//First question code & file

Login Layout Code:

File Name: activity_name.xml

```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:gravity="center"
    android:padding="12dp"
    android:orientation="vertical"
    android:background="@color/teal_200"
    tools:context=".MainActivity">


    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:hint="Reg No"
        android:inputType="number"
        android:padding="10dp"

tools:ignore="Autofill,HardcodedText,TextFields" />
```

```xml
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"

android:background="@drawable/edit_text_background"
        android:layout_marginTop="15dp"
        android:hint="Password"
        android:inputType="textPassword"
        android:padding="10dp"

tools:ignore="Autofill,HardcodedText,TextFields" />

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:padding="10dp"
        android:text="Login"
        android:textColor="#FF9800"
        android:textStyle="bold"
        tools:ignore="HardcodedText" />


    <TextView
        android:id="@+id/r1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="New User?Register"
        android:textColor="#FF5722"
        tools:ignore="HardcodedText" />
```

```
</LinearLayout>
Registration Layout Code:
File Name:                  activity_registration.xml


<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/a
ndroid"
    xmln
    <TextView
        android:id="@+id/login_user"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Already a User?Login"
        android:textColor="@color/purple_700"
        tools:ignore="HardcodedText" />

</LinearLayout>s:app="http://schemas.android.com/ap
k/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="12dp"
    tools:context=".registration">

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

```xml
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:hint="Address"
        android:inputType="textPersonName"
        android:padding="10dp"

tools:ignore="Autofill,HardcodedText,TextFields" />

    <EditText
        android:id="@+id/regno"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:hint="Reg No"
        android:inputType="textPersonName"
        android:padding="10dp"

tools:ignore="Autofill,HardcodedText,TextFields" />

    <EditText
        android:id="@+id/email"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:hint="Email"
        android:inputType="textEmailAddress"
        android:padding="10dp"
```

```xml
        tools:ignore="Autofill,HardcodedText,TextFields" />

    <EditText
        android:id="@+id/mobileno"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:hint="Mobile No"
        android:inputType="phone"
        android:padding="10dp"

        tools:ignore="Autofill,HardcodedText,TextFields" />

    <EditText
        android:id="@+id/password"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:hint="Password"
        android:inputType="textPassword"
        android:padding="10dp"

        tools:ignore="Autofill,HardcodedText,TextFields" />

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

```xml
        android:layout_marginTop="15dp"

android:background="@drawable/edit_text_background"
        android:padding="10dp"
        android:text="Register"
        android:textStyle="bold"
        tools:ignore="HardcodedText" />
```

Java File Code: MainAactivity.java

```java
package com.example.studentform;
import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity
{

    TextView r1;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```java
        r1=findViewById(R.id.r1);

        r1.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new
Intent(MainActivity.this,registration.class));
                finish();
            }
        });


    }
}
```

