Q2:- Create an android app that demonstrates working withText View Elements

Activity main xml:

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

    <EditText
        android:id="@+id/txtname"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="25dp"
        android:layout_weight="1"
        android:ems="10"
        android:hint="name"
        android:inputType="text"
        android:selectAllOnFocus="true"
        android:textSize="24sp" />
<EditText
        android:id="@+id/txtpwd"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:ems="10"
        android:hint="_0_to_9"
        android:inputType="numberPassword" />

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

```xml
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:ems="10"

        android:hint="date"

        android:inputType="date" />

    <EditText

        android:id="@+id/txtPhone"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:ems="10"

        android:hint="phone no"

        android:inputType="phone" />


    <EditText

        android:id="@+id/txtEmail"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:ems="10"

        android:hint="Email"

        android:inputType="textEmailAddress" />


    <Button

        android:id="@+id/btnSend"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:onClick="OnClickListener"

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

```xml
<TextView

    android:id="@+id/resultView"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_weight="1"

    android:text="TextView" />


</LinearLayout>
```

Main activity.java:

```java
package com.example.myapplication;


import android.os.Bundle;

import android.annotation.SuppressLint;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import org.w3c.dom.Text;


import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    Button btnSubmit;

    EditText name, password, email, dob, phoneno;

    TextView result;
```

```java
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    name=(EditText)findViewById(R.id.txtname);
    password = (EditText)findViewById(R.id.txtpwd);


    email = (EditText)findViewById(R.id.txtEmail);
    dob = (EditText)findViewById(R.id.txtDate);
    phoneno= (EditText)findViewById(R.id.txtPhone);
    btnSubmit = (Button)findViewById(R.id.btnSend);
    result = (TextView)findViewById(R.id.resultView);
    btnSubmit.setOnClickListener(new View.OnClickListener(){
        public void onClick(View v) {
            if (name.getText().toString().isEmpty() ||
password.getText().toString().isEmpty() ||
                email.getText().toString().isEmpty() ||
                dob.getText().toString().isEmpty()
                || phoneno.getText().toString().isEmpty()) {
                result.setText("Please Fill All the Details");
            } else {
                result.setText("Name - " + name.getText().toString() +
                    " \n" + "Password - " + password.getText().toString()
                    + " \n" + "E-Mail - " + email.getText().toString()
                    + " \n" + "DOB - " + dob.getText().toString()
                    + " \n" + "Contact - " +
phoneno.getText().toString());
            }
        }
    });
}
```

}

Q4: Create an android app that demonstrates the use of Alert.

Activity_main.xml:

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

    android:layout_width="match_parent"

    android:layout_height="match_parent"

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


    <TextView

        android:id="@+id/top_message"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignParentEnd="true"

        android:layout_alignParentBottom="true"

        android:layout_marginEnd="196dp"

        android:layout_marginBottom="469dp"

        android:text="TextView" />
<Button

        android:id="@+id/button1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignParentEnd="true"

        android:layout_alignParentBottom="true"

        android:layout_marginEnd="177dp"

        android:layout_marginBottom="371dp"

        android:onClick="onClickShowAlert"

        android:text="Alert" />
</RelativeLayout>
```

Main_activity.java:

```java
package com.example.prac4;


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 android.app.AlertDialog;

import android.content.DialogInterface;

import android.os.Bundle;

import android.view.View;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {


    @Override
    protected void onCreate(Bundle savedInstanceState) {


        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);}

        public void onClickShowAlert(View view) {

            AlertDialog.Builder myAlertBuilder = new
                    AlertDialog.Builder(MainActivity.this);

            myAlertBuilder.setTitle("My Alert Box");

            myAlertBuilder.setMessage("Hello TYIT Students!!!!");

            myAlertBuilder.setPositiveButton("Ok", new
                    DialogInterface.OnClickListener() {

                        public void onClick(DialogInterface dialog, int which) {
```

```java
                    Toast.makeText(getApplicationContext(),

                        "pressed ok",

                        Toast.LENGTH_SHORT).show();

                }

            });

myAlertBuilder.setNegativeButton("Cancel", new

            DialogInterface.OnClickListener() {

                public void onClick(DialogInterface dialog, int which) {

                    Toast.makeText(getApplicationContext(),"Cancel",

                        Toast.LENGTH_SHORT).show();

                }

            });

        myAlertBuilder.show();



    }
}
```

Q6: Simple Calculator app

Activity_main.xml:

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

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

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:orientation="vertical">


    <EditText

        android:id="@+id/num1"
```

```xml
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:ems="10"

        android:hint="first no"

        android:inputType="number" />


    <EditText

        android:id="@+id/num2"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:ems="10"

        android:hint="second no"

        android:inputType="number" />
<TextView

        android:id="@+id/result"

        android:layout_width="match_parent"

        android:layout_height="41dp"

        android:layout_weight="1"

        android:hint="result" />


    <Button

        android:id="@+id/sum"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:onClick="dosum"

        android:text="Addition" />


    <Button
```

```xml
        android:id="@+id/sub"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:onClick="dosub"

        android:text="subtraction" />


    <Button

        android:id="@+id/division"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:onClick="dodiv"

        android:text="divsion" />
<Button

        android:id="@+id/button"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:onClick="domod"

        android:text="mod" />


    <Button

        android:id="@+id/mul"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_weight="1"

        android:onClick="domul"

        android:text="multipication" />

</LinearLayout>
```

Main_activity.java:

package com.example.myapplication;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

```java
public class MainActivity extends AppCompatActivity {
    EditText e1, e2;
    TextView t1;
    int num1, num2;


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);}
        public boolean getNumbers() {
            e1 = (EditText) findViewById(R.id.num1);
            e2 = (EditText) findViewById(R.id.num2);
            t1 = (TextView) findViewById(R.id.result);
```

```java
            String s1 = e1.getText().toString();

            String s2 = e2.getText().toString();

            if ((s1.equals(null) && s2.equals(null))

                    || (s1.equals("") && s2.equals(""))) {

                String result = "Please enter a value";

                t1.setText(result);

                return false;

            } else {

                num1 = Integer.parseInt(s1);

                num2 = Integer.parseInt(s2);

            }

    return true;

    }

    public void doSum(View v) {

        if (getNumbers()) {

            int sum = num1 + num2;

            t1.setText(Integer.toString(sum));

        }

    }


    public void doPow(View v) {

        if (getNumbers()) {

            double sum = Math.pow(num1, num2);

            t1.setText(Double.toString(sum));

        }

    }

    public void dosub(View v) {

        if (getNumbers()) {

            int sum = num1 - num2;

            t1.setText(Integer.toString(sum));

        }
```

```java
        }
    public void dosum(View v) {
        if (getNumbers()) {
            int sum = num1 + num2;
            t1.setText(Integer.toString(sum));
        }
    }
    public void domul(View v) {
        if (getNumbers()) {
            int sum = num1 * num2;
            t1.setText(Integer.toString(sum));
        }
    }
    public void dodiv(View v) {
        if (getNumbers()) {
            int sum = num1 / num2;
            t1.setText(Integer.toString(sum));
        }
    }
    public void domod(View v) {
        if (getNumbers()) {
            int sum = num1 % num2;
            t1.setText(Integer.toString(sum));
        }
    }


}
```

Q3. Create an android app that demonstrates Activity Lifecycle.

Activity_main.xml:

```xml
<?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/textView"
        android:layout_width="wrap_content"
        android:layout_height="76dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="99dp"
        android:layout_marginTop="264dp"
        android:layout_marginEnd="91dp"
        android:layout_marginBottom="390dp"
        android:background="#FFC107"
        android:text="hello world"
        android:textAlignment="center"
        android:textColor="#E13535"
        android:textColorHighlight="#CDDC39"
        android:textColorHint="#FF9800"
        android:textSize="24sp" />
</RelativeLayout>
```

Main_activity.java:

package com.example.myapplication;

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 android.app.Activity;

import android.util.Log;

```java
public class MainActivity extends AppCompatActivity {
    String msg ="Activity life cycle";

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

        setContentView(R.layout.activity_main);
        Log.d(msg,"we are on create method");

    }

    @Override
    protected void onStart() {
        super.onStart();
        Log.d(msg,"we are on start method");
    }
```

```java
    @Override
    protected void onResume() {
        super.onResume();
        Log.d(msg,"we are on Resume method");


    }
    @Override
    protected void onPause() {
        super.onPause();
        Log.d(msg,"we are on pause method");
    }


    @Override
    protected void onStop() {
        super.onStop();
        Log.d(msg,"we are on Stop method");
    }


    @Override
    protected void onRestart() {
        super.onRestart();
        Log.d(msg,"we are on Restart method");
    }


    @Override
    protected void onDestroy() {
        super.onDestroy();
        Log.d(msg,"we are on Destory method");


    }
}
```