

CO1 - PROGRAM

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"?>
<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">

    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="729dp"
        android:gravity="center"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="16dp"
        tools:layout_editor_absoluteY="1dp">

        <TextView
            android:id="@+id/textView5"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="center"
            android:text="LOGIN"
            android:textAppearance="@style/TextAppearance.AppCompat.Display2"
            android:textColor="@color/black"
            android:textColorHighlight="@color/black"
            android:textColorHint="@color/black"
            android:textColorLink="@color/black"
            android:textStyle="bold"
            tools:text="LOGIN" />

        <TextView
            android:id="@+id/textView3"
            android:layout_width="375dp"
```

```
android:layout_height="59dp"
android:gravity="left"
android:text="USER NAME"
android:textColor="#070707"
android:textColorHighlight="#0C0000"
android:textColorHint="#070000"
android:textColorLink="#0B0000" />
```

```
<EditText
    android:id="@+id/editTextTextPersonName"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName" />
```

```
<TextView
    android:id="@+id/textView4"
    android:layout_width="361dp"
    android:layout_height="65dp"
    android:text="PASSWORD"
    android:textColor="#0E0D0D"
    android:textColorHighlight="#131111"
    android:textColorHint="#100F0F"
    android:textColorLink="#0E0D0D" />
```

```
<EditText
    android:id="@+id/editTextTextPassword"
    android:layout_width="220dp"
    android:layout_height="57dp"
    android:ems="10"
    android:inputType="textPassword"
    android:textSize="24sp" />
```

```
<Button
    android:id="@+id/button"
    style="@style/Widget.Material3.Button"
    android:layout_width="170dp"
    android:layout_height="wrap_content"
    android:backgroundTint="#09554E"
    android:foregroundGravity="right"
    android:gravity="center"
    android:onClick="click"
    android:shadowColor="#2FD3E8"
    android:text="LOGIN"
    android:textSize="20sp"
    android:visibility="visible"
    app:iconTint="@color/teal_200"
    app:rippleColor="#00BCD4"
    app:strokeColor="#21E6CF"
    tools:text="LOGIN"
```

```
        tools:visibility="visible" />

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

JAVA CODE

```
package com.example.myapplication;
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;

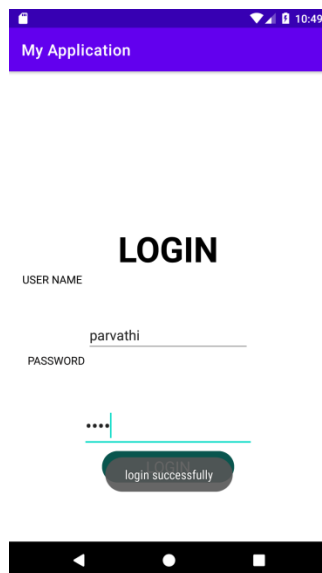
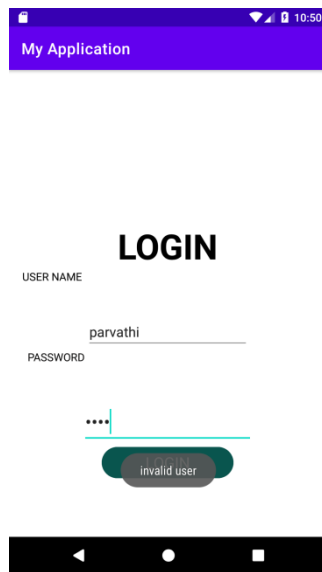
public class MainActivity extends AppCompatActivity {
    EditText E_username,E_password;
    Button btn_login;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toast.makeText(this,"onCreate",Toast.LENGTH_LONG).show();
        E_username=findViewById(R.id.editTextTextPersonName);
        E_password=findViewById(R.id.editTextTextPassword);
        btn_login=findViewById(R.id.button);

    }

    public void click(View view) {
        String s1=E_username.getText().toString();
        String s2=E_password.getText().toString();
        if(s1.equals("parvathi") && s2.equals("paru"))
        {
            Toast.makeText(this,"login successfully",
                Toast.LENGTH_SHORT).show();
        }
        else
        {
            Toast.makeText(this,"invalid user",
                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 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.myapplication;

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 onPause()
    {
        super.onPause();
        Toast.makeText(this,"onPause", Toast.LENGTH_SHORT).show();

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

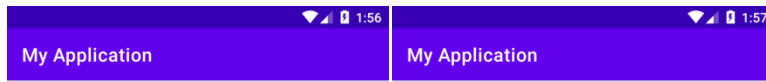
    }
    @Override
    protected void onResume()
    {
        super.onResume();
        Toast.makeText(this,"onResume", Toast.LENGTH_SHORT).show();

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

    }
    @Override
    public void onStop()
    {
        super.onStop();
        Toast.makeText(this,"onStop", Toast.LENGTH_SHORT ).show();

    }
    }}
```

OUTPUT



Hello World!

Hello World!

onCreate

onStart



Hello World!

onResume



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="409dp"
    android:layout_height="729dp"
    android:gravity="center"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <TextView
        android:id="@+id/textView4"
        android:layout_width="251dp"
        android:layout_height="52dp"
        android:background="#2365AC"
        android:backgroundTint="#2446F3"
        android:gravity="center"
        android:text="ADDITION"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        tools:text="ADDITION" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="59dp"
        android:text="number1"
        android:textColor="#151414"
        android:textColorHighlight="#0E0101"
        android:textColorHint="#0E0000"
        android:textColorLink="#040000"
```

```
        android:textSize="24sp"
        android:textStyle="bold" />

<EditText
    android:id="@+id/editTextTextPersonName2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="number|textPersonName" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:text="number2"
    android:textColor="#120101"
    android:textColorHighlight="#0C0000"
    android:textColorHint="#100000"
    android:textColorLink="#0B0000"
    android:textSize="24sp"
    android:textStyle="bold" />

<EditText
    android:id="@+id/editTextTextPersonName3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="number|textPersonName" />

<Button
    android:id="@+id/button"
    android:layout_width="184dp"
    android:layout_height="wrap_content"
    android:background="#D11616"
    android:backgroundTint="#D82C2C"
    android:backgroundTintMode="add"
    android:onClick="sum"
    android:text="submit"
    app:strokeColor="#BD1C1C" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="match_parent"
    android:layout_height="32dp"
    android:gravity="center"
    android:text="result"
    android:textSize="24sp"
    android:textStyle="bold" />
```

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

JAVA CODE

```
package com.example.myapplication;
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 numb1,numb2;
    Button btn;
    TextView resu;

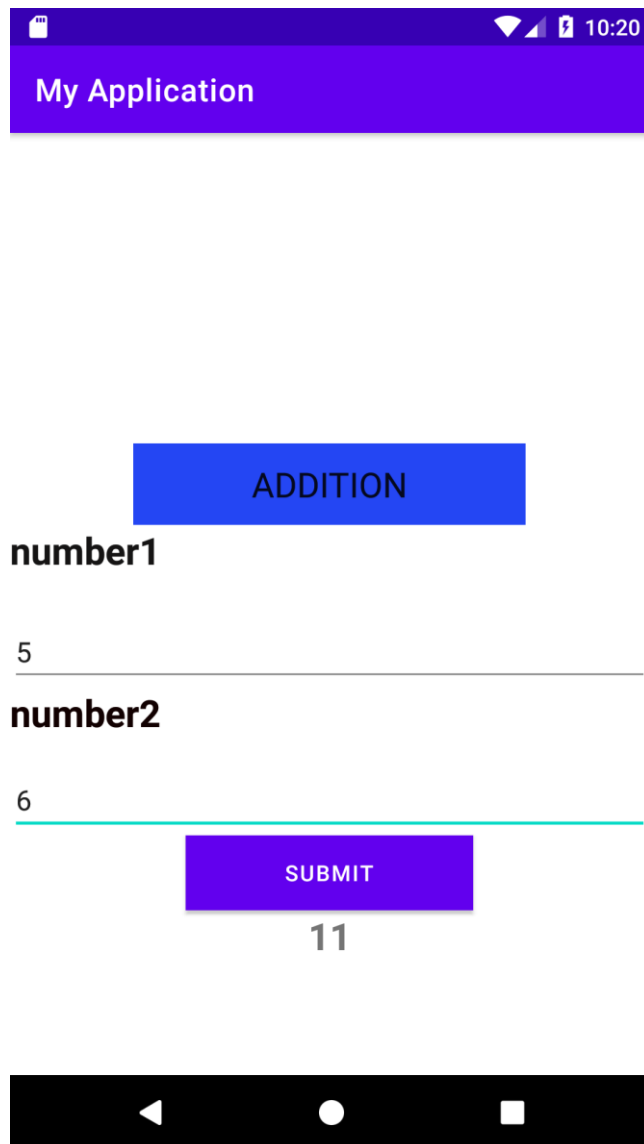
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        numb1=findViewById(R.id.editTextTextPersonName2) ;
        numb2=findViewById(R.id.editTextTextPersonName3);
        btn=findViewById(R.id.button);
        resu = findViewById(R.id.textView3);

    }

    public void sum(View view) {
        int n1=Integer.parseInt(String.valueOf(numb1.getText()));
        int n2=Integer.parseInt(String.valueOf(numb2.getText()));
        int sum = n1 + n2;

        resu.setText(sum + "");
    }
}
```

OUTPUT



The screenshot shows an Android application titled "My Application". It features a blue button labeled "ADDITION". Below this, there are two input fields: "number1" with the value "5" and "number2" with the value "6". A red "SUBMIT" button is positioned below the inputs. The result "11" is displayed below the submit button. At the bottom, there is a black navigation bar with three white icons: a back arrow, a home circle, and a recent apps square.

My Application

ADDITION

number1

5

number2

6

SUBMIT

11

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"?>
<androidx.appcompat.widget.LinearLayoutCompat
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:id="@+id/textView2"
            android:layout_width="match_parent"
            android:layout_height="66dp"
            android:background="#728BD5"
            android:text="Enter the details for rgistration"
            android:textAlignment="center"
            android:textColor="#F6F5F5"
            android:textColorHighlight="#F8F0F0"
            android:textColorHint="#F8F6F6"
            android:textColorLink="#FAF8F8"
            android:textSize="24sp" />
```

```
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="66dp"
            android:orientation="horizontal">
```

```
            <EditText
```

```
    android:id="@+id/editTextTextPersonName4"
    android:layout_width="195dp"
    android:layout_height="74dp"
    android:layout_weight="1"
    android:ems="10"
    android:hint="First Name"
    android:inputType="textPersonName"
    android:textColorHint="#000000" />
```

```
<EditText
    android:id="@+id/editTextTextPersonName5"
    android:layout_width="wrap_content"
    android:layout_height="73dp"
    android:layout_weight="1"
    android:ems="10"
    android:hint="Last Name"
    android:inputType="textPersonName"
    android:textColorHint="#050303" />
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="563dp"
    android:orientation="vertical">
```

```
<EditText
    android:id="@+id/editTextTextEmailAddress9"
    android:layout_width="match_parent"
    android:layout_height="75dp"
    android:ems="10"
    android:hint="Enter Your Email"
    android:inputType="textEmailAddress"
    android:textColor="#050505"
    android:textColorHighlight="#070606"
    android:textColorHint="#050505"
    android:textColorLink="#050505"
    android:textStyle="normal" />
```

```
<RadioGroup
    android:id="@+id/rg"
    android:layout_width="match_parent"
    android:layout_height="77dp">
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="61dp"
    android:orientation="horizontal">
```

```
<TextView
```

```
    android:id="@+id/textView6"
    android:layout_width="80dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#007ED11F"
    android:hint="Gender"
    android:text="Gender"
    android:textColor="@color/black"
    android:textColorHighlight="#0C0C0C"
    android:textColorHint="#0E0D0D"
    android:textColorLink="#0C0A0A"
    android:textSize="16sp"
    android:textStyle="normal"
    tools:text="Gender" />
```

```
<RadioButton
    android:id="@+id/radioButton3"
    android:layout_width="91dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:text="male" />
```

```
<RadioButton
    android:id="@+id/radioButton4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:text="female" />
```

```
<RadioButton
    android:id="@+id/radioButton5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:text="others" />
```

```
</LinearLayout>
</RadioGroup>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="117dp"
    android:orientation="horizontal">
```

```
<TextView
    android:id="@+id/textView3"
    android:layout_width="195dp"
    android:layout_height="57dp"
    android:layout_weight="1"
    android:hint="Date OF Birth"
    android:text="Date Of Birth"
```

```
        android:textColorHighlight="#050000"
        android:textColorHint="#050000"
        android:textSize="16sp"
        android:textStyle="normal"
        tools:text="Date Of Birth" />

<EditText
    android:id="@+id/editTextDate"
    android:layout_width="wrap_content"
    android:layout_height="76dp"
    android:layout_weight="1"
    android:ems="10"
    android:hint="select Date"
    android:inputType="date" />
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="86dp"
    android:orientation="vertical">

    <EditText
        android:id="@+id/editTextTextPassword"
        android:layout_width="match_parent"
        android:layout_height="66dp"
        android:ems="10"
        android:hint="Enter Password"
        android:inputType="textPassword"
        android:textColorHint="#0B0A0A" />
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="67dp"
        android:orientation="horizontal">

        <CheckBox
            android:id="@+id/checkBox"
            android:layout_width="263dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Agree...?" />

        <TextView
            android:id="@+id/textView4"
            android:layout_width="357dp"
            android:layout_height="41dp"
            android:layout_weight="1"
            android:text="Privacy and Policy"
            android:textColor="#08E0FB"
```



```

        android:textColorHighlight="#00BCD4"
        android:textColorHint="#00BCD4"
        tools:text="Privacy and Policy" />
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:layout_gravity="center"
        android:gravity="center"
        android:orientation="vertical">

        <Button
            android:id="@+id/button2"
            android:layout_width="257dp"
            android:layout_height="wrap_content"
            android:background="#181916"
            android:backgroundTint="#12150E"
            android:foregroundTint="#1A1C18"
            android:hapticFeedbackEnabled="true"
            android:onClick="submit"
            android:shadowColor="#1F221B"
            android:text="submit"
            android:textColor="#F8FBF3"
            android:textColorHighlight="#F8FBF5"
            android:textColorHint="#FBFFF6"
            android:textColorLink="#8BC34A"
            android:visibility="visible"
            app:iconTint="#232521"
            app:strokeColor="#0A0B09"
            tools:ignore="OnClick"
            tools:text="Button" />
        </LinearLayout>

    </LinearLayout>

</LinearLayout>

</androidx.appcompat.widget.LinearLayoutCompat>

```

JAVA CODE

```

package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
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<radiogroup> extends AppCompatActivity {
    EditText fn,ln,mail,pass,dob;
    TextView reg,gen,date;
    Button sub;
    RadioButton m,f,o;
    RadioGroup rg;
    CheckBox ch;
    Boolean isAllfieldschecked;
    private Object RadioGroup;

    @SuppressWarnings("WrongViewCast")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        fn=findViewById(R.id.editTextTextPersonName4);
        ln=findViewById(R.id.editTextTextPersonName5);
        mail=findViewById(R.id.editTextTextEmailAddress9);
        pass=findViewById(R.id.editTextTextPassword);
        dob=findViewById(R.id.editTextDate);
        reg=findViewById(R.id.textView2);
        gen=findViewById(R.id.textView6);
        date=findViewById(R.id.textView3);
        ch=findViewById(R.id.checkBox);
        RadioGroup=findViewById(R.id.rg);
        sub=findViewById(R.id.button2);
        m=findViewById(R.id.button2);
        f=findViewById(R.id.button2);
        o=findViewById(R.id.button2);

    }

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

    private Boolean checkAllFields() {
        if(fn.length()==0)
        {

```

```

        fn.setError("This field is required");
        return false;
    }
    if(ln.length()==0)
    {
        ln.setError("This field is required");
        return false;
    }
    if(dob.length()==0)
    {
        dob.setError("This field is required");
        return false;
    }
    if(mail.length()==0)
    {
        mail.setError("This field is required");
        return false;
    }
    else
    {
        String sn=mail.getText().toString();
        String checkm="[a-zA-Z0-9.-_]+@[a-z]+.[a-z]";
        if(!sn.matches(checkm))
        {
            mail.setError("invalid email");
            return false;
        }
    }
    if(pass.length()==0)
    {
        pass.setError("This field is required");
        return false;
    }
    else if(pass.length()<8)
    {
        pass.setError("required parameters");
        return false;
    }
    if(rg.getCheckedRadioButtonId()==-1)
    {
        o.setError("select gender");
        o.requestFocus();
        return false;
    }
    if(ch.isClickable())
    {
        ch.setError("please agree");
        ch.requestFocus();
        return false;
    }

```

```
}  
    return true;  
  
}  
}
```

OUTPUT

The image displays two side-by-side screenshots of a web registration form titled "Enter the details for rgistration".

Left Screenshot (Empty Form):

- First Name:** Input field.
- Last Name:** Input field.
- Enter Your Email:** Input field.
- Gender:** Radio buttons for ☐ male, ☐ female, and ☐ others.
- Date Of Birth:** Input field with placeholder text "select Date".
- Enter Password:** Input field.
- Agree...?:** A checkbox followed by a link "Privacy and Policy".
- Button:** A blue button labeled "BUTTON".

Right Screenshot (Filled Form):

- First Name:** PARVATHI
- Last Name:** PADMESWARAN
- Enter Your Email:** parvathi@gmail.com
- Gender:** ☒ male, ☐ female, ☐ others
- Date Of Birth:** 18-04-2000
- Enter Password:** (Field is present but content is not visible)
- Agree...?:** ☐ Agree...? [Privacy and Policy](#)
- Button:** A blue button labeled "BUTTON".