Java File Code: registration.java

```java
package com.example.studentform;
import androidx.appcompat.app.AppCompatActivity;

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

public class registration extends AppCompatActivity
{
```

```java
    TextView l1;
    EditText e1,e2,e3,e4,e5;


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

setContentView(R.layout.activity_registration);

        e1=findViewById(R.id.address);
        e2=findViewById(R.id.email);
        e3=findViewById(R.id.mobileno);
        e4=findViewById(R.id.password);
        e5=findViewById(R.id.regno);




        l1=findViewById(R.id.login_user);

        l1.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new
Intent(registration.this,MainActivity.class));
                finish();
            }
        });
    }}
```
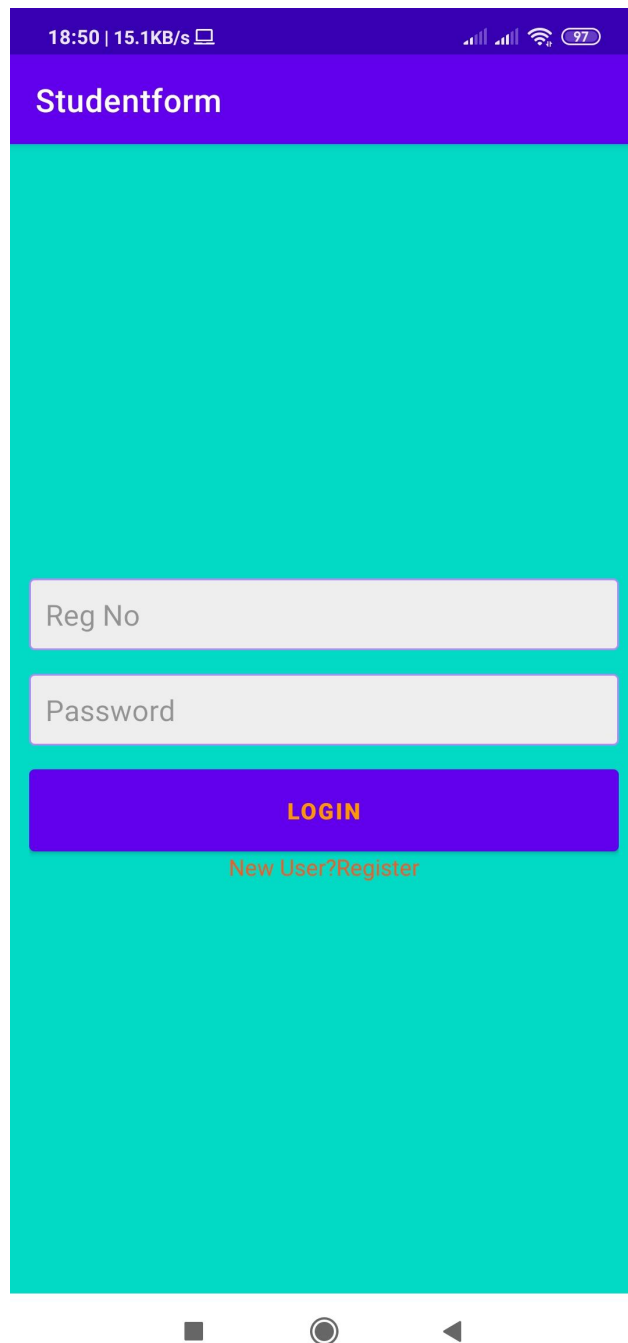
App Working Output:

Studentform

Address

Reg No

Email

Mobile No

Password

REGISTER

Already a User?Login

```
//second question code & file


FrontEnd Layout Code File:      activity_main.xml



<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/a
ndroid"

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_marginStart="20dp"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="20dp"
    android:layout_marginEnd="20dp"
    android:layout_marginRight="20dp"
    android:background="@color/purple_200"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/et1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:layout_marginTop="100dp"
```

```xml
        android:layout_marginEnd="20dp"
        android:layout_marginRight="20dp"
        android:layout_marginBottom="20dp"
        android:ems="10"
        android:hint="enter first number"
        android:inputType="numberDecimal" />

    <EditText
        android:id="@+id/et2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:layout_marginTop="20dp"
        android:layout_marginEnd="20dp"
        android:layout_marginRight="20dp"
        android:ems="10"
        android:hint="enter second number"
        android:inputType="none|numberDecimal" />

    <Button
        android:id="@+id/add"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="20dp"
        android:layout_marginRight="20dp"
        android:text="addtion"
        android:textColor="@color/teal_200" />

    <Button
        android:id="@+id/sub"
        android:layout_width="match_parent"
```

```xml
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="20dp"
        android:layout_marginRight="20dp"
        android:text="substration"

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

    <Button
        android:id="@+id/mul"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="20dp"
        android:layout_marginRight="20dp"
        android:text="multiplication"

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

    <Button
        android:id="@+id/div"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="20dp"
        android:layout_marginRight="20dp"
        android:text="division"
```

```xml
    android:textColor="@android:color/holo_green_light"
/>

    <TextView
        android:id="@+id/tv"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="result" />

</LinearLayout>
```

```java
package com.example.calculator;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity
{
    EditText et1, et2;  //id if text number edit
    Button  add, sub, mul, div; // id of buttom
    TextView tv;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        et1 = findViewById(R.id.et1);
        et2 = findViewById(R.id.et2);
        add = findViewById(R.id.add);
        sub = findViewById(R.id.sub);
        mul = findViewById(R.id.mul);
        div = findViewById(R.id.div);
        tv = findViewById(R.id.tv);

        add.setOnClickListener(new
View.OnClickListener() {
```

```java
        @Override
        public void onClick(View v) {
            float f, s, a;
            f =
Float.parseFloat(et1.getText().toString());
            s =
Float.parseFloat(et2.getText().toString());
            a = f+s;
            tv.setText("result = " + a);
        }
    });


    div.setOnClickListener(new
View.OnClickListener() {
        @Override
        public void onClick(View v) {
            float f, s, a;
            f =
Float.parseFloat(et1.getText().toString());
            s =
Float.parseFloat(et2.getText().toString());
            if(s == 0.0){
                tv.setText("infinity");
            }else {
                a = f / s;
                tv.setText("result = " + a);
            }
        }
    });
    sub.setOnClickListener(new
View.OnClickListener() {
        @Override
        public void onClick(View v){
```

```java
            float f, s, a;
            f =
Float.parseFloat(et1.getText().toString());
            s =
Float.parseFloat(et2.getText().toString());
            a = f-s;
            tv.setText("result = " + a);
        }
    });
    mul.setOnClickListener(new
View.OnClickListener() {
        @Override
        public void onClick(View v) {
            float f, s, a;
            f =
Float.parseFloat(et1.getText().toString());
            s =
Float.parseFloat(et2.getText().toString());
            a = f*s;
            tv.setText("result = " + a);
        }
    });
    }
}
```

