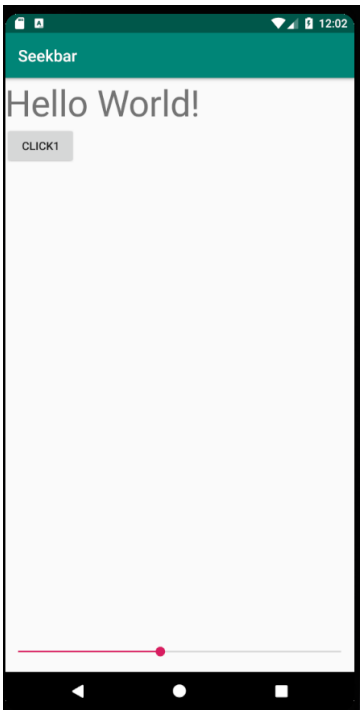
```
        <SeekBar
                android:id="@+id/s1"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_alignParentBottom="true"
                android:layout_alignParentRight="true"
                android:padding="16dp"/>
</RelativeLayout>
```

## Java Code:

```
package com.example.seekbar;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.SeekBar;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
  TextView tv;
  SeekBar sb;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     tv=(TextView)findViewById(R.id.t1);
     sb=(SeekBar)findViewById(R.id.s1);
     sb.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
        @Override
        public void onProgressChanged(SeekBar seekBar, int progress, boolean fromUser) {
           tv.setTextSize(progress+1);
```

```
        }

        @Override
        public void onStartTrackingTouch(SeekBar seekBar) {

        }

        @Override
        public void onStopTrackingTouch(SeekBar seekBar) {
        }
    });
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 12 | ImageView and ImageButton |
|---|---|

## Aim:

To write a program of ImageView and ImageButton in Android Studio.

## XML Code:

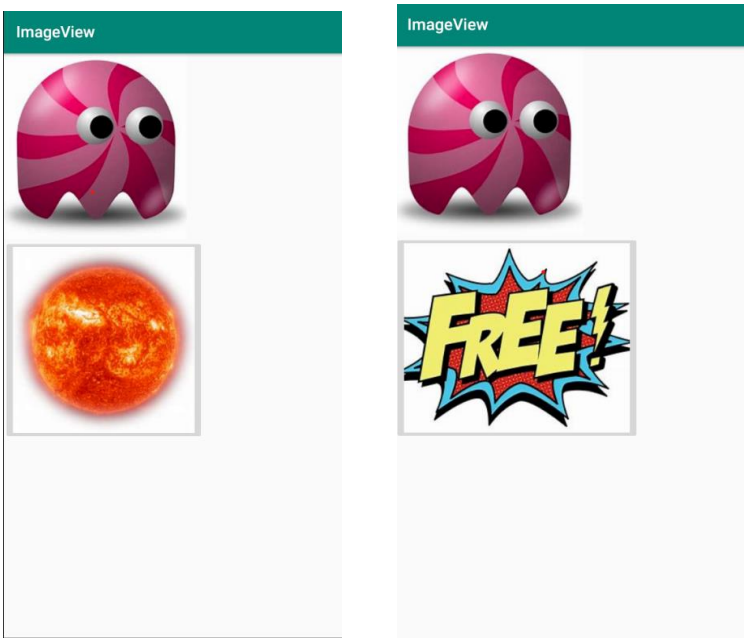
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical"
  tools:context=".MainActivity">

  <ImageView
    android:layout_width = "wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/iv1"
    android:src="@drawable/oooo_1"/>

  <ImageButton
    android:layout_width = "wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/iv2"
    android:text="Click"
    android:src="@drawable/aaaa"/>

</LinearLayout>
```

## Java Code:

```
package com.example.imageview;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageButton;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

  ImageView iv1;
  ImageButton iv2;
  @SuppressLint("ResourceAsColor")
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);

     iv1 = (ImageView)findViewById(R.id.iv1);
     iv1.setImageResource(R.drawable.oooo_1);
     iv1.setBackgroundColor(android.R.color.black);
     iv2 = (ImageButton)findViewById(R.id.iv2);
     iv2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
           iv2.setImageResource(R.drawable.opi1);
        }
     });
```

```
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 13 | ToggleButton |
|---|---|

## Aim:

To write a program of Toggle Button in Android Studio.

## XML Code:

```
<?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:id="@+id/main"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical"
  tools:context=".MainActivity">

  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="TOGGLE BUTTON"
    android:textSize="20sp"
    android:textColor="@android:color/holo_orange_light"
    android:layout_gravity="center"
    android:layout_marginTop="20dp"/>

  <ToggleButton
    android:id="@+id/toggleButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="ToggleButton"
```

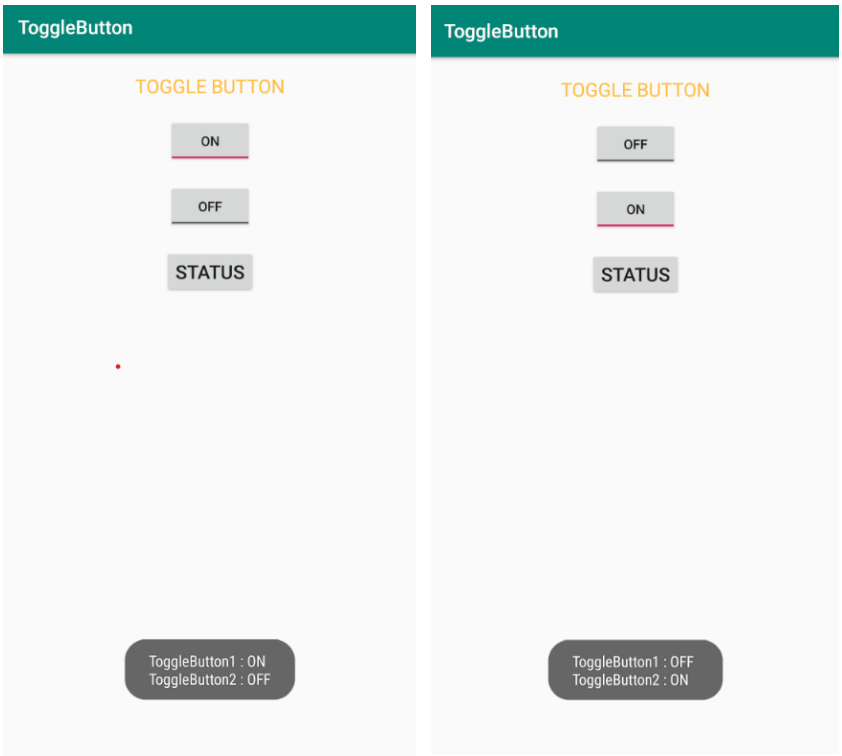
```
    android:layout_gravity="center"
    android:layout_marginTop="20dp"/>

  <ToggleButton
    android:id="@+id/toggleButton2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="ToggleButton"
    android:layout_gravity="center"
    android:layout_marginTop="20dp"/>

  <Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="STATUS"
    android:textSize="20sp"
    android:layout_gravity="center"
    android:layout_marginTop="20dp"/>

</LinearLayout>
```

## Java Code:

```
package com.example.togglebutton;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import android.widget.ToggleButton;
```

```
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
  ToggleButton t1, t2;
  Button b;

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

    t1 = findViewById(R.id.toggleButton);
    t2 = findViewById(R.id.toggleButton2);
    b = findViewById(R.id.button);

    b.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String status = "ToggleButton1 : " + t1.getText() + "\n" + "ToggleButton2 : " +
            t2.getText();
        Toast.makeText(getApplicationContext(), status, Toast.LENGTH_SHORT).show();
      }
    });
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 14 | ListView |
|---|---|

## Aim:

To write a program of ListVIew in Android Studio.

## XML Code:

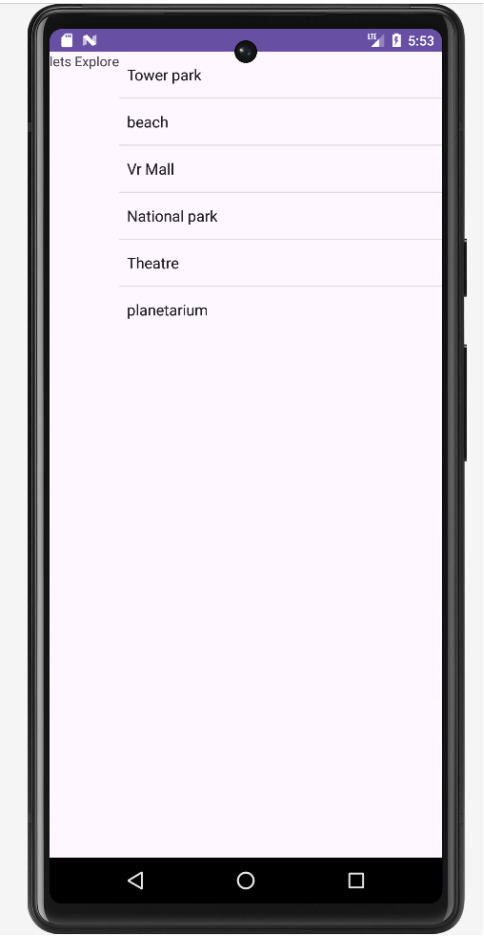
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.appcompat.widget.LinearLayoutCompat
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  tools:context=".MainActivity">
  <TextView
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:text="lets Explore" />
  <ListView
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:id="@+id/l1" />
</androidx.appcompat.widget.LinearLayoutCompat>
```

## Java Code:

```
package com.example.list_view;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.ArrayAdapter;
```

```
import android.widget.ListView;
public class MainActivity extends AppCompatActivity {
  ListView l;
  String[] s = {"Tower park","beach","Vr Mall","National park","Theatre","planetarium"};
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     l=findViewById(R.id.l1);
     ArrayAdapter ad= new ArrayAdapter<String>(this,
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item,s);
     l.setAdapter(ad);
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 15 | DatePicker and TimePicker |
|---|---|

## Aim:

To write a program of DatePicker and TimePicker in Android Studio.

## XML Code:

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

    <Button
      android:id="@+id/btnDatePicker"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="@string/pick_date"
      android:layout_centerHorizontal="true"
      android:layout_marginTop="50dp"/>

    <Button
      android:id="@+id/btnTimePicker"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="@string/pick_time"
      android:layout_below="@id/btnDatePicker"
      android:layout_centerHorizontal="true"
```

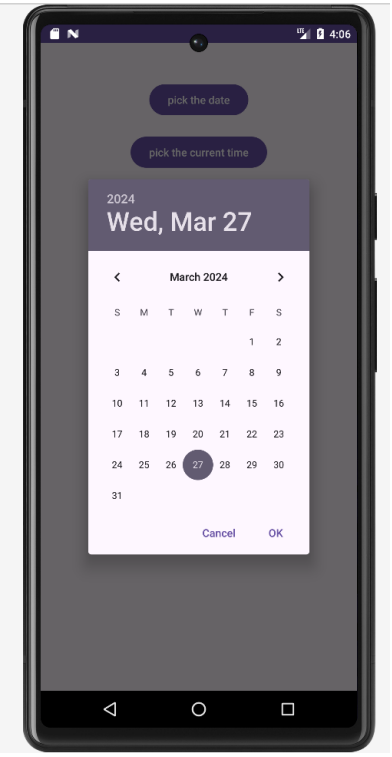
```
        android:layout_marginTop="20dp"/>

</RelativeLayout>
```

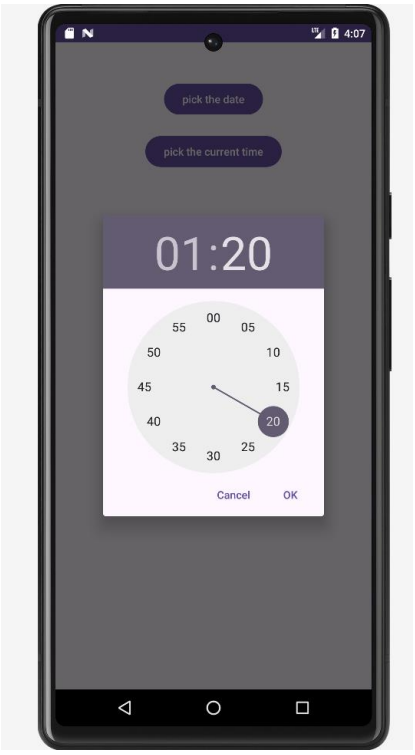
## Java Code:

```
package com.example.timepicker_and_datepicker;
import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.os.Bundle;
import android.widget.Button;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import java.util.Calendar;
public class MainActivity extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     Button btnDatePicker = findViewById(R.id.btnDatePicker);
     Button btnTimePicker = findViewById(R.id.btnTimePicker);
     btnDatePicker.setOnClickListener(v -> showDatePicker());
     btnTimePicker.setOnClickListener(v -> showTimePicker());
  }
  private void showDatePicker() {
     // Get current date
     final Calendar c = Calendar.getInstance();
     int year = c.get(Calendar.YEAR);
     int month = c.get(Calendar.MONTH);
     int day = c.get(Calendar.DAY_OF_MONTH);
     // Create DatePickerDialog and show it
     DatePickerDialog datePickerDialog = new DatePickerDialog(this,
```

```
            (view, year1, monthOfYear, dayOfMonth) -> {
                String date = dayOfMonth + "/" + (monthOfYear + 1) + "/" + year1;
                Toast.makeText(MainActivity.this, "Selected Date: " + date,
Toast.LENGTH_SHORT).show();
            }, year, month, day);
        datePickerDialog.show();
    }
    private void showTimePicker() {
        // Get current time
        final Calendar c = Calendar.getInstance();
        int hour = c.get(Calendar.HOUR_OF_DAY);
        int minute = c.get(Calendar.MINUTE);
        // Create TimePickerDialog and show it
        TimePickerDialog timePickerDialog = new TimePickerDialog(this, (view, hourOfDay,
minute1) -> {
            String time = hourOfDay + ":" + minute1;
            Toast.makeText(MainActivity.this, "Selected Time: " + time,
Toast.LENGTH_SHORT).show();
        }, hour, minute, true);
        timePickerDialog.show();
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 16 | CreateView programmatically |
|---|---|

## Aim:

To write a program of CreateView programmatically in Android Studio.

## XML Code:

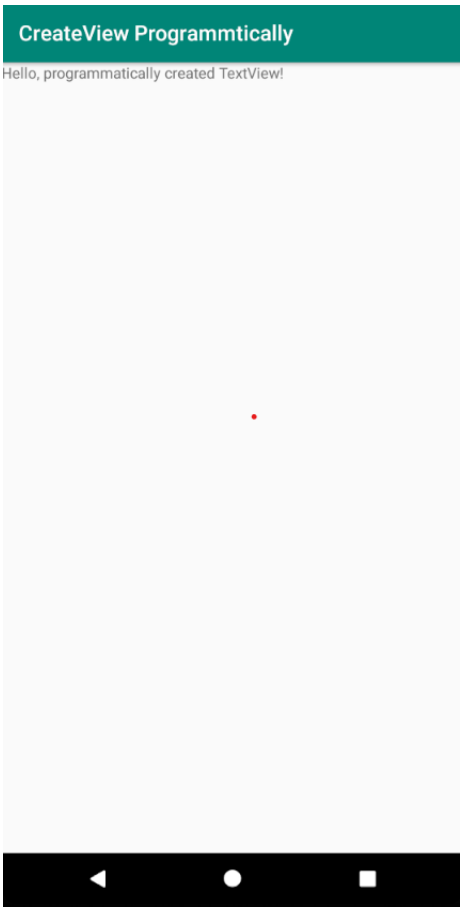
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:id="@+id/parent_layout"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical"
  tools:context=".MainActivity">

</LinearLayout>
```

## Java Code:

```
package com.example.createviewprogrammtically;

import android.os.Bundle;
import android.widget.LinearLayout;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
```

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

        // Create a TextView
        TextView textView = new TextView(this);
        textView.setText("Hello, programmatically created TextView!");

        // Create LayoutParams for the TextView
        LinearLayout.LayoutParams layoutParams = new LinearLayout.LayoutParams(
                LinearLayout.LayoutParams.WRAP_CONTENT,
                LinearLayout.LayoutParams.WRAP_CONTENT
        );

        // Set layout parameters for the TextView
        textView.setLayoutParams(layoutParams);

        // Find the parent layout where you want to add the TextView
        LinearLayout parentLayout = findViewById(R.id.parent_layout);

        // Add the TextView to the parent layout
        parentLayout.addView(textView);
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 17 (i) | Popup Menu |
|---|---|

## Aim:

To write a program of Popup Menu in Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity"
  android:orientation="vertical">

  <Button
    android:layout_height="wrap_content"
    android:layout_width="wrap_content"
    android:text="Show menu"
    android:onClick="showpopup"/>

</LinearLayout>
```

## Popupmenu XML code:

```
<menu xmlns:android="http://schemas.android.com/apk/res/android">
  <item
    android:id="@+id/i1"
    android:title="kurti"/>
  <item
```

```
    android:id="@+id/i2"
    android:title="chudidar"/>
  <item
    android:id="@+id/i3"
    android:title="jeans"/>
  <item
    android:id="@+id/i4"
    android:title="skirt"/>
  <item
    android:id="@+id/i5"
    android:title="saree"/>
</menu>
```

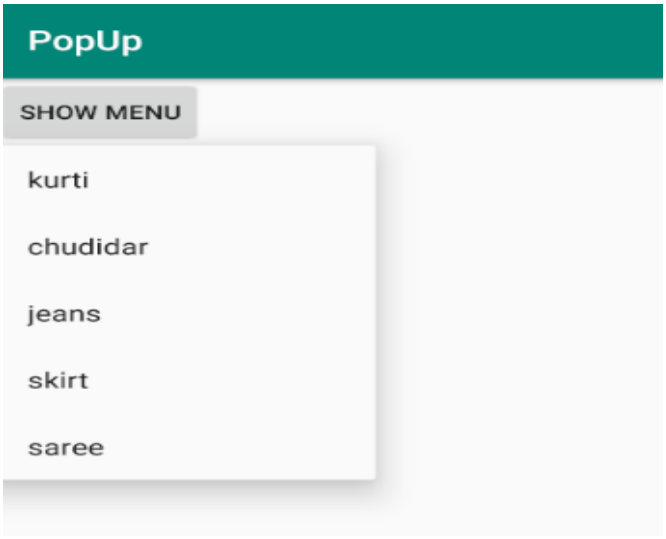
## Java Code:

```
package com.example.popup;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.widget.PopupMenu;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity implements
PopupMenu.OnMenuItemClickListener {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
  }
  public void showpopup(View view)
  {
```

```
    PopupMenu popup=new PopupMenu(this,view);
    popup.inflate(R.menu.popupmenu);
    popup.setOnMenuItemClickListener(this);
    popup.show();
}
@Override
public boolean onMenuItemClick(MenuItem item)
{
    switch (item.getItemId())
    {
        case R.id.i1:
            Toast.makeText(this,"you have selected kurti",Toast.LENGTH_LONG).show();
            return true;
        case R.id.i2:
            Toast.makeText(this,"you have selected chuditar",Toast.LENGTH_LONG).show();
            return true;
        case R.id.i3:
            Toast.makeText(this,"you have selected jeans",Toast.LENGTH_LONG).show();
            return true;
        case R.id.i4:
            Toast.makeText(this,"you have selected skirt",Toast.LENGTH_LONG).show();
            return true;
        case R.id.i5:
            Toast.makeText(this,"you have selected saree",Toast.LENGTH_LONG).show();
            return true;
        default:
            return false;
    }
}
@Override
public void onPointerCaptureChanged(boolean hasCapture){
```

```
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 17 (ii) | Context Menu |
|---|---|

## Aim:

To write a program of Context Menu in Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity" android:orientation="vertical">
  <TextView
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:id="@+id/t1" android:text="Show icecream flavours"
     android:textSize="25sp" android:textStyle="bold"/>
</LinearLayout>
```

## Contextmenu XML code:

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
  <item
     android:id="@+id/i1" android:title="Vanilla"/>
  <item
     android:id="@+id/i2" android:title="Chocolate"/>
  <item
     android:id="@+id/i3" android:title="Butterscotch"/>
  <item
```

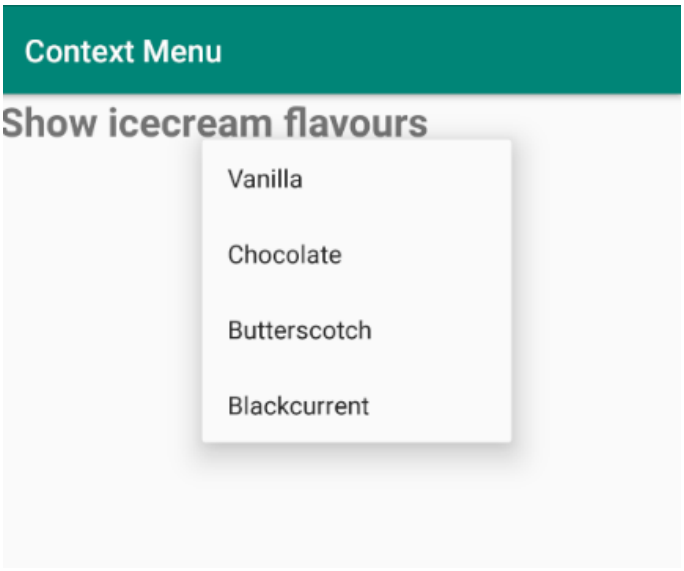
```
    android:id="@+id/i4" android:title="Blackcurrent"/>
</menu>
```

## Java Code:

```
package com.example.contextmenu;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.ContextMenu; import android.view.MenuItem;
import android.view.View;
import android.widget.TextView;
import android.widget.Toast;
import static com.example.contextmenu.R.menu.contextmenu;
public class MainActivity extends AppCompatActivity {
  TextView tv; @Override
  protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main); tv=findViewById(R.id.t1);
registerForContextMenu(tv);
  }@Override
  public void onCreateContextMenu(ContextMenu menu, View v,
ContextMenu.ContextMenuInfo menuInfo) {
    super.onCreateContextMenu(menu, v, menuInfo);
getMenuInflater().inflate(R.menu.contextmenu,menu);
  }@Override
  public boolean onContextItemSelected(@NonNull MenuItem item) {
switch(item.getItemId()){
    case R.id.i1:
      Toast.makeText(this,"You have selected vanilla",Toast.LENGTH_LONG).show();
      return true;
    case R.id.i2:
```

```
        Toast.makeText(this,"You have selected chocolate",Toast.LENGTH_LONG).show();
        return true;
      case R.id.i3:
        Toast.makeText(this,"You have selected butterscotch",Toast.LENGTH_LONG).show();
        return true;
      case R.id.i4:
        Toast.makeText(this,"You have selected blackcurrent" , Toast.LENGTH_LONG).show();
        return true; default:
        return false;
    }
    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 17 (iii) | Options Menu |
|---|---|

## Aim:

To write a program of Options Menu in Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity">

  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Option menu"
    android:id="@+id/t1"/>

</LinearLayout>
```

## Optionalmenu

## XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto">
  <item
    android:id="@+id/i1"
```

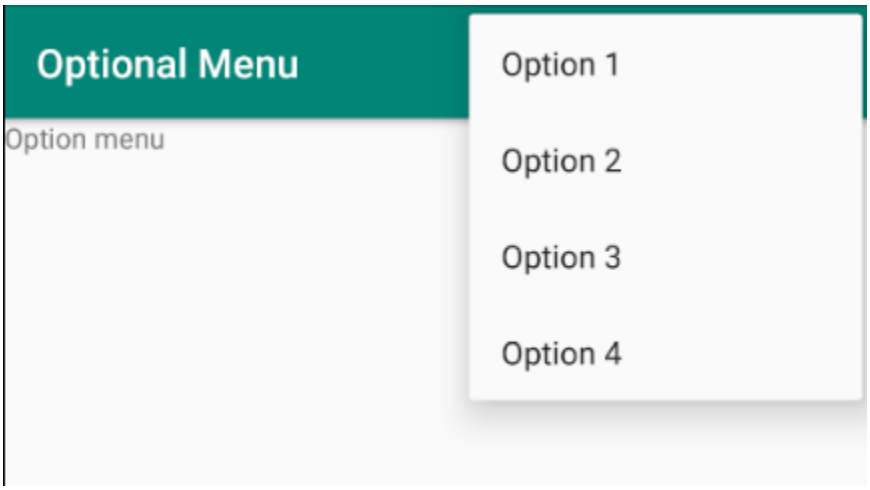
```
        android:title="Option 1"
        app:showAsAction="never"/>
    <item
        android:id="@+id/i2"
        android:title="Option 2"
        app:showAsAction="never"/>
    <item
        android:id="@+id/i3"
        android:title="Option 3"
        app:showAsAction="never"/>
    <item
        android:id="@+id/i4"
        android:title="Option 4"
        app:showAsAction="never"/>
</menu>
```

## Java Code:

```
package com.example.optionalmenu;

import androidx.annotation.NonNull;
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);
  }

  @Override
  public boolean onCreateOptionsMenu(Menu menu) {
    MenuInflater inflater = getMenuInflater();
    inflater.inflate(R.menu.optionalmenu, menu);
    return true;
  }

  @Override
  public boolean onOptionsItemSelected(@NonNull MenuItem item) {
    switch (item.getItemId()) {
      case R.id.i1:
        Toast.makeText(this, "Option 1 was selected", Toast.LENGTH_SHORT).show();
        return true;
      case R.id.i2:
        Toast.makeText(this, "Option 2 was selected", Toast.LENGTH_SHORT).show();
        return true;
      case R.id.i3:
        Toast.makeText(this, "Option 3 was selected", Toast.LENGTH_SHORT).show();
        return true;
      case R.id.i4:
        Toast.makeText(this, "Option 4 was selected", Toast.LENGTH_SHORT).show();
        return true;
      default:
        return super.onOptionsItemSelected(item);
    }
  }
}
```

**Output:**




**Result:**

The code has been executed successfully.

| EX No - 18(i) | Shared preferences |
|---|---|

## Aim:

To write a program for Shared preferences in Android Studio.

### XML Code:

```
<?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"
  tools:context=".MainActivity"
  android:orientation="vertical">

  <EditText
     android:id="@+id/t1"
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:hint="emailid"/>
  <EditText
     android:id="@+id/t2"
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:hint="password"/>

</LinearLayout>
```

### Java Code:

```
package com.example.shared_perference;
```

```
import androidx.appcompat.app.AppCompatActivity;

import android.content.SharedPreferences;
import android.os.Bundle;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
EditText ed1,ed2;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_main);
     ed1 = (EditText) findViewById(R.id.t1);
     ed2 = (EditText) findViewById(R.id.t2);
  }
  protected void onResume(){
     super.onResume();
     SharedPreferences sh = getSharedPreferences("MySharedPref",MODE_PRIVATE);
     String s1 = sh.getString("name","");
     String s2 = sh.getString("password","");
     ed1.setHint(s1);
     ed2.setHint(s2);
  }
  protected void onPause(){
     super.onPause();
     SharedPreferences sh = getSharedPreferences("MySharedPref",MODE_PRIVATE);
     SharedPreferences.Editor ed = sh.edit();
     ed.putString("name",ed1.getText().toString());
     ed.putString("password",ed2.getText().toString());
     ed.apply();
```

```
    }
}
```

## Output:


## Result:

The code has been executed successfully.

| EX No - 18(ii) | Manipulation of Files in Android |
|---|---|

## Aim:

To write a program to Manipulate files in Android using Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity">

  <EditText
    android:layout_width="300dp"
    android:layout_height="wrap_content"
    android:id="@+id/e1"
    android:layout_centerInParent="true"
    android:hint = "type here!"
    />
  <Button
    android:layout_width="150dp"
    android:layout_height="wrap_content"
    android:id="@+id/b1"
    android:layout_centerInParent="true"
    android:layout_below="@+id/e1"
    android:text="write"/>
  <Button
    android:layout_width="150dp"
```

```
        android:layout_height="wrap_content"
        android:id="@+id/b2"
        android:layout_centerInParent="true"
        android:layout_below="@+id/b1"
        android:text="read"/>

</RelativeLayout>
```

## Java Code:

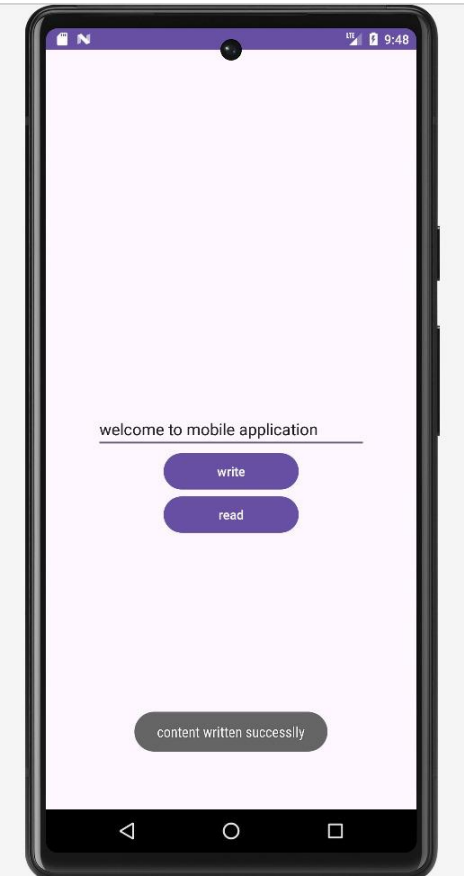
```
package com.example.files_in_out;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;

public class MainActivity extends AppCompatActivity {
EditText ed1;
Button bb1,bb2;
FileInputStream fin;
FileOutputStream fout;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
```

```
    setContentView(R.layout.activity_main);
    ed1 = (EditText) findViewById(R.id.e1);
    bb1 = (Button) findViewById(R.id.b1);
    bb2 = (Button) findViewById(R.id.b2);
    bb1.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
          try {
             fout = openFileOutput("file1.txt",MODE_PRIVATE);
             fout.write(ed1.getText().toString().getBytes());
             fout.close();
             Toast.makeText(MainActivity.this, "content written successlly",
Toast.LENGTH_SHORT).show();
          }
          catch (Exception e) {
             Toast.makeText(MainActivity.this, "Not written",
Toast.LENGTH_SHORT).show();;
          }
       }
    });
    bb2.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
          int c;
          String s = "";
          try {
             fin = openFileInput("file1.txt");
             while ((c = fin.read()) != -1) {
                s += Character.toString((char) c);
             }
             fin.close();
```

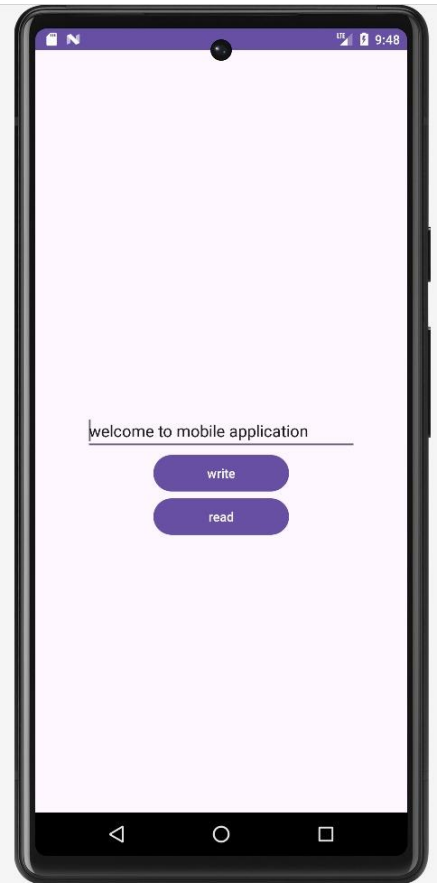
```
                ed1.setText(s);
            } catch (Exception e) {
                throw new RuntimeException(e);
            }
        }
    });
  }
}
```

## Output:

Text entered to write in file.




Reading the Text in file.




## Result:

The code has been executed successfully.

| EX No - 18(iii) | Connecting to SQLite DataBase |
|---|---|

## Aim:

To write a program for Connecting to SQLite DataBase in Android Studio.

## XML Code:

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
  android:layout_width="fill_parent"
  android:layout_height="fill_parent"
  android:orientation="vertical">

  <EditText
     android:id="@+id/e1"
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:hint="Enter Employee name"/>

  <EditText
     android:id="@+id/e2"
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:hint="Enter Employee id" />

  <EditText
     android:id="@+id/e3"
     android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     android:hint="Enter Department name"/>

  <EditText
```

```
        android:id="@+id/e4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter blood group"/>

    <Button
        android:id="@+id/b1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit" />

    <Button
        android:id="@+id/b2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Retrieve" />

</LinearLayout>
```

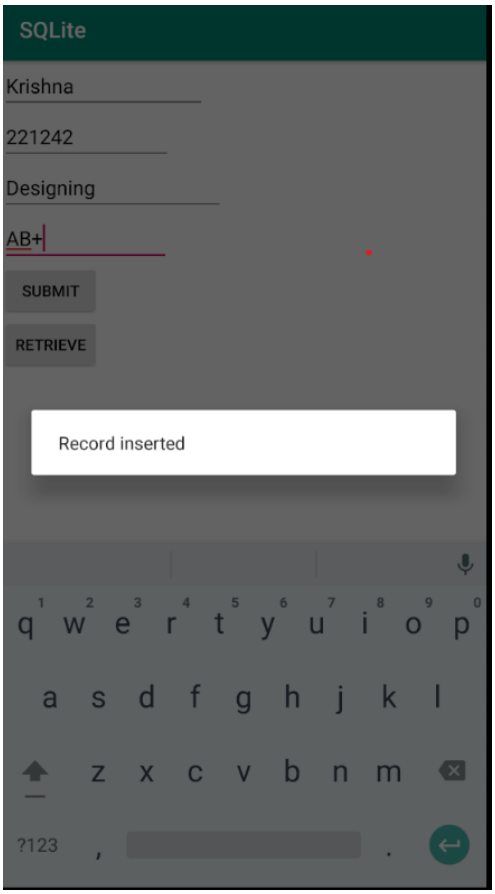
## Java Code:

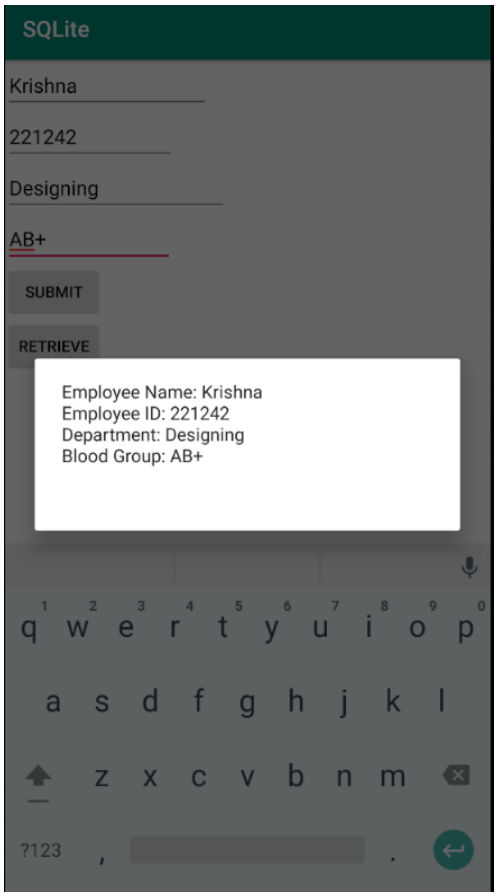
```
package com.example.sqlite;

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

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
```

```
public class MainActivity extends AppCompatActivity {
   EditText ee1, ee2, ee3, ee4;
   Button bb1, bb2;
   SQLiteDatabase db;
   AlertDialog.Builder builder;

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

      ee1 = findViewById(R.id.e1);
      ee2 = findViewById(R.id.e2);
      ee3 = findViewById(R.id.e3);
      ee4 = findViewById(R.id.e4);
      bb1 = findViewById(R.id.b1);
      bb2 = findViewById(R.id.b2);

      builder = new AlertDialog.Builder(this);

      db = openOrCreateDatabase("db1", MODE_PRIVATE, null);
      db.execSQL("CREATE TABLE IF NOT EXISTS employee (name VARCHAR(50), id
INTEGER, department VARCHAR(50), blood_group VARCHAR(10))");

      bb1.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            String name = ee1.getText().toString();
            int id = Integer.parseInt(ee2.getText().toString());
            String department = ee3.getText().toString();
```

```
            String bloodGroup = ee4.getText().toString();

            db.execSQL("INSERT INTO employee (name, id, department, blood_group) VALUES
('" + name + "', " + id + ", '" + department + "', '" + bloodGroup + "')");
            builder.setMessage("Record inserted");
            builder.show();
        }
    });

    bb2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            StringBuffer sb = new StringBuffer();
            Cursor c = db.rawQuery("SELECT * FROM employee", null);
            while (c.moveToNext()) {
                sb.append("Employee Name: " + c.getString(c.getColumnIndex("name")) + "\n");
                sb.append("Employee ID: " + c.getInt(c.getColumnIndex("id")) + "\n");
                sb.append("Department: " + c.getString(c.getColumnIndex("department")) + "\n");
                sb.append("Blood Group: " + c.getString(c.getColumnIndex("blood_group")) +
"\n\n");
            }
            builder.setMessage(sb.toString());
            builder.show();
        }
    });
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 19 | Sending Email |
|---|---|

## Aim:

To write a program of Sending Email in Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity"
  android:orientation="vertical">

  <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" />


  <EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/e1"
```

```
    android:hint="Email ID"/>

  <EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/e2"
    android:hint="SUBJECT" />

  <EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/e3"
    android:hint="Body of Content"/>

  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b1"
    android:text="Send"/>

</LinearLayout>
```

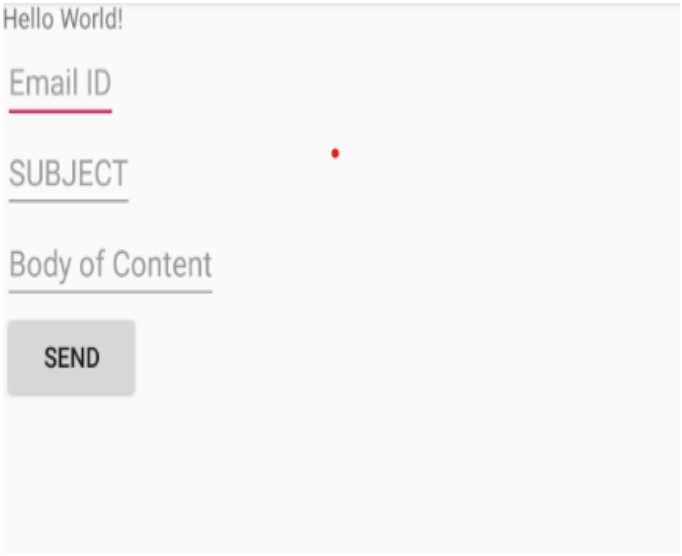
## Java Code:

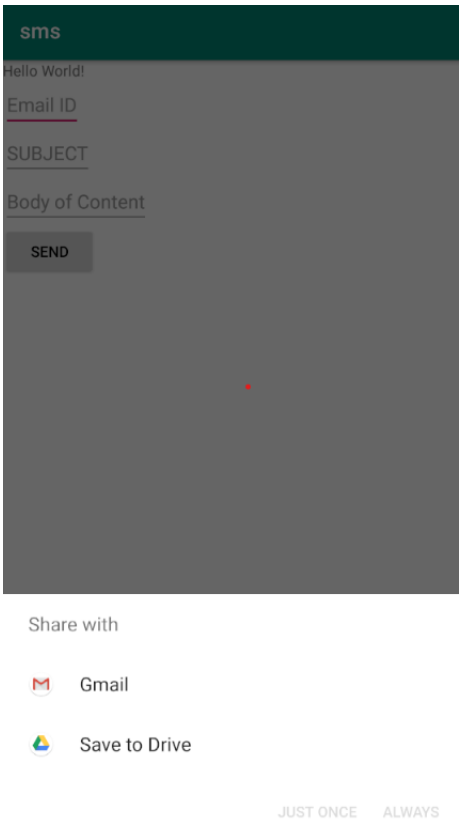
```
package com.example.sms;

import androidx.appcompat.app.AppCompatActivity;

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

```
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

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

    Button bb1 = findViewById(R.id.b1);
    EditText t1 = (EditText) findViewById(R.id.e1);
    EditText t2 = (EditText) findViewById(R.id.e2);
    EditText t3 = (EditText) findViewById(R.id.e3);

    bb1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        Intent intent = new Intent(Intent.ACTION_SEND);

        // Email

        intent.putExtra(Intent.EXTRA_EMAIL,t1.getText().toString());
        intent.putExtra(Intent.EXTRA_SUBJECT,t2.getText().toString());
        intent.putExtra(Intent.EXTRA_TEXT,t3.getText().toString());

        intent.setType("message/rfc822"); //Universal code(rfc822) for sending mail
        startActivity(intent);

      }
    });
  }
```

}

## Output:




## Result:

The code has been executed successfully.

| EX No - 20 | Sending SMS |
|---|---|

## Aim:

To write a program of Sending SMS in Android Studio.

## XML Code:

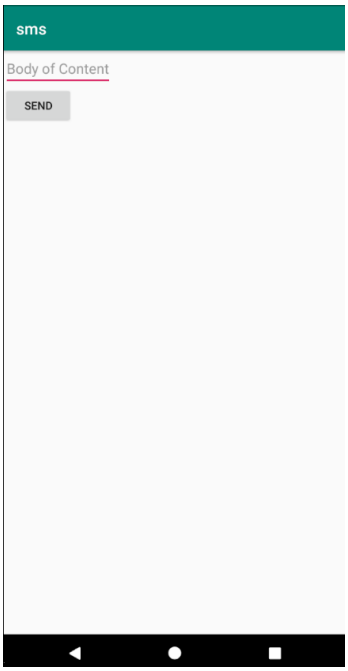
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  tools:context=".MainActivity"
  android:orientation="vertical">

  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b1"
    android:text="Send"
    />
</LinearLayout>
```

## Java Code:

```
package com.example.sms;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

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

     Button bb1 = findViewById(R.id.b1);

     bb1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
           //SMS
           Intent intent = new Intent(Intent.ACTION_VIEW);
           intent.setType("vnd.android-dir/mms-sms");
           intent.putExtra("address", new String("8056082188"));
           //intent.putExtra("address", new String("9090909090"));
           intent.putExtra("sms_body", "Welcome");

           startActivity(intent);

        }
     });
  }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 21 | JSON Services |
|---|---|

## Aim:

To write a program of JSON Services in Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity">

  <TextView
    android:id="@+id/t1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerInParent="true"
    android:padding="20dp"
    android:text="username:" />

  <TextView
    android:id="@+id/t2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/t1"
    android:layout_centerInParent="true"
    android:padding="20dp"
    android:text="salary" />
```

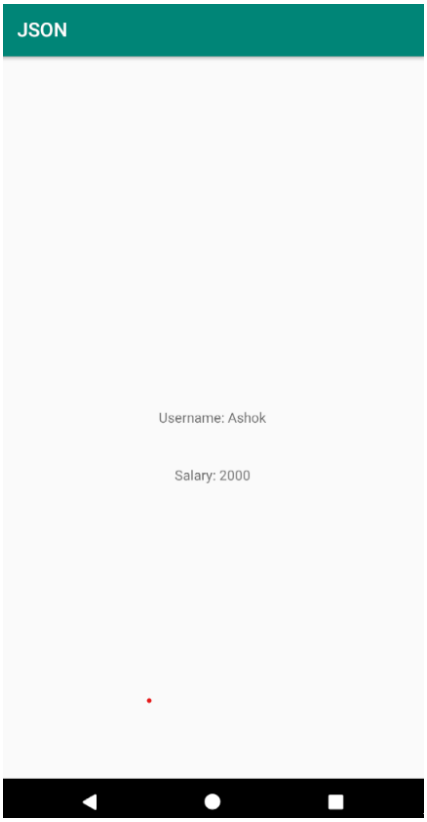
```
</RelativeLayout>
```

## Java Code:

```
package com.example.json;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.TextView;

import org.json.JSONException;
import org.json.JSONObject;

public class MainActivity extends AppCompatActivity {

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

     String json_string = "{\"employee\":{\"name\":\"Ashok\",\"salary\":\"2000\"}}";
     TextView tx1 = findViewById(R.id.t1);
     TextView tx2 = findViewById(R.id.t2);

     try {
        JSONObject obj = new JSONObject(json_string);
        JSONObject emp = obj.getJSONObject("employee");
        String name1 = emp.getString("name");
        String salary = emp.getString("salary");
        tx1.setText("Username: " + name1);
```

```
            tx2.setText("Salary: " + salary);

        } catch (JSONException e) {
            throw new RuntimeException(e);
        }

    }
}
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 22 | Android Services |
|---|---|

## Aim:

To write a program of Android Services in Android Studio.

## XML Code:

```
<?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"
  tools:context=".MainActivity"
  android:orientation="vertical">
  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:layout_gravity="center"
    android:text="ANDROID SERVICES"
    android:textSize="30sp"
    android:textColor="@android:color/holo_orange_light"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:id="@+id/b1"
    android:layout_marginTop="20dp"
    android:layout_gravity="center"
    android:text="START"
```

```
    android:background="@android:color/holo_purple"
    android:onClick="startservice"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:id="@+id/b2"
    android:layout_marginTop="20dp"
    android:layout_gravity="center"
    android:text="STOP"
    android:background="@android:color/holo_purple"
    android:onClick="stopservice"/>
</LinearLayout>
```

## Java Code:

```
package com.example.androidservices;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;

public class MainActivity extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
  }
  public void startservice(View view){
    startService(new Intent(this,MyService.class));
  }
```

```
  public void stopservice(View view){
     stopService(new Intent(this,MyService.class));
  }
}
```

## Myservices Java Code:

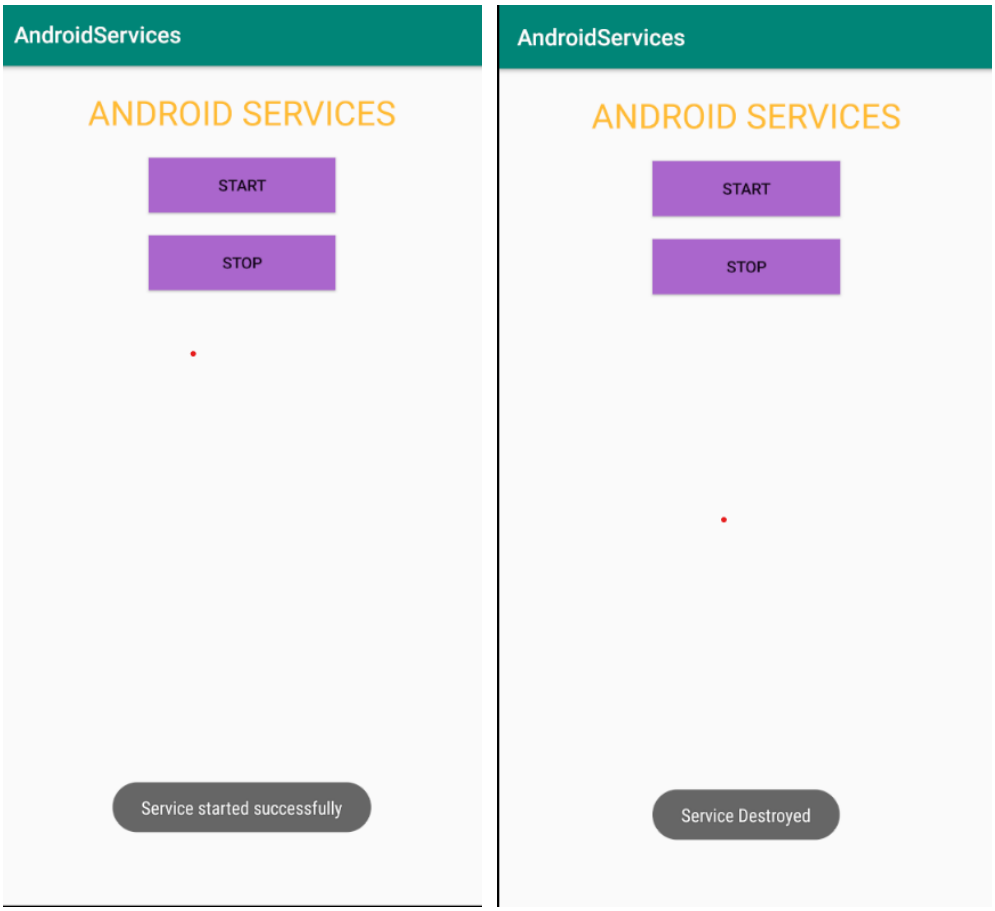
```
package com.example.androidservices;

import android.app.Service;
import android.content.Intent;
import android.os.IBinder;
import android.widget.Toast;
import androidx.annotation.Nullable;

public class MyService extends Service {

  @Nullable
  @Override
  public IBinder onBind(Intent intent) {
     return null;
  }

  @Override
  public int onStartCommand(Intent intent, int flags, int startId) {
     Toast.makeText(getApplicationContext(), "Service started successfully",
Toast.LENGTH_LONG).show();
     return super.onStartCommand(intent, flags, startId);
  }

  @Override
  public void onDestroy() {
```

```
    super.onDestroy();
    Toast.makeText(getApplicationContext(),"Service
Destroyed",Toast.LENGTH_LONG).show();
  }

}
```

## AndroidManifest.xml code:

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

  <application
    android:allowBackup="true"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/AppTheme">
    <activity android:name=".MainActivity">
      <intent-filter>
        <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

## Output:




## Result:

The code has been executed successfully.

| EX No - 23 | Project |
|---|---|

## Abstract:

Application is all about Granting or Declining the On-Duty and Medical Leave request from the Students (User). It will be having Admin and User Variations. It is fully cloud synchronized!

## XML1 Code:

```
<?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:background="@color/bgcolor"
    android:padding="40dp"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".login">

    <TextView
        android:id="@+id/brandlogo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="right"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:fontFamily="@font/twnoraml"
        android:textSize="40dp"
        android:textColor="@color/primarycolor"
        android:text="@string/brandlogo" />
```

```
<TextView
    android:id="@+id/loginlabel"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="left"
    android:layout_margin="20dp"
    android:fontFamily="@font/twnoraml"
    android:textSize="28dp"
    android:textColor="@color/primarycolor"
    android:text="@string/login" />

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/setrollnumber"
        android:textColor="@color/primarycolor"
        android:hint="Enter your Roll Number"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>
```

```
<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/setemail"
        android:textColor="@color/primarycolor"
        android:hint="Enter your Email"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="25dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">
    <com.google.android.material.textfield.TextInputEditText
```

```
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/setpassword"
        android:textColor="@color/primarycolor"
        android:hint="Enter your Password"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>

<Button
    android:id="@+id/loginjumpbtn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="5dp"
    android:padding="15dp"
    android:fontFamily="@font/rmbold"
    android:textSize="16dp"
    android:textColor="@color/bgcolor"
    android:backgroundTint="@color/primarycolor"
    android:onClick="movetologin"
    android:text="Login" />
<Button
    android:id="@+id/registerjumpbtn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
```

```
        android:layout_marginBottom="5dp"
        android:padding="15dp"
        android:fontFamily="@font/rmbold"
        android:textSize="16dp"
        android:textColor="@color/bgcolor"
        android:backgroundTint="@color/secondarycolor"
        android:onClick="movetoregister"
        android:text="New Register" />

    <Button
        android:id="@+id/backtosplash3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"
        android:layout_marginBottom="5dp"
        android:padding="15dp"
        android:fontFamily="@font/rmbold"
        android:textSize="16dp"
        android:textColor="@color/primarycolor"
        android:backgroundTint="@color/bgcolor"
        android:onClick="movetosplash3"
        android:text="Back" />
</LinearLayout>
```

## XML2 Code:

```
<?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:background="@color/bgcolor"
    android:padding="40dp"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".register">

    <!--
    <TextView
        android:id="@+id/brandlogo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="right"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:fontFamily="@font/twnoraml"
        android:textSize="40dp"
        android:textColor="@color/primarycolor"
        android:text="@string/brandlogo" />
-->
    <TextView
        android:id="@+id/registerlabel"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="left"
        android:layout_margin="20dp"
        android:fontFamily="@font/twnoraml"
        android:textSize="28dp"
        android:textColor="@color/primarycolor"
        android:text="@string/register" />
```

```
<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/getusername"
        android:textColor="@color/primarycolor"
        android:hint="Enter your Name"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColor="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">
<Spinner
```

```
    android:id="@+id/getrole"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:padding="16dp"
    android:popupBackground="@color/bgcolor"
    android:entries="@array/role"/>
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColor="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">
    <Spinner
        android:id="@+id/getdept"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:padding="16dp"
        android:popupBackground="@color/bgcolor"
        android:entries="@array/department"/>
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
```

```
    android:layout_marginBottom="10dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/getrollnumber"
        android:textColor="@color/primarycolor"
        android:hint="Enter your Roll Number"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/getemail"
        android:hint="Enter your Email"
        android:textColor="@color/primarycolor"
```

```
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="10dp"
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/getpassword"
        android:hint="Enter your Password"
        android:textColor="@color/primarycolor"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>


<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="25dp"
```

```
    android:textColorHint="@color/primarycolor"
    app:boxStrokeColor="@color/primarycolor"
    app:placeholderTextColor="@color/primarycolor">

    <com.google.android.material.textfield.TextInputEditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/getconfirmpassword"
        android:textColor="@color/primarycolor"
        android:hint="Confirm your Password"
        android:textSize="16dp"
        android:fontFamily="@font/rmbold" />
</com.google.android.material.textfield.TextInputLayout>

<Button
    android:id="@+id/jumptologin"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
    android:layout_marginLeft="20dp"
    android:layout_marginRight="20dp"
    android:layout_marginBottom="5dp"
    android:padding="15dp"
    android:fontFamily="@font/rmbold"
    android:textSize="16dp"
    android:textColor="@color/bgcolor"
    android:backgroundTint="@color/primarycolor"
    android:onClick="movetologin"
    android:text="@string/register" />

<Button
```

```
        android:id="@+id/backtologin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"
        android:layout_marginBottom="5dp"
        android:padding="15dp"
        android:fontFamily="@font/rmbold"
        android:textSize="16dp"
        android:textColor="@color/primarycolor"
        android:backgroundTint="@color/bgcolor"
        android:onClick="backtologin"
        android:text="@string/back_to_login" />
</LinearLayout>
```

## Java1 Code:

```
package com.example.requestifyv1;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.ProgressBar;
import android.widget.TextView;
import android.widget.Toast;
```

```
import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.android.material.textfield.TextInputEditText;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;

import java.util.Objects;

public class login extends AppCompatActivity {

    TextInputEditText useremail, userpassword;
    Button userloginbtn;

    FirebaseAuth mAuth;

   @Override
   public void onStart() {
       super.onStart();
        Check if user is signed in (non-null) and update UI accordingly.
       FirebaseUser currentUser = mAuth.getCurrentUser();
       if(currentUser != null){
           Intent intent = new Intent(getApplicationContext(), userhome.class);
           startActivity(intent);
           finish();
       }
   }
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_login);
```

```
//Move to the Register page
Button registerjumpbtn = findViewById(R.id.registerjumpbtn);
registerjumpbtn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent movetoregister = new Intent(login.this, register.class);
        startActivity(movetoregister);
    }
});

//Move to the Splash 3 Screen
Button backtosplach3 = findViewById(R.id.backtosplash3);
backtosplach3.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent movetosplash3 = new Intent(login.this, splash3.class);
        startActivity(movetosplash3);
    }
});

//Move to user Home
Button loginjumpbtn = findViewById(R.id.loginjumpbtn);
loginjumpbtn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent movetologin = new Intent(login.this, userhome.class);
        startActivity(movetologin);
    }
});
```

**Authentication**

```
mAuth = FirebaseAuth.getInstance();
useremail = findViewById(R.id.setemail);
userpassword = findViewById(R.id.setpassword);
userloginbtn = findViewById(R.id.loginjumpbtn);

userloginbtn.setOnClickListener(new View.OnClickListener() {
   @Override
   public void onClick(View v) {
      String email,password;
      email = useremail.getText().toString();
      password  =userpassword.getText().toString();

      if(TextUtils.isEmpty(email)){
         Toast.makeText(login.this, "Enter Email", Toast.LENGTH_SHORT).show();
         return;
      }

      if(TextUtils.isEmpty(password)){
         Toast.makeText(login.this, "Enter Password", Toast.LENGTH_SHORT).show();
         return;
      }

      mAuth.signInWithEmailAndPassword(email, password)
            .addOnCompleteListener(new OnCompleteListener<AuthResult>() {
               @Override
               public void onComplete(@NonNull Task<AuthResult> task) {
                  if (task.isSuccessful()) {
                     Toast.makeText(login.this, "Logged Succesfully",
                           Toast.LENGTH_SHORT).show();
                     Intent intent = new Intent(getApplicationContext(), userhome.class);
```

```
                    startActivity(intent);
                    finish();
                } else {

                    Toast.makeText(login.this, "Authentication failed.",
                            Toast.LENGTH_SHORT).show();

                }
            }
        });
    }
});
}
```

## Java2 Code:

```
package com.example.requestifyv1;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ProgressBar;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;
```

```
import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.android.material.textfield.TextInputEditText;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;
import com.google.firebase.firestore.*;

import java.util.Arrays;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import java.util.Objects;

public class register extends AppCompatActivity {

    TextInputEditText useremail, userpassword, userrollnumber, getusername, confirmpassword;
    Button userregisterbtn;

    Spinner getrole, getdept;

    FirebaseAuth mAuth;
    FirebaseFirestore db;
   // @Override
   // public void onStart() {
      //  super.onStart();
        // Check if user is signed in (non-null) and update UI accordingly.
      //  FirebaseUser currentUser = mAuth.getCurrentUser();
      //  if(currentUser != null){
      //      Intent intent = new Intent(getApplicationContext(), userhome.class);
       //     startActivity(intent);
```

```
        //    finish();
        // }
//   }
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_register);

        //Back to Login Page
        //Button backtologin = findViewById(R.id.backtologin);
        // backtologin.setOnClickListener(new View.OnClickListener() {
        //    @Override
        //    public void onClick(View v) {
        //        Intent backtologin = new Intent(register.this, login.class);
        //        startActivity(backtologin);
        //    }
        // });

        //Move to user Home
        Button jumptologin = findViewById(R.id.jumptologin);
        jumptologin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent movetologin = new Intent(register.this, userhome.class);
                startActivity(movetologin);
            }
        });

        //Start role Spinner Style
        Spinner roleSpinner = findViewById(R.id.getrole);
        Spinner deptSpinner = findViewById(R.id.getdept);
```

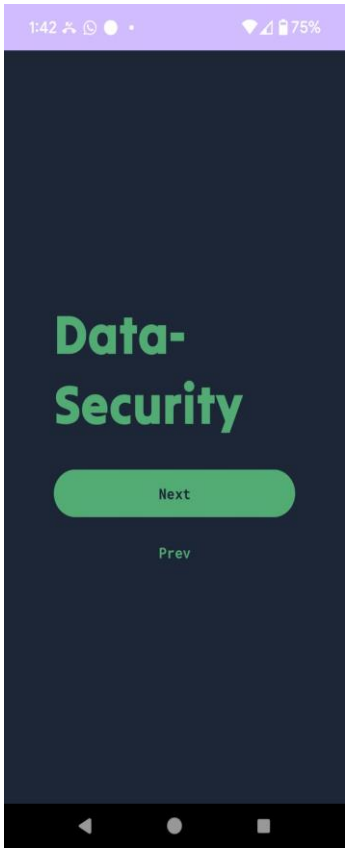
```
        // Create a list to display in the Spinner
        List<String> role = Arrays.asList("Select your role","Student", "Assistant Professor", "H O
D");

        List<String> dept = Arrays.asList("Select your Department","MCA", "Other");

        // Create an adapter as shown below
        ArrayAdapter<String> roleArrayAdapter = new ArrayAdapter<String>(this,
R.layout.spinnerstyle, role);
        roleArrayAdapter.setDropDownViewResource(R.layout.spinnerstyle);

        ArrayAdapter<String> deptArrayAdapter = new ArrayAdapter<String>(this,
R.layout.spinnerstyle, dept);
        deptArrayAdapter.setDropDownViewResource(R.layout.spinnerstyle);

        // Set the adapter to the Spinner
        roleSpinner.setAdapter(roleArrayAdapter);
        deptSpinner.setAdapter(deptArrayAdapter);
        //End Spinner Style

        //Authentication Registration

        mAuth = FirebaseAuth.getInstance();
        db = FirebaseFirestore.getInstance();
        useremail = findViewById(R.id.getemail);
        userpassword = findViewById(R.id.getpassword);
        userregisterbtn = findViewById(R.id.jumptologin);
        userrollnumber = findViewById(R.id.getrollnumber);
        getusername = findViewById(R.id.getusername);
        confirmpassword = findViewById(R.id.getconfirmpassword);
```

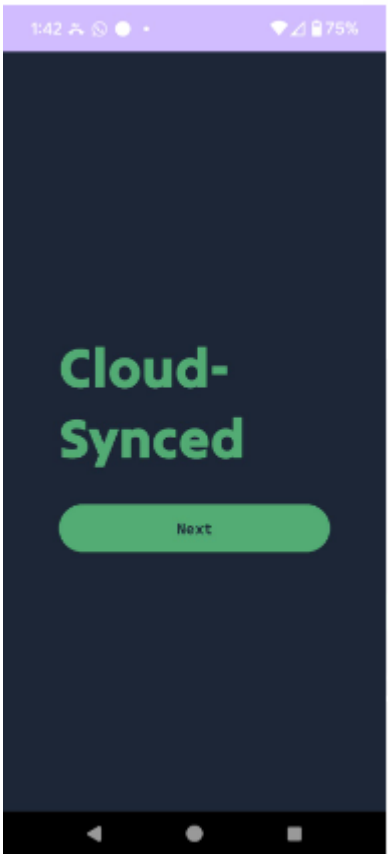
```
getrole = findViewById(R.id.getrole);
getdept = findViewById(R.id.getdept);

userregisterbtn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String email, password, againpassword, uid, designation, department;
        email = useremail.getText().toString();
        password = userpassword.getText().toString();
        againpassword = confirmpassword.getText().toString();
        uid = mAuth.getCurrentUser().getUid();
        designation = getrole.getSelectedItem().toString();
        department = getdept.getSelectedItem().toString();

        if (TextUtils.isEmpty(email)) {
            Toast.makeText(register.this, "Enter Email", Toast.LENGTH_SHORT).show();
            return;
        }

        if (TextUtils.isEmpty(password)) {
            Toast.makeText(register.this, "Enter Value", Toast.LENGTH_SHORT).show();
            return;
        }

        if (TextUtils.isEmpty(againpassword)) {
            Toast.makeText(register.this, "Enter Value", Toast.LENGTH_SHORT).show();
            return;
        }

        if (password.equals(againpassword)) {
            mAuth.createUserWithEmailAndPassword(email, password)
```

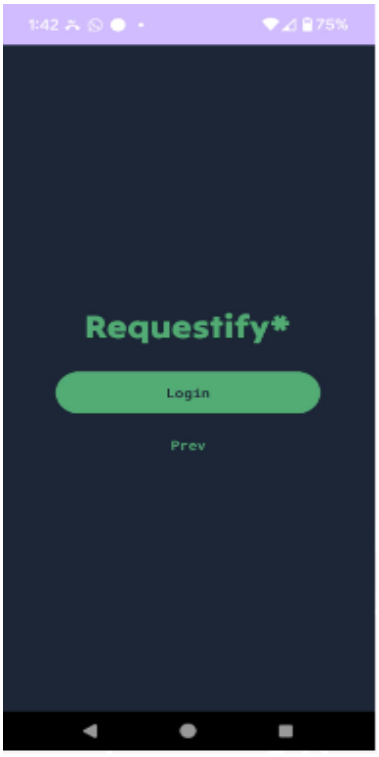
```
                .addOnCompleteListener(new OnCompleteListener<AuthResult>() {
                    @Override
                    public void onComplete(@NonNull Task<AuthResult> task) {
                        if (task.isSuccessful()) {
                            Toast.makeText(register.this, "Account Created",
                                    Toast.LENGTH_SHORT).show();
                            Map<String, Object> userdetails = new HashMap<>();
                            userdetails.put("Name", getusername.getText().toString());
                            userdetails.put("Roll Number", userrollnumber.getText().toString());
                            userdetails.put("Mini Grant", "False");
                            userdetails.put("Maxi Grant", "False");
                            userdetails.put("Designation", designation);
                            userdetails.put("Department", department);

                            //String getuserrollnumber = userrollnumber.getText().toString();

                        db.collection("requestifyuser").document(email).set(userdetails).
                        addOnCompleteListener(new OnCompleteListener<Void>() {
                            @Override
                            public void onComplete(@NonNull Task<Void> task) {
                                if (task.isSuccessful()) {
                                    Intent intent = new Intent(getApplicationContext(),
userhome.class);
                                    startActivity(intent);
                                    finish();
                                }
                            }
                        });

                        Intent intent = new Intent(getApplicationContext(), userhome.class);
                        startActivity(intent);
```

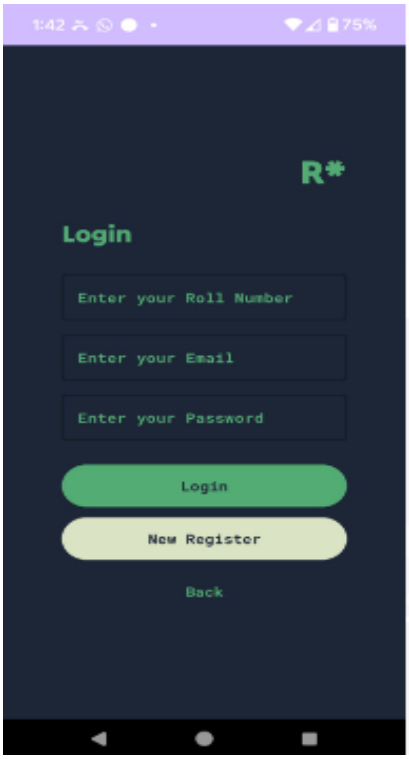
```
                        finish();

                    } else {
                        // If sign in fails, display a message to the user.
                        Toast.makeText(register.this, "Authentication failed.",
                                Toast.LENGTH_SHORT).show();

                    }
                }

            });

        }
        else{
            Toast.makeText(register.this, "Password not same",
Toast.LENGTH_SHORT).show();
        }
      }
    });
  }
}
```

**Output:**


1:42
75%
Data-
Security
Next
Prev

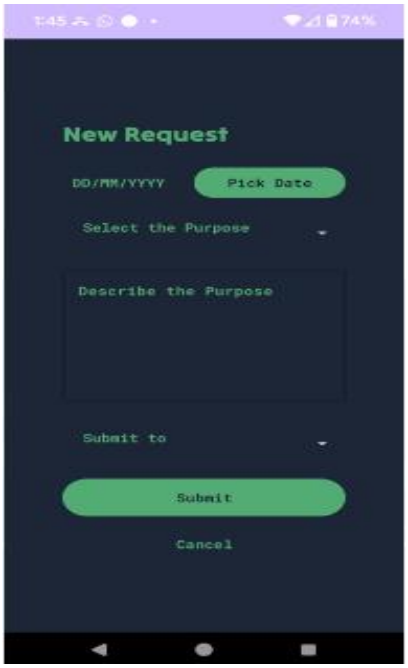

1:42
75%
Cloud-
Synced
Next

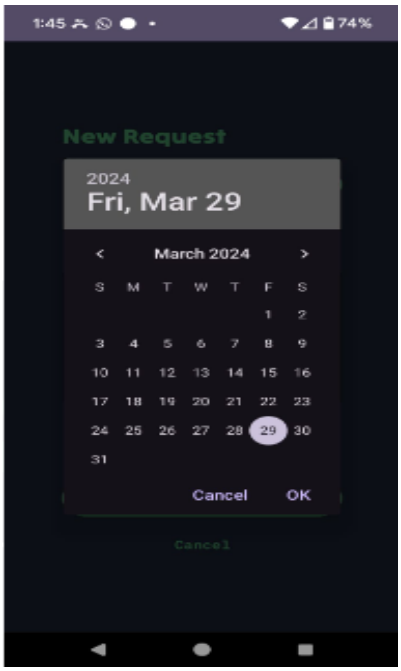

1:42
75%
Requestify*
Login
Prev


1:42
75%
R*
Login
Enter your Roll Number
Enter your Email
Enter your Password
Login
New Register
Back


Register
Enter your Name
Select your role
Select your Department
Enter your Roll Number
Enter your Email
Enter your Password
Confirm your Password
Register

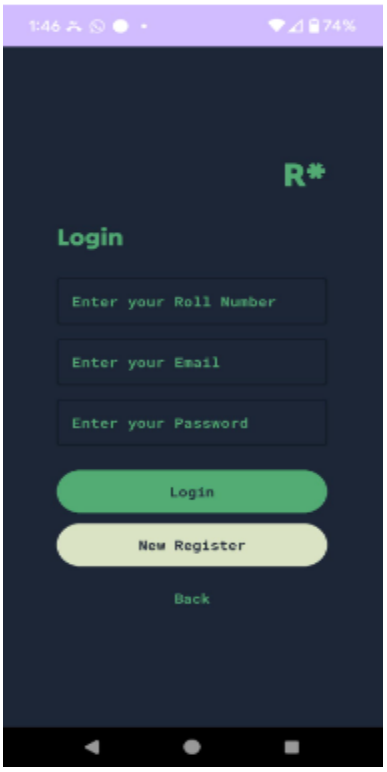

Register
Enter your Name
Dhanush Gopi G
Student
MCA
Enter your Roll Number
23d3132
Enter your Email
dhanushgopig@gmail.com
Enter your Password
dhanushgopig
Confirm your Password
dhanushgopig
Register

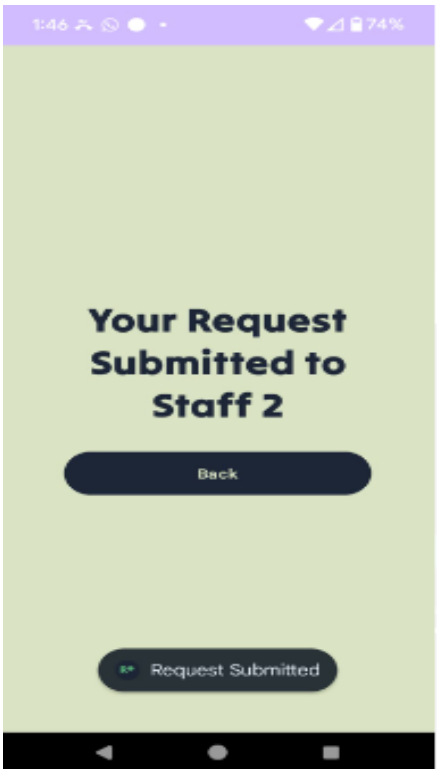

New Request
DD/MM/YYYY
Pick Date
Select the Purpose
Describe the Purpose
Submit to
Submit
Cancel


New Request
2024
Fri, Mar 29
March 2024
S M T W T F S
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
Cancel
OK
Cancel


1:44
74%
R*
Hi, Dhanush Gopi G
MCA-23d3132
Logout
New Request
ApprovalList
Recent:
null / null / Not Approved
The User
iddhanushgopig@gmail.com


1:46
74%
New Request
21/4/2024
Pick Date
Select the Purpose
Describe the Purpose
I'm gonna write the "joy of python computing" swayam course exam in CIT college.
Staff 2
Submit
Cancel


1:46
74%
R*
Login
Enter your Roll Number
Enter your Email
Enter your Password
Login
New Register
Back


1:46
74%
Your Request Submitted to Staff 2
Back
Request Submitted


## Result:

The code has been executed successfully.