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"
```

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```
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();
                                                                               Page:2
```

```
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
                                                     Loginapp
     Loginapp
                                                        ENTER THE DETAILS
        ENTER THE DETAILS
                                                    alan
    alan
                                                              LOGIN
              LOGIN
                                                             Login Successfull
         ENTER THE DETAILS
      alan
            LOGIN
                                                                                  Page:3
```

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</p>
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();
```

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```
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

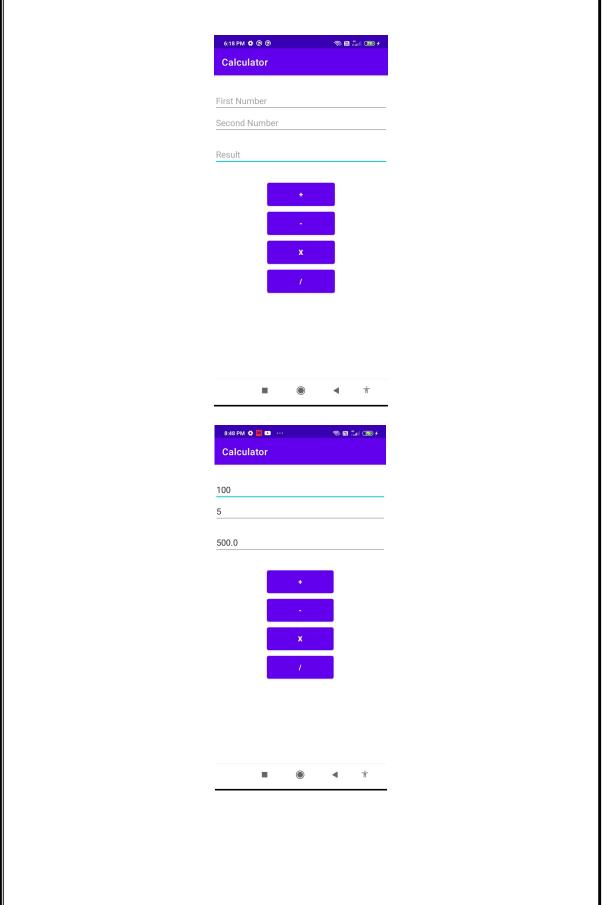
XML CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  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"
                                                                              Page:6
```

```
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 {
                                                                              Page:7
```

```
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"</p>
  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"
                                                                             Page:10
```

```
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
                                                                        Page:11
```

```
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>
                                                                           Page:12
```

```
</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);
                                                                              Page:13
```

```
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=newDatePickerDialog(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");
                                                                             Page:14
```

```
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
First name Last name
                                    aanbaby@gmail.com
Password
Male Female Other
                                    ○ Male ○ Female ○ Other
                                    2022/10/20
☐ I agree to the terms and conditions
                                           REGISTER
                                                                                           Page:15
```