App Working Output:

Layout Display:

Demo Display Calculation:

calculator

12

15

ADDTION

SUBSTRATION

MULTIPLICATION

DIVISION

result = 27.0

//Third question Code & File

ScrollView of Images & Rotation Of Image   **activity_main.xml**

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


    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">

<!--        <Button-->
<!--
android:layout_width="wrap_content"-->
<!--
android:layout_height="match_parent">-->
        <ImageView
            android:id="@+id/img1"
            android:layout_width="match_parent"
```

```xml
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:adjustViewBounds="true"
            android:scaleType="fitStart"
            android:src="@drawable/flow5"
            android:contentDescription="TODO"
            tools:ignore="ContentDescription" />
<!--            </Button>-->

<!--            <Button-->
<!--
android:layout_width="match_parent"-->
<!--
android:layout_height="wrap_content">-->
        <ImageView
            android:id="@+id/img2"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:scaleType="fitStart"
            android:src="@drawable/flow1"
            android:contentDescription="TODO"
            tools:ignore="ContentDescription" />
<!--            </Button>-->
<!--            <Button-->
<!--
android:layout_width="wrap_content"-->
<!--
android:layout_height="match_parent">-->
        <ImageView
            android:id="@+id/img3"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
```

```xml
                android:layout_marginTop="10dp"
                android:adjustViewBounds="true"
                android:scaleType="fitStart"
                android:contentDescription="TODO"
                tools:ignore="ContentDescription"
                android:src="@drawable/flow3" />
<!--        </Button>-->
<!--        <Button-->
<!--
android:layout_width="match_parent"-->
<!--
android:layout_height="wrap_content">-->
            <ImageView
                android:id="@+id/img4"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginTop="10dp"
                android:scaleType="fitStart"
                android:contentDescription="TODO"
                tools:ignore="ContentDescription"
                android:src="@drawable/flow4" />
<!--        </Button>-->
    </LinearLayout>
</ScrollView>
```

Rotation Layout xml File: **activity_flip.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".flip">

    <Button
        android:id="@+id/anti"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="115dp"
        android:layout_marginLeft="115dp"
        android:layout_marginEnd="141dp"
        android:layout_marginRight="141dp"
        android:layout_marginBottom="146dp"
        android:text="AntiClockwise"

app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintStart_toStartOf="parent" />

    <ImageView
```

```xml
        android:id="@+id/flipimg1"
        android:layout_width="260dp"
        android:layout_height="185dp"
        android:layout_marginStart="75dp"
        android:layout_marginLeft="75dp"
        android:layout_marginTop="72dp"
        android:layout_marginEnd="76dp"
        android:layout_marginRight="76dp"
        android:foregroundGravity="center"

app:layout_constraintBottom_toTopOf="@+id/anti"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/clock"
        app:layout_constraintVertical_bias="0.222"
        app:srcCompat="@drawable/flow5"/>

    <Button
        android:id="@+id/clock"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="116dp"
        android:text="Clockwise"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.438"

app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout
>
```

Scroll View Java Code & File: **MainActivity.java**

```java
package com.example.rotation;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity
{

    ImageView btn1,btn2,btn3,btn4;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        btn1=findViewById(R.id.img1);
        btn2=findViewById(R.id.img2);
        btn3=findViewById(R.id.img3);
        btn4=findViewById(R.id.img4);

        btn1.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```java
                startActivity(new
Intent(MainActivity.this,flip.class));
            }
        });

        btn2.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new
Intent(MainActivity.this,flip2.class));
            }
        });

        btn3.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new
Intent(MainActivity.this,flip3.class));
            }
        });

        btn4.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new
Intent(MainActivity.this,flip4.class));
            }
        });

    }
```

```
}
```

