Develop an Android application program to calculate age based on given date of birth and current date..

mainActiviy.xml

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

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

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp"

tools:context=".MainActivity">

<DatePicker

android:id="@+id/datePicker"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerHorizontal="true" />

<Button

android:id="@+id/calculateButton"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@id/datePicker"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="16dp"

android:text="Calculate Age" />

<TextView

android:id="@+id/resultTextView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@id/calculateButton"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="16dp"

android:text=""

android:textSize="20sp" />

</RelativeLayout>

mainActivity.java

package com.example.myapplication;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.DatePicker;

import android.widget.TextView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

private DatePicker datePicker;

private Button calculateButton;

private TextView resultTextView;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

datePicker = findViewById(R.id.datePicker);

calculateButton = findViewById(R.id.calculateButton);

resultTextView = findViewById(R.id.resultTextView);

calculateButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

calculateAge();

}

});

}

private void calculateAge() {

int day = datePicker.getDayOfMonth();

int month = datePicker.getMonth();

int year = datePicker.getYear();

Calendar dob = Calendar.getInstance();

dob.set(year, month, day);

Calendar today = Calendar.getInstance();

int age = today.get(Calendar.YEAR) - dob.get(Calendar.YEAR);

if (today.get(Calendar.DAY\_OF\_YEAR) < dob.get(Calendar.DAY\_OF\_YEAR)) {

age--;

}

String result = "Your age is: " + age + " years";

resultTextView.setText(result);

}

}

Develop a basic calculator android application.

MainActivity.xml

<?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">

<EditText

android:id="@+id/editTextNumber"

android:layout\_width="241dp"

android:layout\_height="63dp"

android:ems="10"

android:inputType="number"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.164" />

<EditText

android:id="@+id/editTextNumber2"

android:layout\_width="240dp"

android:layout\_height="62dp"

android:ems="10"

android:inputType="number"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.497"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.297" />

<Button

android:id="@+id/button"

android:layout\_width="115dp"

android:layout\_height="58dp"

android:onClick="Add"

android:text="ADD"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.449" />

<Button

android:id="@+id/button2"

android:layout\_width="113dp"

android:layout\_height="53dp"

android:layout\_marginTop="16dp"

android:onClick="Subtract"

android:text="Subtract"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/button" />

<Button

android:id="@+id/button3"

android:layout\_width="114dp"

android:layout\_height="55dp"

android:layout\_marginTop="12dp"

android:onClick="Multiply"

android:text="Multiply"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/button2" />

<Button

android:id="@+id/button4"

android:layout\_width="116dp"

android:layout\_height="57dp"

android:layout\_marginTop="24dp"

android:onClick="Divide"

android:text="Division"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/button3" />

<EditText

android:id="@+id/editTextNumber3"

android:layout\_width="265dp"

android:layout\_height="64dp"

android:layout\_marginTop="28dp"

android:ems="10"

android:inputType="number"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/button4"

app:layout\_constraintVertical\_bias="0.074" />

</androidx.constraintlayout.widget.ConstraintLayout>

MainActivity.java

package com.example.basiccalculator;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

public void Add(View v){

EditText et1 = (EditText) findViewById(R.id.editTextNumber);

EditText et2 = (EditText) findViewById(R.id.editTextNumber2);

EditText et3 = (EditText) findViewById(R.id.editTextNumber3);

int n1 = Integer.parseInt(et1.getText().toString());

int n2 = Integer.parseInt(et2.getText().toString());

int result = n1+n2;

et3.setText("Total Value "+result);

}

public void Subtract(View v){

EditText et1 = (EditText) findViewById(R.id.editTextNumber);

EditText et2 = (EditText) findViewById(R.id.editTextNumber2);

EditText et3 = (EditText) findViewById(R.id.editTextNumber3);

int n1 = Integer.parseInt(et1.getText().toString());

int n2 = Integer.parseInt(et2.getText().toString());

int result = n1-n2;

et3.setText("Subtract Value "+result);

}

public void Multiply(View v){

EditText et1 = (EditText) findViewById(R.id.editTextNumber);

EditText et2 = (EditText) findViewById(R.id.editTextNumber2);

EditText et3 = (EditText) findViewById(R.id.editTextNumber3);

int n1 = Integer.parseInt(et1.getText().toString());

int n2 = Integer.parseInt(et2.getText().toString());

int result = n1\*n2;

et3.setText("Multiply Value "+result);

}

public void Divide(View v){

EditText et1 = (EditText) findViewById(R.id.editTextNumber);

EditText et2 = (EditText) findViewById(R.id.editTextNumber2);

EditText et3 = (EditText) findViewById(R.id.editTextNumber3);

int n1 = Integer.parseInt(et1.getText().toString());

int n2 = Integer.parseInt(et2.getText().toString());

int result = n1/n2;

et3.setText("Divide Value "+result);

}

}

Develop an Android application program that demonstrates intent in mobile application development.

MainActivity.xml

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

<RelativeLayout 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">

<!-- activity\_a.xml -->

<!-- activity\_a.xml -->

<LinearLayout

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

android:padding="16dp">

<EditText

android:id="@+id/editTextName"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Name" />

<EditText

android:id="@+id/editTextPhone"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Phone" />

<EditText

android:id="@+id/editTextEmail"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Email" />

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Submit"

android:onClick="submitData" />

</LinearLayout>

</RelativeLayout>

MainActivity.java

package com.example.myapplication;

import androidx.appcompat.app.AlertDialog;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.content.Intent;

import com.example.myapplication.MainActivity2;

public class MainActivity extends AppCompatActivity {

EditText editTextName, editTextPhone, editTextEmail;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextName = findViewById(R.id.editTextName);

editTextPhone = findViewById(R.id.editTextPhone);

editTextEmail = findViewById(R.id.editTextEmail);

}

public void submitData(View view) {

String name = editTextName.getText().toString();

String phone = editTextPhone.getText().toString();

String email = editTextEmail.getText().toString();

Intent intent = new Intent(this, MainActivity2.class);

intent.putExtra("name", name);

intent.putExtra("phone", phone);

intent.putExtra("email", email);

startActivity(intent);

}

}

MainActivity2.xml

<?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=".MainActivity2">

<!-- activity\_b.xml -->

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="" />

</androidx.constraintlayout.widget.ConstraintLayout>

Mainactivity2.java

package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.widget.TextView;

import android.os.Bundle;

import android.content.Intent;

public class MainActivity2 extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

Intent intent = getIntent();

String name = intent.getStringExtra("name");

String phone = intent.getStringExtra("phone");

String email = intent.getStringExtra("email");

TextView textView = findViewById(R.id.textView);

String displayText = "Name: " + name + "\nPhone: " + phone + "\nEmail: " + email;

textView.setText(displayText);

}

}

Develop an android application to demonstrate Menu.

Mainactivity.xml

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

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Open Menu"

android:layout\_centerInParent="true"/>

</RelativeLayout>

Mainactivity.java

package com.example.sindhu;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.view.View;

import android.widget.Button;

import android.widget.PopupMenu;

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);

Button button = findViewById(R.id.button);

button.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

showPopupMenu(v);

}

});

}

private void showPopupMenu(View view) {

PopupMenu popupMenu = new PopupMenu(this, view);

popupMenu.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {

@Override

public boolean onMenuItemClick(MenuItem item) {

if (item.getItemId() == R.id.menu\_item\_1) {

Toast.makeText(MainActivity.this, "Menu Item 1 Clicked", Toast.LENGTH\_SHORT).show();

return true;

} else if (item.getItemId() == R.id.menu\_item\_2) {

Toast.makeText(MainActivity.this, "Menu Item 2 Clicked", Toast.LENGTH\_SHORT).show();

return true;

}

return false;

}

});

popupMenu.getMenuInflater().inflate(R.menu.main\_menu, popupMenu.getMenu());

popupMenu.show();

}

}

menu.xml

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

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

<item

android:id="@+id/menu\_item\_1"

android:title="Menu Item 1"/>

<item

android:id="@+id/menu\_item\_2"

android:title="Menu Item 2"/>

</menu>

Develop an android application to demonstrate Alert Dialog

Mainactivity.xml

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

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

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp"

tools:context=".MainActivity">

<Button

android:id="@+id/showAlertButton"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Show Alert"

android:layout\_centerInParent="true"/>

</RelativeLayout>

Mainactivity.java

import androidx.appcompat.app.AlertDialog;

import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button showAlertButton = findViewById(R.id.showAlertButton);

showAlertButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

showAlertDialog();

}

});

}

private void showAlertDialog() {

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setTitle("Alert");

builder.setMessage("This is an alert dialog.");

builder.setPositiveButton("OK", new DialogInterface.OnClickListener() {

@Override

public void onClick(DialogInterface dialog, int which) {

dialog.dismiss();

}

});

AlertDialog dialog = builder.create();

dialog.show();

}

}