

**PROGRAM NO:1**

**DATE:30/08/22**

## **LOGIN FORM**

**AIM:** Design a Login Form with username and password using LinearLayout and toast valid credentials

### **XML CODE:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    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:layout_marginTop="22dp"
        android:gravity="center"
        android:text="ENTER THE DETAILS"
        android:textSize="25sp"
        android:textStyle="bold"
        android:textColor="@color/black"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/txt1"
        android:layout_marginTop="25sp"
        android:textSize="25sp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="username"/>

    <EditText
        android:id="@+id/txt2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```

        android:ems="10"
        android:layout_marginTop="25sp"
        android:textSize="25sp"
        android:hint="password"
        android:inputType="textPassword" />

<Button
    android:id="@+id/btn1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:onClick="login"
    android:layout_marginTop="25dp"
    android:textStyle="bold"
    android:textSize="20sp"
    android:text="Login" />

</LinearLayout>

```

### **JAVA CODE:**

```

package com.example.loginapp;

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,e2;
    Button b1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1=findViewById(R.id.txt1);
        e2=findViewById(R.id.txt2);
        b1=findViewById(R.id.btn1);
    }

    public void login(View view) {

        String user = e1.getText().toString();
        String pass = e2.getText().toString();
    }
}

```

```

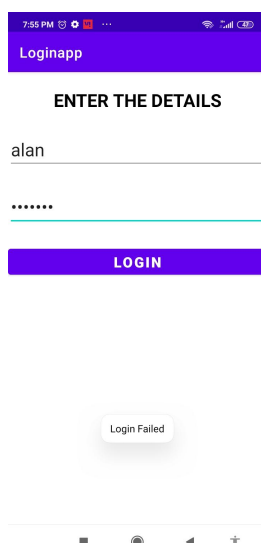
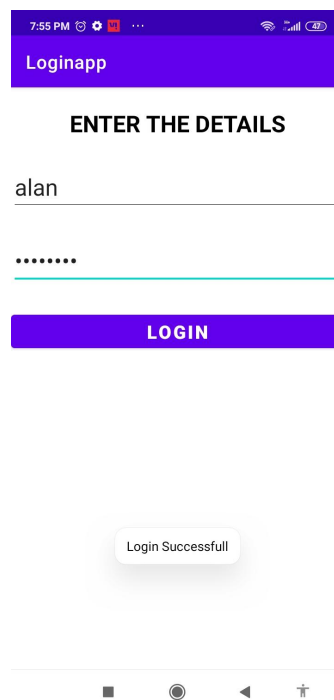
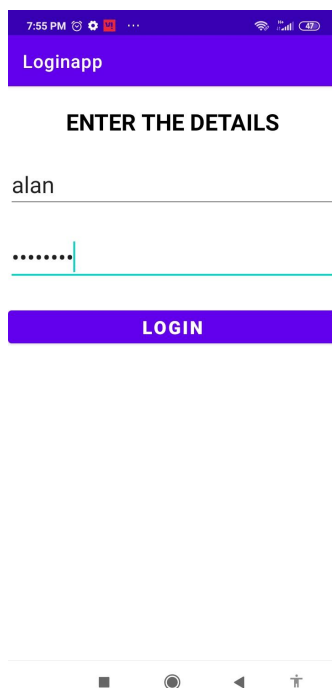
if (user.equals("alan") && pass.equals("alan@123")) {

    Toast.makeText(this, "Login Successfull", Toast.LENGTH_SHORT).show();

} else {
    Toast.makeText(this, "Login Failed", Toast.LENGTH_SHORT).show();
}
}
}

```

## OUTPUT



**PROGRAM NO:2**

**DATE:3/09/22**

### **ACTIVITY LIFECYCLE**

**AIM:**Write a program that demonstrates Activity Lifecycle

#### **XML CODE:**

```
<?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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

#### **JAVA CODE**

```
package com.example.lifecycle;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

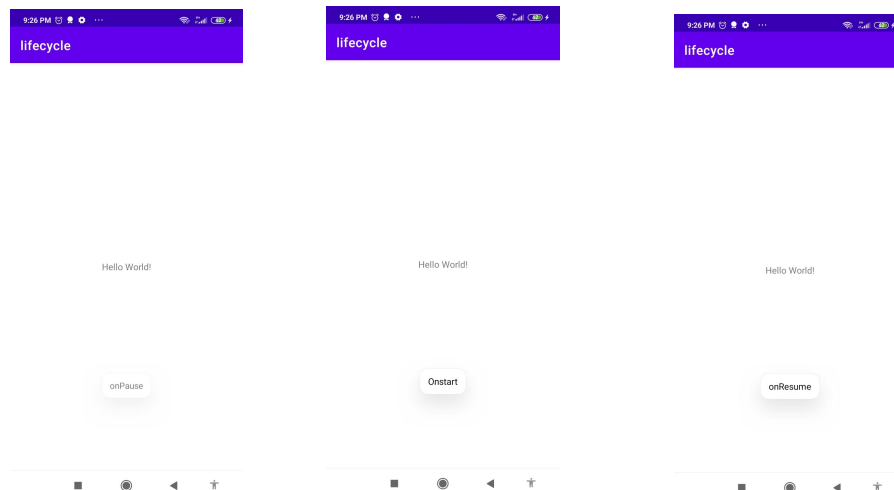
    @Override
    protected void onStart() {
        super.onStart();
```

```

Toast.makeText(this, "Onstart", Toast.LENGTH_SHORT).show();
}
@Override
protected void onResume(){
    super.onResume();
    Toast.makeText(this,"onResume",Toast.LENGTH_SHORT).show();
}
@Override
protected void onPause(){
    super.onPause();
    Toast.makeText(this,"onPause",Toast.LENGTH_SHORT).show();
}
@Override
protected void onStop(){
    super.onStop();
    Toast.makeText(this,"onStop",Toast.LENGTH_SHORT).show();
}
@Override
protected void onDestroy(){
    super.onDestroy();
    Toast.makeText(this,"onDestroy",Toast.LENGTH_SHORT).show();
}
}
}

```

## OUTPUT



**PROGRAM NO:3**

**DATE:10/09/22**

### **SIMPLE CALCULATOR**

**AIM:**Implementing basic arithmetic operations of a simple calculator

**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">

    <EditText
        android:id="@+id/first"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:layout_marginTop="30dp"
        android:hint="First Number" />

    <EditText
        android:id="@+id/second"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint="Second Number" />

    <EditText
        android:id="@+id/result"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint="Result" />

    <Button
        android:id="@+id/button"
        android:layout_width="140dp"
        android:layout_height="60dp"
        android:layout_gravity="center"
        android:layout_marginTop="30dp"
```

```
    android:textSize="15dp"
    android:onClick="add"
    android:textStyle="bold"
    android:text="+" />
```

```
<Button
    android:id="@+id/button2"
    android:layout_width="140dp"
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:textSize="15dp"
    android:onClick="sub"
    android:textStyle="bold"
    android:text="-" />
```

```
<Button
    android:id="@+id/button3"
    android:layout_width="140dp"
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:text="x"
    android:textSize="15dp"
    android:onClick="mult"
    android:textStyle="bold" />
```

```
<Button
    android:id="@+id/button4"
    android:layout_width="140dp"
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:textSize="15dp"
    android:onClick="div"
    android:textStyle="bold"
    android:text="/" />
```

```
</LinearLayout>
```

### **JAVA CODE**

```
package com.example.simplecalculator;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
```

```

EditText f,s,r;
double ans;
String answ;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    f=findViewById(R.id.first);
    s=findViewById(R.id.second);
    r=findViewById(R.id.result);
}

public void add(View view) {
    double a=Integer.parseInt(f.getText().toString());
    double b=Integer.parseInt(s.getText().toString());
    ans=a+b;
    r.setText(String.valueOf(ans));
}

public void mult(View view) {
    double a=Integer.parseInt(f.getText().toString());
    double b=Integer.parseInt(s.getText().toString());
    ans=a*b;
    r.setText(String.valueOf(ans));
}

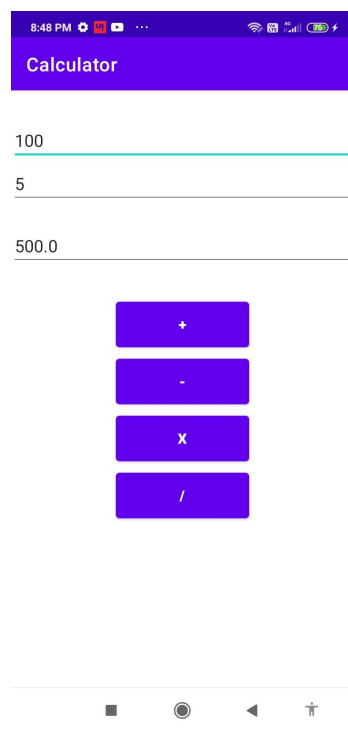
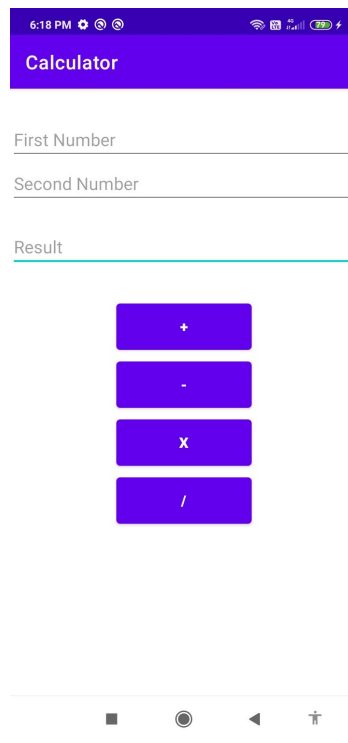
public void div(View view) {
    double a=Integer.parseInt(f.getText().toString());
    double b=Integer.parseInt(s.getText().toString());
    ans=a/b;
    r.setText(String.valueOf(ans));
}

public void sub(View view) {
    double a=Integer.parseInt(f.getText().toString());
    double b=Integer.parseInt(s.getText().toString());
    ans=a-b;
    r.setText(String.valueOf(ans));
}
}

```

## **OUTPUT**





**PROGRAM NO:4**

**DATE:20/09/22**

## **FORM VALIDATION**

**AIM:**Implement validations on various UI controls

### **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">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:layout_marginTop="10dp"
        android:orientation="horizontal">

        <EditText
            android:id="@+id/first"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:ems="10"
            android:inputType="textPersonName"
            android:hint="First name" />

        <EditText
            android:id="@+id/last"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:ems="10"
            android:inputType="textPersonName"
            android:hint="Last name" />
    </LinearLayout>

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

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

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Email"
        android:inputType="textEmailAddress" />

<EditText
    android:id="@+id/password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Password"
    android:inputType="textPassword" />

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="15dp"
    android:orientation="horizontal">

    <RadioGroup
        android:id="@+id/group"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <RadioButton
            android:id="@+id/male"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Male" />

        <RadioButton
            android:id="@+id/female"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Female" />

        <RadioButton
            android:id="@+id/other"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Other" />
    </RadioGroup>

</LinearLayout>

<LinearLayout

```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"
        android:orientation="horizontal">

        <EditText
            android:id="@+id/date"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:hint="date"
            android:ems="10"
            android:inputType="date" />

        <Button
            android:id="@+id/datebutton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="select" />
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="25dp"
        android:orientation="vertical">

        <CheckBox
            android:id="@+id/checkbox"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="I agree to the terms and conditions" />
    </LinearLayout>

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

        <Button
            android:id="@+id/regbutton"
            android:layout_width="150dp"
            android:layout_gravity="center"
            android:layout_height="wrap_content"
            android:onClick="register"

            android:text="register" />
    </LinearLayout>

```

</LinearLayout>

</LinearLayout>

### **JAVA CODE**

```
package com.example.registrationvalidate;

import androidx.appcompat.app.AppCompatActivity;

import android.app.DatePickerDialog;
import android.os.Bundle;
import android.provider.MediaStore;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.view.View;
import android.widget.Toast;
import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

    EditText first,last,dob,pass,email,datetext;
    RadioButton male,female,other;
    CheckBox c;
    RadioGroup g;
    Boolean val;
    public DatePickerDialog datepicker;
    Button pickdate;
    int day,month,year;

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

        first=findViewById(R.id.first);
        last=findViewById(R.id.last);
        email=findViewById(R.id.email);
        dob=findViewById(R.id.date);
        pass=findViewById(R.id.password);
        male=findViewById(R.id.male);
        female=findViewById(R.id.female);
        other=findViewById(R.id.other);
        g=findViewById(R.id.group);
        c=findViewById(R.id.checkbox);
```

```

datetext=findViewById(R.id.date);
pickdate=findViewById(R.id.datebutton);
pickdate.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Calendar calendar=Calendar.getInstance();
        day=calendar.get(Calendar.DAY_OF_MONTH);
        month=calendar.get(calendar.MONTH);
        year=calendar.get(Calendar.YEAR);
        datepicker=new DatePickerDialog(MainActivity.this,new
            DatePickerDialog.OnDateSetListener() {
                @Override
                public void onDateSet(DatePicker datePicker, int day, int month, int year) {
                    datetext.setText(day+"/"+(month+1)+"/"+year);
                }
            },year,month,day);
        datepicker.show();
    }
});
}

public void register(View view) {
    val=validate();
    if(val)
    {
        Toast.makeText(this, "Registered Successfull", Toast.LENGTH_SHORT).show();
    }
}

private boolean validate() {
    if(email.length() == 0) {
        email.setError("required");
    }
    else
    {
        String s_email=email.getText().toString();
        String checkmail="[a-zA-Z0-9._-]+@[a-z].[a-z]+";
        if(!s_email.matches(checkmail)) {
            email.setError("Invalid email");
            return false;
        }
    }
}

if(pass.length()==0)
{
    pass.setError("Required");
}
else if(pass.length()<8) {
    pass.setError("password must be minimum 8 characters");
}

```

```

    }

    if(last.length()==0)
    {
        last.setError("Required");
        return false;
    }

    if(first.length()==0)
    {
        first.setError("Required");
        return false;
    }

    if(dob.length()==0)
    {
        dob.setError("Required");
        return false;
    }
    if(g.getCheckedRadioButtonId()==-1)
    {
        other.setError("Select gender");
        other.requestFocus();
        return false;
    }
    if(!c.isChecked())
    {
        c.setError("Please agree");
        c.requestFocus();
        return false;
    }
    return true;
}
}

```

## OUTPUT