Rotation of Image Clock & anti Clockwise Java File: **flip.java**

```java
package com.example.rotation;

import androidx.appcompat.app.AppCompatActivity;

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


public class flip extends AppCompatActivity {

    Button btn1,btn2;
    ImageView img1;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_flip);

        btn1=findViewById(R.id.clock);
        btn2=findViewById(R.id.anti);
        img1=findViewById(R.id.flipimg1);
```

```java
        btn1.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                //clockwise

img1.setRotation(img1.getRotation()+90);
            }
        });

        btn2.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                //anticlockwise

img1.setRotation(img1.getRotation()-90);
//              startActivity(new
Intent(MainActivity.this,Raju.class));
            }
        });

    }
}
```

App Working Output:
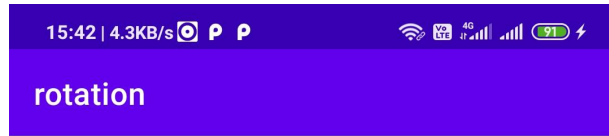
ScrollView Up & Down

Rotation Layout of Images

Rotation Demo:

//Four Question Code & File

Layout Code & File   **activity_main.xml**


```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="132dp"
        android:layout_marginTop="96dp"
        android:onClick="buttonCreateFile"
        android:text="Create file"

app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="RtlCompat" />

    <Button
```

```xml
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="135dp"
        android:layout_marginTop="67dp"
        android:onClick="buttonDeleteFile"
        android:text="Detele file"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/button"
        tools:ignore="RtlCompat" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="132dp"
        android:layout_marginLeft="132dp"
        android:layout_marginTop="272dp"
        android:text="DownloadFile"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/button"
        tools:ignore="RtlCompat" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

```java
package com.example.filehandle;
import android.Manifest;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

import java.io.File;
import java.io.IOException;

public class MainActivity extends AppCompatActivity
{

    private File filePath = new
File(Environment.getExternalStorageDirectory() +
"/ABC.pdf");
    Button download1;

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

```java
        download1=findViewById(R.id.button3);

        download1.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(MainActivity.this,
"File downloaded Successfully!",
Toast.LENGTH_LONG).show();
            }
        });

        ActivityCompat.requestPermissions(this, new
String[]{Manifest.permission.WRITE_EXTERNAL_STORAGE
                ,
Manifest.permission.READ_EXTERNAL_STORAGE},
PackageManager.PERMISSION_GRANTED);

    }

    public void buttonCreateFile(View view){
        try {
            filePath.createNewFile();
            Toast.makeText(this, "File Created
Successfully!", Toast.LENGTH_LONG).show();
        } catch (IOException e) {
            e.printStackTrace();
        }
    }

    public void buttonDeleteFile(View view){
        if (filePath.exists()){
            filePath.delete();
```

```java
            Toast.makeText(this, "File Deleted
Successfully!", Toast.LENGTH_LONG).show();
        }
    }
}
```

App Working Output:

CREATE FILE

DETELE FILE

DOWNLOADFILE

File Created Successfully!

CREATE FILE

DETELE FILE

DOWNLOADFILE

File Deleted Successfully!

CREATE FILE

DETELE FILE

DOWNLOADFILE

File downloaded Successfully!

//fifth question code & Files

Xml Code File: **activity_main.xml**


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

    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    // WebView Element
    <WebView
        android:id="@+id/webview"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />
</RelativeLayout>
```

Java File of WebPage Rendering   **MainActivity.java**

```java
package com.example.webpagerendering;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.os.Bundle;
import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;

public class MainActivity extends AppCompatActivity
{

    private WebView mywebView;

    @SuppressLint("SetJavaScriptEnabled")

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


        this.mywebView = (WebView)
findViewById(R.id.webview);
```

```java
        WebSettings webSettings =
mywebView.getSettings();
        webSettings.setJavaScriptEnabled(true);

mywebView.loadUrl("https://nitnagaland.ac.in/"); //
Line of Code for opening links in app
        mywebView.setWebViewClient(new
WebViewClient());
    }

    @Override
    public void onBackPressed() {
        // now you don't need findViewById because
you can access field prepared in onCreate
        if (mywebView.canGoBack()) {
            mywebView.goBack();
        } else {
            super.onBackPressed();
        }
    }
}
```

App working & Output:
Screenshot of Web Page Rendering: