

#2 HELLOWORLD

Main activity

```
package com.example.helloworld;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity { @Override
protected void onCreate(Bundle savedInstanceState) {super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main); } }
```

activity_main.xml

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

<android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <ImageView

        android:id="@+id/imageView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart="24dp"

        android:layout_marginTop="192dp"

        android:layout_marginEnd="16dp"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.47"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

    app:srcCompat="@drawable/android_studio_logo" />

    <TextView

        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginStart,Top,End,Bottom="32dp",91,32,200
```

```
android:text="Welcome to andriod! Hello world"

app:layout_constraintBottom_toBottomOf="parent"

app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/imageView" />

</android.support.constraint.ConstraintLayout>
```

AGE CALCULATOR MainActivity.java

```
package com.avinash.testworld;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.*;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {   EditText inputValue;Button calculate;TextView
result;@Override

protected void onCreate(Bundle savedInstanceState) {super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        inputValue=findViewById(R.id.editTextInput);

        calculate=findViewById(R.id.calculate);

        result=findViewById(R.id.result);

        calculate.setOnClickListener(new View.OnClickListener() { @Override

            public void onClick(View v) {

int years = Calendar.getInstance().get(Calendar.YEAR);

                String dobyear = inputValue.getText().toString().trim();

                int dyear = Integer.parseInt(dobyear);

                int age = years - dyear;

                if (dobyear.isEmpty()) {

                    result.setText("Please Enter Input");

                } else if (age < 0) {

                    result.setText("Enter a valid Input");

                } else {
```

```
        result.setText(String.valueOf(age));
    } } }); }
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="match_parent" android:background="@color/light"
    android:orientation="vertical"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="200sp"
        android:text="calculate my age"
        android:textColor="@color/dark"
        android:textSize="20sp" />
    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:gravity="center"
        android:layout_marginTop="100dp"
        android:hint="Enter your year from DOB"
        android:textColor="@color/black"
        android:id="@+id/editTextInput"
        android:minWidth="200dp"
        android:height="40dp"
        android:width="250dp">
    </EditText>
    <Button
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:gravity="center"
        android:id="@+id/calculate"
        android:text="Calculate Age"
        android:background="@color/dark"
        android:layout_marginTop="40dp"
        android:minWidth="200dp"></Button>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="50sp"
        android:text="Your age is __"
        android:id="@+id/result"
        android:textColor="@color/dark"
        android:textSize="20sp" /></LinearLayout>
```

week 3 Share Intent

```
package com.avinash.myshareapp;

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

import android.view.View; import android.widget.*;

import android.content.Intent;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {

    Button b; EditText e;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        b=(Button)findViewById(R.id.button);

        e=(EditText)findViewById(R.id.editText);

        b.setOnClickListener(this);

    }@Override

    public void onClick(View v) { if(v.getId()==R.id.button) {

        String result=e.getText().toString();

        Intent shareIntent=new Intent();

        shareIntent.setAction(Intent.ACTION_SEND);

        shareIntent.putExtra(Intent.EXTRA_TEXT,result);

        shareIntent.setType("text/plain"); startActivity(shareIntent.createChooser(shareIntent,"Share to")); } } }
```

activity_main.xml

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <EditText

        android:id="@+id/editText"    android:layout_width="297dp"    android:layout_height="65dp"

        android:layout_marginStart="72dp"

        android:layout_marginTop="168dp"

        android:ems="10"

        android:inputType="textPersonName"
```

```
        android:text="Name"

        android:textSize="30sp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <Button

        android:id="@+id/button"

        android:layout_width="178dp"

        android:layout_height="67dp"

        android:layout_marginStart="124dp"

        android:layout_marginTop="296dp"

        android:text="Share"

        android:textSize="40sp"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

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

EMAIL

MainActivity.java

```
package com.avinash.email;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.*;

public class MainActivity extends AppCompatActivity {

    EditText mEditText,mEditTextMessage,mEditTextSubject;

    Button send;    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        mEditText=(EditText)findViewById(R.id.et2);

        mEditTextMessage=(EditText)findViewById(R.id.et3);

        mEditTextSubject=(EditText)findViewById(R.id.message1);

        send=findViewById(R.id.bt_send);
```

```

        send.setOnClickListener(new View.OnClickListener() { @Override
public void onClick(View v) {sendMail(); } }); }

private void sendMail(){

    String getRecep=mEditText.getText().toString();

    String[] getReceplist=getRecep.split(",");

    String getsub=mEditTextSubject.getText().toString();

    String getmsg=mEditTextMessage.getText().toString();

    Intent intent=new Intent(Intent.ACTION_SEND);

    intent.putExtra(intent.EXTRA_EMAIL,getReceplist);

    intent.putExtra(intent.EXTRA_SUBJECT,getsub);

    intent.putExtra(intent.EXTRA_TEXT,getmsg);

    intent.setType("message/rfc822");

    startActivity(intent.createChooser(intent,"Choose the appropriate channel")); } }

```

activity_main.xml

```

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

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:orientation="vertical"

    tools:context=".MainActivity">

<LinearLayout

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:orientation="vertical">

<EditText

    android:layout_width="match_parent"

    android:textSize="20dp"

    android:id="@+id/et2"

    android:layout_margin="20dp"    android:padding="10dp"

    android:layout_height="wrap_content"

    android:hint="To"

    android:textColor="@color/black"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintLeft_toLeftOf="parent"

```

```

    app:layout_constraintRight_toRightOf="parent"    android:background="@drawable/edit_text_back1"

    app:layout_constraintTop_toTopOf="parent" />

<EditText

    android:layout_width="match_parent"

    android:textSize="20dp"

    android:layout_marginLeft="20dp"

    android:layout_marginRight="20dp"

    android:padding="10dp"    android:textColor="@color/black"

    android:id="@+id/et3"

    android:layout_height="wrap_content"

    android:hint="Subject"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintLeft_toLeftOf="parent"

    app:layout_constraintRight_toRightOf="parent"

    android:background="@drawable/edit_text_back1"    />

```

```

<EditText

    android:layout_width="match_parent"

    android:textSize="20dp"    android:gravity="top"

    android:id="@+id/message1"

    android:textColor="@color/black"

    android:layout_margin="20dp"

    android:padding="10dp"

    android:layout_height="380dp"

    android:hint="Message"

    app:layout_constraintBottom_toBottomOf="parent"

    app:layout_constraintLeft_toLeftOf="parent"

    app:layout_constraintRight_toRightOf="parent"

    android:background="@drawable/edit_text_back1"    />

<Button

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:id="@+id/bt_send"

    android:layout_marginLeft="25dp"

```

```

    android:text="Send"

    android:textSize="20dp"

    android:textColor="@color/white"/>

</LinearLayout>    </LinearLayout>

edit_text_background1.xml

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

<shape

    xmlns:android="http://schemas.android.com/apk/res/android"

    android:shape="rectangle">

    <stroke android:width="3dp"

        android:color="@color/black"/>

    <corners android:radius="10dp"/>

    <solid android:color="@color/white"/>    </shape>

```

Cast the poll

MainActivity.java

```
package com.avinash.pollstatus1;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {

    SeekBar seekbar1, seekbar2, seekbar3;

    TextView tvOption1, tvOption2, tvOption3;

    TextView tvPercent1, tvPercent2, tvPercent3;

    int counter1 = 1, counter2 = 1, counter3 = 1;

    boolean flag1 = true, flag2 = true, flag3 = true;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        seekbar1 = findViewById(R.id.seek_bar1);

        seekbar2 = findViewById(R.id.seek_bar2);

        seekbar3 = findViewById(R.id.seek_bar3);

        tvOption1 = findViewById(R.id.tv_option1);

        tvOption2 = findViewById(R.id.tv_option2);

        tvOption3 = findViewById(R.id.tv_option3);

        tvPercent1 = findViewById(R.id.tv_percent1);

        tvPercent2 = findViewById(R.id.tv_percent2);

        tvPercent3 = findViewById(R.id.tv_percent3);

        seekbar1.setOnTouchListener(new View.OnTouchListener() { @Override

            public boolean onTouch(View view, MotionEvent motionEvent) {

                return true; } }));

        seekbar2.setOnTouchListener(new View.OnTouchListener() {

            @Override

            public boolean onTouch(View view, MotionEvent motionEvent) {

                return true; } }));
```

```
seekbar3.setOnTouchListener(new View.OnTouchListener() {

    @Override

    public boolean onTouch(View view, MotionEvent motionEvent) {

        return true; } }));

tvOption1.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        if (flag1) { counter1=counter1+1;

            counter2 = 1; counter3 = 1;

            flag1 = false; flag2 = true; flag3 = true;

            calcpercent(); } } });

tvOption2.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        if (flag2) { counter1=1;

            counter2++; counter3 = 1;

            flag1 = true; flag2 = false; flag3 = true;

            calcpercent(); } } });

tvOption3.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        if (flag3) { counter1=1;

            counter2 = 1; counter3++;

            flag1 = true; flag2 = true; flag3 = false;

            calcpercent(); } } });

    private void calcpercent() {

        double total = counter1 + counter2 + counter3;

        System.out.println(total);

        double percent1 = (counter1 / total) * 100;

        double percent2 = (counter2 / total) * 100;

        double percent3 = (counter3 / total) * 100;

        tvPercent1.setText(String.format("%.0f%%", percent1));

        seekbar1.setProgress((int) percent1);
```

```

        tvPercent2.setText(String.format("%.0f%%", percent2));

        seekbar2.setProgress((int) percent2);

        tvPercent3.setText(String.format("%.0f%%", percent3));

        seekbar3.setProgress((int) percent3);

    }

}

```

activity_main.xml

```

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:layout_gravity="center"

    tools:context=".MainActivity">

    <TextView

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:id="@+id/tv_question"

        android:text="Which programming language is your favourite language?"

        android:textSize="20sp"

        android:textStyle="bold"

        android:textAlignment="center"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintEnd_toStartOf="parent"

        tools:ignore="HardcodedText" />

    <SeekBar

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:id="@+id/seek_bar1"

        android:max="100"

        android:progress="25"

        android:layout_marginTop="16dp"

```

```

        android:thumb="@android:color/transparent"

        android:progressDrawable="@drawable/progress_track"

        app:layout_constraintTop_toBottomOf="@+id/tv_question"

        app:layout_constraintStart_toStartOf="parent"

        tools:ignore="MissingConstraints"

    />

```

```

<TextView

    android:layout_width="0dp"

    android:layout_height="40dp"

    android:id="@+id/tv_option1"

    android:text="Java"

    android:paddingStart="32dp"

    android:paddingEnd="0dp"

    android:layout_marginTop="16dp"

    android:gravity="center_vertical"

    app:layout_constraintTop_toBottomOf="@+id/tv_question"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toStartOf="@+id/tv_percent1"

    tools:ignore="HardcodedText" />

```

```

<TextView

    android:layout_width="wrap_content"

    android:layout_height="40dp"

    android:id="@+id/tv_percent1"

    android:text="25%"

    android:paddingStart="0dp"

    android:paddingEnd="52dp"

    android:layout_marginTop="16dp"

    android:gravity="center_vertical"

    app:layout_constraintTop_toBottomOf="@+id/tv_question"

    app:layout_constraintEnd_toEndOf="parent"

    tools:ignore="HardcodedText" />

```

```

<SeekBar

    android:layout_width="match_parent"

```

```

        android:layout_height="wrap_content"

        android:id="@+id/seek_bar2"

        android:max="100"

        android:progress="25"

        android:layout_marginTop="16dp"

        android:thumb="@android:color/transparent"

        android:progressDrawable="@drawable/progress_track"

        app:layout_constraintTop_toBottomOf="@+id/seek_bar1"

        app:layout_constraintStart_toStartOf="parent"

        tools:ignore="MissingConstraints"

    />

<TextView

    android:layout_width="0dp"

    android:layout_height="40dp"

    android:id="@+id/tv_option2"

    android:text="C"

    android:paddingStart="32dp"

    android:paddingEnd="0dp"

    android:layout_marginTop="16dp"

    android:gravity="center_vertical"

    app:layout_constraintTop_toBottomOf="@+id/seek_bar1"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toStartOf="@+id/tv_percent2"

    tools:ignore="HardcodedText" />

<TextView

    android:layout_width="wrap_content"

    android:layout_height="40dp"

    android:id="@+id/tv_percent2"

    android:text="25%"

    android:paddingStart="0dp"

    android:paddingEnd="52dp"

    android:layout_marginTop="16dp"

    android:gravity="center_vertical"

```

```

        app:layout_constraintTop_toBottomOf="@+id/seek_bar1"

        app:layout_constraintEnd_toEndOf="parent"

        tools:ignore="HardcodedText" />

<SeekBar

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:id="@+id/seek_bar3"

    android:max="100"

    android:progress="25"

    android:layout_marginTop="16dp"

    android:thumb="@android:color/transparent"

    android:progressDrawable="@drawable/progress_track"

    app:layout_constraintTop_toBottomOf="@+id/seek_bar2"

    app:layout_constraintStart_toStartOf="parent"

    tools:ignore="MissingConstraints"

    />

<TextView

    android:layout_width="0dp"

    android:layout_height="40dp"

    android:id="@+id/tv_option3"

    android:text="Python"

    android:paddingStart="32dp"

    android:paddingEnd="0dp"

    android:layout_marginTop="16dp"

    android:gravity="center_vertical"

    app:layout_constraintTop_toBottomOf="@+id/seek_bar2"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toStartOf="@id/tv_percent3"

    tools:ignore="HardcodedText" />

<TextView

    android:layout_width="wrap_content"

    android:layout_height="40dp"

    android:id="@+id/tv_percent3"

```

```
        android:text="25%"
        android:paddingStart="0dp"
        android:paddingEnd="52dp"
        android:layout_marginTop="16dp"
        android:gravity="center_vertical"
        app:layout_constraintTop_toBottomOf="@+id/seek_bar2"
        app:layout_constraintEnd_toEndOf="parent"
        tools:ignore="HardcodedText" />
    </androidx.constraintlayout.widget.ConstraintLayout>
```

progress_track.xml

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list xmlns:android="http://schemas.android.com/apk/res/android">
    <item>
        <shape android:shape="rectangle">
            <solid android:color="@android:color/transparent"/>
            <size android:height="40dp"/>
            <corners android:radius="4dp"/>
            <stroke android:color="#F3D304" android:width="1dp"/>
        </shape>    </item>
    <item>
        <scale android:scaleWidth="100%">
            <selector>
                <item android:state_enabled="false" android:drawable="@android:color/transparent"/>
                <item>
                    <shape android:shape="rectangle">
                        <solid android:color="#67F311"/>
                        <size android:height="40dp"/>
                        <corners android:bottomLeftRadius="4dp"
                            android:topLeftRadius="4dp"/>
                        <stroke android:color="#E0E0E0" android:width="1dp"/>
                    </shape>    </item>    </selector>
                </scale>    </item>    </layer-list>
```


Rating Bar

MainActivity.java

```
package com.avinash.ratingbar;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.RatingBar;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    RatingBar rating;

    Button button;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        rating=findViewById(R.id.rating_bar);

        button=findViewById(R.id.btn1);

        button.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                String s=String.valueOf(rating.getRating());

                Toast.makeText(getApplicationContext(),s+"stars", Toast.LENGTH_SHORT).show();

            }

        });

    }

}
```

activity_main.xml

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

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"

    android:orientation="vertical"

    tools:context=".MainActivity">

    <RatingBar

        android:id="@+id/rating_bar"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:numStars="5"

        android:stepSize="0.5"

        android:paddingTop="200dp"

        android:paddingBottom="50dp"

        android:layout_gravity="center"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintLeft_toLeftOf="parent"

        app:layout_constraintRight_toRightOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <Button

        android:id="@+id/btn1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_gravity="center"

        android:text="submit" />

</LinearLayout>
```

Text to speech

MainActivity.java

```
package com.avinash.texttospeech;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.speech.tts.TextToSpeech;

import android.view.View;

import android.widget.*;

import java.util.Locale;

public class MainActivity extends AppCompatActivity {

    EditText etinput; Button btconvert; TextToSpeech tts;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        etinput=findViewById(R.id.et_input);

        btconvert=findViewById(R.id.bt_convert);

        tts=new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {

            @Override

            public void onInit(int status) {

                if(status==TextToSpeech.SUCCESS){

                    int lang=tts.setLanguage(Locale.ENGLISH);

                } } });

        btconvert.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                String message=etinput.getText().toString();

                int speech=tts.speak(message,TextToSpeech.QUEUE_FLUSH,null);

            } }); } }
```

Activity_main.xml:

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

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:orientation="vertical"
```

```
    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <EditText

        android:layout_width="match_parent"

        android:layout_height="100dp"

        android:gravity="center"

        android:id="@+id/et_input"

        android:hint="Enter your text"

        android:textColor="@color/black"

        android:background="@drawable/edit_text_background1"

        android:layout_margin="20dp"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintLeft_toLeftOf="parent"

        app:layout_constraintRight_toRightOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

    <Button

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_gravity="center"

        android:id="@+id/bt_convert"

        android:background="@drawable/edit_text_background1"

        android:minWidth="100dp"

        android:text="Speech" /> </LinearLayout>
```

Edit_text_background1.xml

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

<shape xmlns:android="http://schemas.android.com/apk/res/android"

    android:shape="rectangle">

    <stroke android:width="3dp"

        android:color="#4799E4"/>

    <corners android:radius="10dp"/>

    <solid android:color="@color/white"/>

</shape>
```

Colouring App

Main Activity

```
package com.avinash.colouringapp;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;

import android.os.Bundle;

import android.view.View;

import android.widget.SeekBar;

import android.widget.TextView;

import java.util.Locale;

public class MainActivity extends AppCompatActivity implements SeekBar.OnSeekBarChangeListener {

    View vColor;

    TextView tvCode,tvValue;

    SeekBar sbRed,sbGreen,sbBlue;

    int red=0,green=0,blue=0;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        vColor=findViewById(R.id.v_color);

        tvCode=findViewById(R.id.tv_code);

        tvValue=findViewById(R.id.tv_value);

        sbRed=findViewById(R.id.sb_red);

        sbGreen=findViewById(R.id.sb_green);

        sbBlue=findViewById(R.id.sb_blue);

        sbRed.setOnSeekBarChangeListener(this);

        sbGreen.setOnSeekBarChangeListener(this);

        sbBlue.setOnSeekBarChangeListener(this);

    }

    @Override

    public void onProgressChanged(SeekBar seekBar, int progress, boolean fromUser) {

        switch(seekBar.getId()){

            case R.id.sb_red:
```

```
                red=progress; break;

            case R.id.sb_green:

                green=progress; break;

            case R.id.sb_blue:

                blue=progress; break;

        }

        vColor.setBackgroundColor(Color.rgb(red,green,blue));

        String code=HexCode(red,green,blue);

        tvCode.setText(code.toUpperCase());

        tvValue.setText(String.format("RGB (%d, %d, %d)",red,green,blue));

    }

    private String HexCode(int red, int green, int blue) {

        String code="#";

        code+=Integer.toHexString(red);

        code+=Integer.toHexString(green);

        code+=Integer.toHexString(blue);

        return code;

    }

    @Override

    public void onStartTrackingTouch(SeekBar seekBar) {

    }

    @Override

    public void onStopTrackingTouch(SeekBar seekBar) {

    }

}

#####

activity main.xml

#####

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

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"
```

```
android:layout_height="match_parent"
android:orientation="vertical"
android:gravity="center"
android:padding="16dp"
tools:context=".MainActivity">
```

```
<View
    android:layout_height="180dp"
    android:layout_width="match_parent"
    android:id="@+id/v_color"
    android:background="#000"
/>
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/tv_code"
    android:text="#000"
    android:textSize="24sp"
    android:textStyle="bold"
    android:layout_marginTop="8dp"
/>
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/tv_value"
    android:text="RGB (0,0,0)"
    android:textSize="24sp"
    android:textStyle="bold"
    android:layout_marginTop="8dp"
/>
```

```
<SeekBar
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
android:id="@+id/sb_red"
android:layout_marginTop="16dp"
android:max="255"
android:progressTint="#FF0000"
android:thumbTint="#FF0000"
/>
```

```
<SeekBar
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/sb_green"
    android:layout_marginTop="16dp"
    android:max="255"
    android:progressTint="#00FF00"
    android:thumbTint="#00FF00"
/>
```

```
<SeekBar
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/sb_blue"
    android:layout_marginTop="16dp"
    android:max="255"
    android:progressTint="#0000FF"
    android:thumbTint="#0000FF"
/>
```

```
</LinearLayout>
```

Menu App

Main activity

```
package com.avinash.menuapp;

import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.view.menu.MenuBuilder;
import android.os.Bundle;
import android.view.*;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override

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

    @SuppressWarnings("RestrictedAPI")

    @Override

    public boolean onCreateOptionsMenu(Menu menu) {

        MenuInflater inflater=getMenuInflater();

        inflater.inflate(R.menu.menu_options,menu);

        MenuBuilder mn=(MenuBuilder) menu;

        mn.setOptionalIconsVisible(true);

        return true;  }

    @Override

    public boolean onOptionsItemSelected(@NonNull MenuItem item) {

        Toast.makeText(this, "Select Item: "+item.getTitle(), Toast.LENGTH_SHORT).show();

        switch (item.getItemId())

        {   case R.id.upload:

            Toast.makeText(this, "File Uploaded "+item.getTitle(), Toast.LENGTH_SHORT).show();

            return true;

        case R.id.download:

            Toast.makeText(this, "File downloaded "+item.getTitle(), Toast.LENGTH_SHORT).show();

            return true;

        case R.id.share:
```

```
            Toast.makeText(this, "File shared "+item.getTitle(), Toast.LENGTH_SHORT).show();

            return true;

        case R.id.exit:    System.exit(0);

        case R.id.settings:

            Toast.makeText(this, "Clicked on settings "+item.getTitle(), Toast.LENGTH_SHORT).show();

            return true;

        default:    return super.onOptionsItemSelected(item);

    }  } }
```

menu_options.xml

```
<?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/share"

        android:icon="@drawable/ic_share"

        android:title="Share"/>

    <item

        android:id="@+id/upload"

        android:icon="@drawable/ic_upload"

        android:title="Upload"/>

    <item

        android:id="@+id/download"

        android:icon="@drawable/ic_download"

        android:title="Download"/>

    <item

        android:id="@+id/settings"

        android:icon="@drawable/ic_settings"

        android:title="Settings"/>

    <item

        android:id="@+id/exit"

        android:icon="@drawable/ic_exit"

        android:title="Exit"/>

</menu>
```

DatePicker

MainActivity

```
import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.DatePicker;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    DatePicker picker;

    Button displayDate;

    TextView textView1;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        textView1=(TextView)findViewById(R.id.textView1);

        picker=(DatePicker)findViewById(R.id.datePicker);

        displayDate=(Button)findViewById(R.id.button1);

        textView1.setText("Current Date: "+getCurrentDate());

        displayDate.setOnClickListener(new View.OnClickListener(){

            @Override

            public void onClick(View view) {

                textView1.setText("Change Date: "+getCurrentDate());

            } });

    }

    public String getCurrentDate(){

        StringBuilder builder=new StringBuilder();

        builder.append((picker.getMonth() + 1)+" / "); //month is 0 based

        builder.append(picker.getDayOfMonth()+" / ");

        builder.append(picker.getYear());

        return builder.toString();

    }

}
```

activity_main

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent">

    <TextView

        android:id="@+id/textView1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_above="@+id/button1"

        android:layout_alignParentLeft="true"

        android:layout_alignParentStart="true"

        android:layout_marginBottom="102dp"

        android:layout_marginLeft="30dp"

        android:layout_marginStart="30dp"

        android:text="" />

    <Button

        android:id="@+id/button1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignParentBottom="true"

        android:layout_centerHorizontal="true"

        android:layout_marginBottom="20dp"

        android:text="Change Date" />

    <DatePicker

        android:id="@+id/datePicker"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_above="@+id/textView1"

        android:layout_centerHorizontal="true"

        android:layout_marginBottom="36dp" />

</RelativeLayout>
```


Camera

MainActivity.java

```
package com.avinash.multimedia;

import android.content.Intent;
import android.graphics.Bitmap;
import android.provider.MediaStore;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    // Define the pic id
    private static final int pic_id = 123;

    // Define the button and imageview type variable
    Button camera_open_id;
    ImageView click_image_id;

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

        camera_open_id = (Button)findViewById(R.id.camera_button);
        click_image_id = (ImageView)findViewById(R.id.click_image);
        camera_open_id.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v)
            {
                Intent camera_intent = new Intent(MediaStore.ACTION_IMAGE_CAPTURE);
                startActivityForResult(camera_intent, pic_id);
            }
        });
    }

    // This method will help to retrieve the image
    protected void onActivityResult(int requestCode, int resultCode, Intent data)
    {

```

```
        // Match the request 'pic id with requestCode
        if (requestCode == pic_id) {

            Bitmap photo = (Bitmap)data.getExtras().get("data");

            // Set the image in imageview for display
            click_image_id.setImageBitmap(photo);

        }
    }
}
```

activity_main.xml

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

<RelativeLayout

    xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <!-- add Camera Button to open the Camera-->

    <Button

        android:layout_width="100dp"

        android:layout_height="50dp"

        android:layout_marginLeft="140dp"

        android:id="@+id/camera_button"

        android:text="Camera" />

    <!-- add ImageView to display the captured image-->

    <ImageView

        android:layout_marginTop="70dp"

        android:layout_width="350dp"

        android:layout_marginLeft="15dp"

        android:layout_height="450dp"

        android:id="@+id/click_image"

        android:layout_marginBottom="10dp"/>

</RelativeLayout>
```


Login Form

Main Activity

```
package com.avinash.loginform;

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

public class MainActivity extends AppCompatActivity {

    EditText name,password;

    Button login; TextView info;  int counter=3;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        name=(EditText)findViewById(R.id.etName);

        password=(EditText)findViewById(R.id.etPassword);

        info=(TextView)findViewById(R.id.attempts);

        login=(Button)findViewById(R.id.login);

        info.setText("No. of Remaining Attempts : 3");

        login.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                validate(name.getText().toString(),password.getText().toString());

            } });  }

    public void validate(String name, String password) {

        if(name.equals("Admin") && password.equals("123#")){

            Intent intent=new Intent(MainActivity.this,secondActivity.class);

            startActivity(intent);

        }

        else{

            counter--;

            info.setText("No. of Remaining Attempts : "+counter);
```

```
        if(counter==0){

            login.setEnabled(false);

        }

    }

}
```

Activity_main

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

<LinearLayout xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:background="@color/white"

    android:orientation="vertical"

    android:layout_gravity="center"

    tools:context=".MainActivity">

    <ImageView

        android:id="@+id/imageView2"

        android:layout_width="194dp"

        android:layout_height="195dp"

        android:layout_gravity="center"

        android:layout_marginTop="20dp"

        android:src="@drawable/img" />

    <EditText

        android:id="@+id/etName"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_gravity="center"

        android:width="250dp"

        android:height="40dp"

        android:hint="Username"

        android:textColorHint="@color/black"
```

```

        android:textColor="@color/black"

        android:inputType="text"

        android:minWidth="200dp"

        android:layout_marginTop="20dp"

        android:background="@drawable/edit_text_background1"

        android:padding="12dp"/>
<EditText
        android:id="@+id/etPassowrd"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_gravity="center"

        android:width="250dp"

        android:height="40dp"

        android:textColor="@color/black"

        android:textColorHint="@color/black"

        android:hint="Password"

        android:inputType="textPassword"

        android:minWidth="200dp"

        android:layout_marginTop="20dp"

        android:background="@drawable/edit_text_background1"

        android:padding="12dp"/>
<Button
        android:id="@+id/login"

        android:layout_width="wrap_content"

        android:layout_height="wrapcontent"

        android:text="Login"

        android:textSize="20dp"

        android:layout_gravity="center"

        android:background="@drawable/edit_text_background1"

        android:layout_marginTop="20dp"

        tools:layout_editor_absoluteX="149dp"

        tools:layout_editor_absoluteY="354dp" />

```

```

<TextView
        android:id="@+id/attempts"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Maximum No.Of attempts left: 3"

        android:textSize="20dp"

        android:layout_marginTop="20dp"

        android:layout_gravity="center"

        android:textColor="@color/black"

        android:autoSizeMaxTextSize="30sp"

        tools:layout_editor_absoluteX="55dp"

        tools:layout_editor_absoluteY="444dp" />
</LinearLayout>
Edit_text_background1.xml
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"

        android:shape="rectangle">

        <stroke android:width="3dp"

                android:color="#4799E4"/>

        <corners android:radius="10dp"/>

        <solid android:color="@color/white"/>

</shape>

```

Registration form

MainActivity

```
package com.avinash.register1;

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

public class MainActivity extends AppCompatActivity {

    EditText email,p1,p2;

    Button reg,log;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        email=(EditText) findViewById(R.id.remail);

        p1=(EditText) findViewById(R.id.p1);

        p2=(EditText) findViewById(R.id.p2);

        reg=(Button) findViewById(R.id.register);

        log=(Button) findViewById(R.id.rlogin);

        reg.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                String pass1,pass2;

                pass1=String.valueOf(p1.getText());

                pass2=String.valueOf(p2.getText());

                if(pass1.equals(pass2))

                {

                    Intent login=new Intent(MainActivity.this,SecondActivity.class);

                    System.out.println("Matched");

                    startActivity(login);

                }

                else
```

```


            {

                Toast.makeText(getApplicationContext(),"Password Mismatch...",Toast.LENGTH_LONG).show();

                System.out.println("Not Matched");

            }

        });

    }

}
```

activity_main

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Register"

        android:textAlignment="center"

        android:textSize="40dp"

        android:textStyle="bold"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.113" />

    <EditText

        android:id="@+id/remail"

        android:layout_width="367dp"

        android:layout_height="47dp"

        android:ems="10"

        android:textColorHint="@color/black"

        android:textColor="@color/black"

        android:hint="Email ID"

        android:inputType="textPersonName"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"
```

```

        android:background="@drawable/edit_text_background1"
        android:paddingLeft="5dp"/>
<EditText
    android:id="@+id/p1"
    android:layout_width="367dp"
    android:layout_height="47dp"
    android:ems="10"
    android:hint="Password"
    android:inputType="textPassword"
    android:textColorHint="@color/black"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:textColor="@color/black"
    android:background="@drawable/edit_text_background1"
    android:paddingLeft="5dp"/>
<EditText
    android:id="@+id/p2"
    android:layout_width="367dp"
    android:layout_height="47dp"
    android:ems="10"
    android:textColorHint="@color/black"
    android:hint="Re-Enter Password"
    android:inputType="textPassword"
    android:textColor="@color/black"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:background="@drawable/edit_text_background1"
    android:paddingLeft="5dp"/>
<Button
    android:id="@+id/register"
    android:layout_width="367dp"
    android:layout_height="45dp"
    android:text="register"

```

```

        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/p2"
        app:layout_constraintVertical_bias="0.061" />
<Button
    android:id="@+id/rlogin"
    android:layout_width="118dp"
    android:layout_height="42dp"
    android:text="login"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>

```

SecondActivity

```

package com.avinash.register1;

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

public class SecondActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second); } }

```

activity_second.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".SecondActivity">

    <TextView
        android:id="@+id/name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome User..."
        android:textSize="34sp"
        android:textStyle="bold"

```

```

        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
Edit_text_background1.xml
<?xml version="1.0" encoding="utf-8"?>

<shape
    xmlns:android="http://schemas.android.com/apk/res/android"

    android:shape="rectangle">

    <stroke android:width="3dp"

        android:color="#4799E4"/>

    <corners android:radius="10dp"/>

    <solid android:color="@color/white"/>

</shape>

```