

PROGRAM NO: 1

DATE: 30/08/22

LOGIN FORM

AIM

Design a Login Form with username and password using Linear Layout and toast valid credentials

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"
    >

    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="729dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="1dp"
        tools:layout_editor_absoluteY="1dp"
        tools:ignore="MissingConstraints">

        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="E-mail"
            android:fontFamily="sans-serif"
            android:textStyle="bold"
            />
```

```
<EditText
    android:id="@+id/ET_email"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPassword" />

<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Password"
    android:fontFamily="sans-serif"
    android:textStyle="bold"
    />

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

<Button
    android:id="@+id/btn_id"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:onClick="click"
    android:text="LOGIN" />

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

JAVA CODE

```
package com.example.pp;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

    EditText ETemail, ETpswd;
    Button btnlogin;

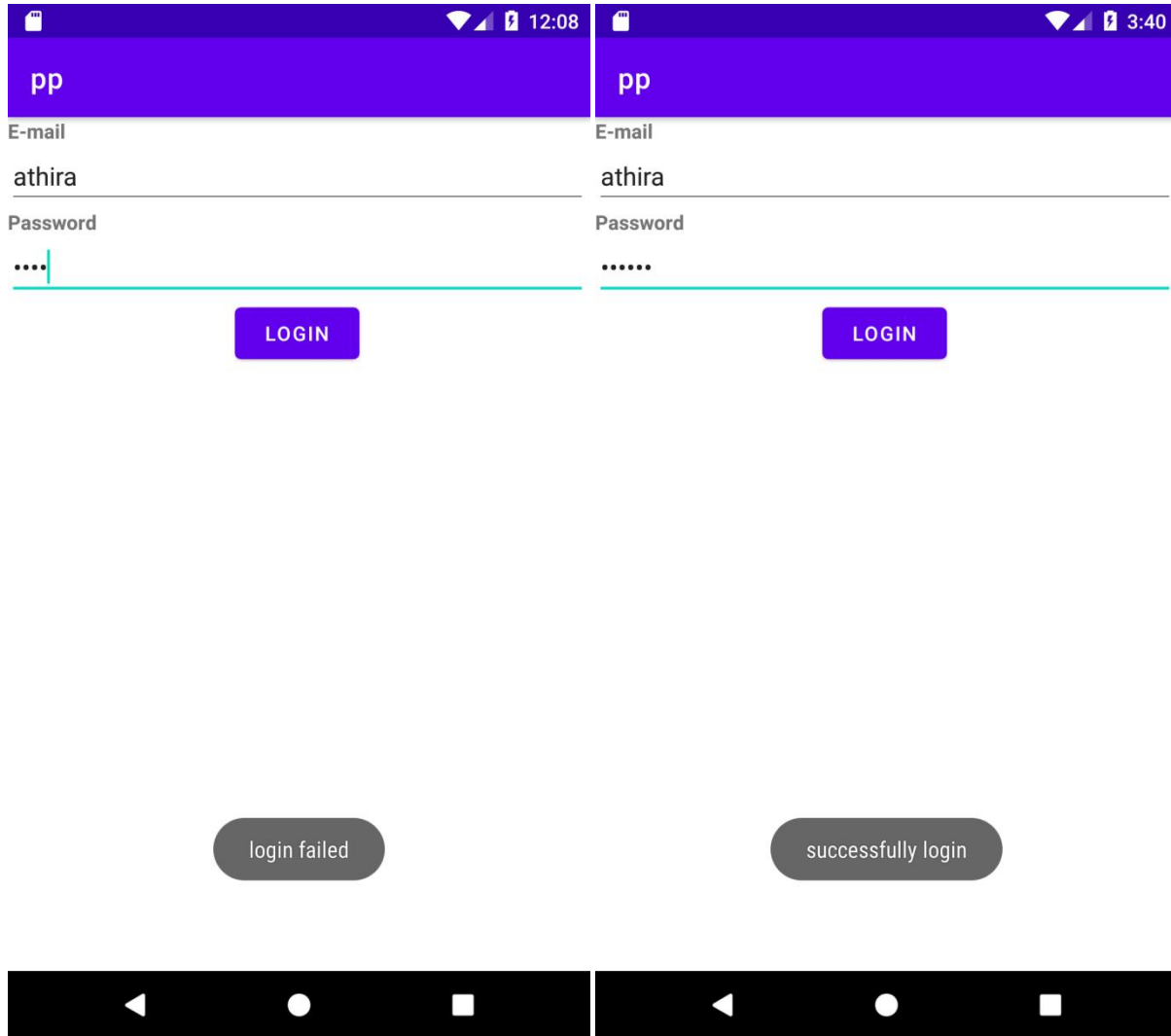
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        ETemail=findViewById(R.id.ET_email);
        ETpswd=findViewById(R.id.ET_pswd);
        btnlogin=findViewById(R.id.btn_id);

    }

    public void click(View view) {
        String s1=ETemail.getText().toString();
        String s2=ETpswd.getText().toString();
        if(s1.equals("athira") && s2.equals("athira"))
        {
            Toast.makeText(this, "successfully login",
Toast.LENGTH_SHORT).show();
        }
        else
            Toast.makeText(this, "login failed", Toast.LENGTH_SHORT).show();
    }
}
```

Output



PROGRAM NO: 2

DATE: 03/09/22

ACTIVITY LIFECYCLE

AIM

Write a program that demonstrates Activity Lifecycle XML CODE

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="Stage!"
        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.stage;

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);
        Toast.makeText(this, "onCreate", Toast.LENGTH_SHORT).show();
    }

    @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 onRestart() {
        super.onRestart();
        Toast.makeText(this, "onRestart", Toast.LENGTH_SHORT).show();
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        Toast.makeText(this, "onDestroy", Toast.LENGTH_SHORT).show();
    }
}
```

output



Stage!

onResume



Stage!

onRestart



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"?>
<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">

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

        <EditText
            android:id="@+id/ETn1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:hint="NUM 1"
            android:inputType="textPersonName" />

        <EditText
            android:id="@+id/ETn2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:hint="NUM 2"
            android:inputType="textPersonName" />
```



```

<EditText
    android:id="@+id/res"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="RESULT"
    android:inputType="textPersonName" />

<Button
    android:id="@+id/button7"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="sum"
    android:text="ADD" />

<TableRow
    android:layout_width="match_parent"
    android:layout_height="match_parent" >

    <Button
        android:id="@+id/button8"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="sub"
        android:text="SUB" />

    <Button
        android:id="@+id/button9"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="mul"
        android:text="multi" />

    <Button
        android:id="@+id/button10"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="div"
        android:text="DIV" />
</TableRow>

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

```

JAVA CODE

```
package com.example.calculator;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    EditText Etn1,Etn2;
    Button add,sub,mul,div;
    TextView res;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Etn1=findViewById(R.id.Etn1);
        Etn2=findViewById(R.id.Etn2);
        res=findViewById(R.id.res);
        add=findViewById(R.id.button7);
        sub=findViewById(R.id.button8);
        mul=findViewById(R.id.button9);
        div=findViewById(R.id.button10);

    }

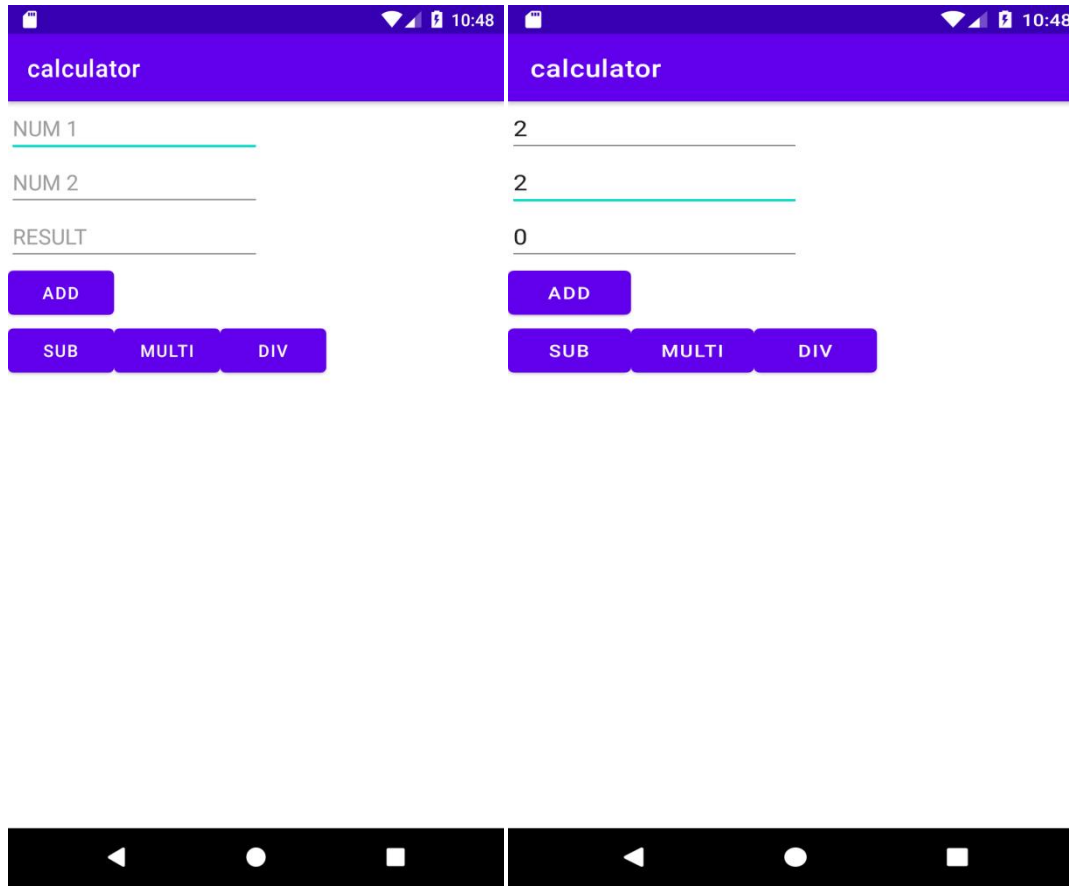
    public void sum(View view) {
        int n1=Integer.parseInt(Etn1.getText().toString());
        int n2=Integer.parseInt(Etn2.getText().toString());
        int sum=n1+n2;
        res.setText(sum+"");
    }

    public void sub(View view) {
        int n1=Integer.parseInt(Etn1.getText().toString());
        int n2=Integer.parseInt(Etn2.getText().toString());
        int sub=n1-n2;
        res.setText(sub+"");
    }

    public void mul(View view) {
        int n1=Integer.parseInt(Etn1.getText().toString());
        int n2=Integer.parseInt(Etn2.getText().toString());
        int mul=n1*n2;
        res.setText(mul+"");
    }

    public void div(View view) {
        int n1=Integer.parseInt(Etn1.getText().toString());
        int n2=Integer.parseInt(Etn2.getText().toString());
        int div=n1/n2;
        res.setText(div+"");
    }
}
```

output



PROGRAM NO :0 4

DATE: 20/09/22

FORM VALIDATION

AIM

Implement validations on various UI controls

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"
    android:background="#F4EEDC"
    tools:context=".MainActivity">

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

        <TextView
            android:id="@+id/textView3"
            android:layout_width="match_parent"
            android:layout_height="32dp"
            android:background="#C2CC62"
            android:gravity="center"
            android:text="Enter The Details for Registrarion" />

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

            <TableRow
                android:layout_width="match_parent"
                android:layout_height="wrap_content">

                <EditText
                    android:id="@+id/FN1"
```

```

        android:layout_width="187dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="    First_name"
        android:inputType="textPersonName" />

        <EditText
            android:id="@+id/LN1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:hint="    Last_name"
            android:inputType="textPersonName" />

    </TableRow>
</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="    Enter your email"
        android:inputType="textEmailAddress" />

    <RadioGroup
        android:id="@+id/radio"
        android:layout_width="match_parent"
        android:layout_height="49dp"
        android:orientation="horizontal">

        <RadioButton
            android:id="@+id/RB1"
            android:layout_width="129dp"
            android:layout_height="wrap_content"
            android:text="Male" />

        <RadioButton
            android:id="@+id/RB2"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:text="Female" />

        <RadioButton
            android:id="@+id/RB3"
            android:layout_width="127dp"
            android:layout_height="wrap_content"
            android:text="other" />

    </RadioGroup>

</LinearLayout>

```

```

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

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="56dp" >

            <EditText
                android:id="@+id/DOB"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:ems="10"
                android:hint="Date of Birth"
                android:inputType="date" />

            <TextView
                android:id="@+id/textView5"
                android:layout_width="250dp"
                android:layout_height="wrap_content"
                android:text="SELECT DATE"
                android:textStyle="bold"/>

        </TableRow>

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

        <CheckBox
            android:id="@+id/checkBox"
            android:layout_width="251dp"
            android:layout_height="wrap_content"
            android:text="Agree?Privacy and Ploicy" />

        <Button
            android:id="@+id/buttonID"
            android:layout_width="wrap_content"
            android:layout_height="73dp"
            android:layout_gravity="center"
            android:backgroundTint="#9AA621"
            android:onClick="submit"
            android:text="REGISTER" />
    </LinearLayout>
</LinearLayout>

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

```

JAVA FILE

```
package com.example.registration;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
    EditText fname, lname, email, pswd, dob;
    RadioButton male, female, other;
    TextView sdate;
    Button register;
    CheckBox check;
    RadioGroup fm_gender;

    boolean isallchceked=false;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        fname=findViewById(R.id.FN1);
        lname=findViewById(R.id.LN1);
        email=findViewById(R.id.email);
        pswd=findViewById(R.id.PSWD);
        dob=findViewById(R.id.DOB);
        male=findViewById(R.id.RB1);
        female=findViewById(R.id.RB2);
        other=findViewById(R.id.RB3);
        sdate=findViewById(R.id.textView3);
        register=findViewById(R.id.buttonID);
        check=findViewById(R.id.checkBox);
        fm_gender=findViewById(R.id.radio);
    }

    public void submit(View view) {
        isallchceked=checkAllFields();
        if(isallchceked){
            Toast.makeText(this, "registered successfully",
Toast.LENGTH_SHORT).show();
        }
    }

    private boolean checkAllFields() {
        if (fname.length() == 0) {
```

```

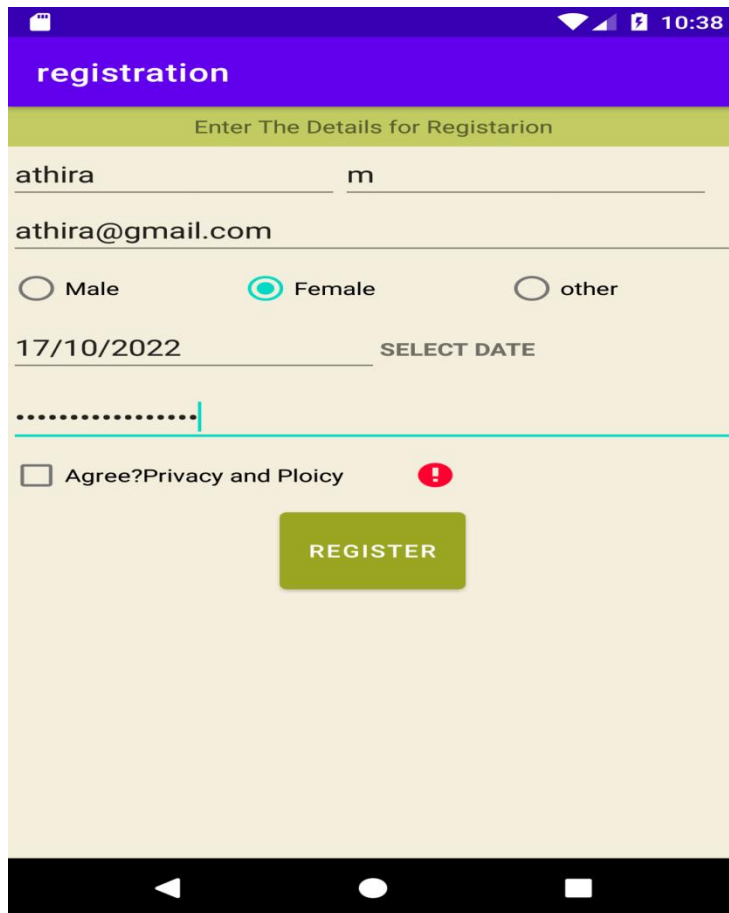
        fname.setError("* required");
        return false;
    }
    if (lname.length() == 0) {
        lname.setError("* required");
        return false;
    }
    if (email.length() == 0) {
        email.setError("* required");
        return false;
    }
    else {
        String s_email = email.getText().toString();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

    if (pswd.length() == 0) {
        pswd.setError("*required");
        return false;
    }
    else if (pswd.length() < 8) {
        pswd.setError("password must be minimum 8 characters");
        return false;
    }
    if(!check.isChecked()){
        check.setError("please agree");
        check.requestFocus();
        return false;
    }
    if(fm_gender.getCheckedRadioButtonId() == -1){
        other.setError("select gender");
        other.requestFocus();
        return false;
    }

    return true;
}
}

```


Output



The screenshot shows a mobile application interface for a registration form. At the top, there is a purple header bar with the word "registration" in white. Below this is a light green bar with the text "Enter The Details for Registrarion". The form itself is on a light beige background. It contains several input fields: a first name field with "athira", a last name field with "m", an email field with "athira@gmail.com", a date field with "17/10/2022" and a "SELECT DATE" button, and a password field with a masked input ".....". There are three radio buttons for gender: "Male", "Female" (which is selected with a blue dot), and "other". Below the gender options is a checkbox labeled "Agree?Privacy and Ploicy" with a red exclamation mark icon to its right. At the bottom of the form is a green "REGISTER" button. The entire form is framed by a black border, and the bottom of the screen shows the standard Android navigation bar.

registration

Enter The Details for Registrarion

athira m

athira@gmail.com

☐ Male ☒ Female ☐ other

17/10/2022 SELECT DATE

.....

☐ Agree?Privacy and Ploicy !

REGISTER