

```

package com.example.loanapp;

import android.os.Bundle;

import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
import java.text.DecimalFormat;

public class MainActivity extends AppCompatActivity {
    // Declare the views
    EditText principalEditText, rateEditText, periodEditText;
    TextView emiTextView, totalInterestTextView;
    Button calculateButton;

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

        // Initialize the views
        principalEditText = findViewById(R.id.principalEditText);
        rateEditText = findViewById(R.id.rateEditText);
        periodEditText = findViewById(R.id.periodEditText);
        emiTextView = findViewById(R.id.emiTextView);
        totalInterestTextView = findViewById(R.id.totalInterestTextView);
        calculateButton = findViewById(R.id.calculateButton);

        // Set the onClickListener for the button
        calculateButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Get the values from the edit texts
                double principal = Double.parseDouble(principalEditText.getText().toString());
                double rate = Double.parseDouble(rateEditText.getText().toString());
                double period = Double.parseDouble(periodEditText.getText().toString());

                // Calculate the EMI and total interest
                double emi = calculateEMI(principal, rate, period);
                double totalInterest = calculateTotalInterest(principal, rate, period);
            }
        });
    }
}

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        // Format the results to two decimal places
        DecimalFormat decimalFormat = new DecimalFormat("#.##");
        String emiFormatted = decimalFormat.format(emi);
        String totalInterestFormatted = decimalFormat.format(totalInterest);

        // Set the text for the text views
        emiTextView.setText("EMI: Rs." + emiFormatted);
        totalInterestTextView.setText("Total Interest: Rs." + totalInterestFormatted);
    }
});
}

private double calculateEMI(double principal, double rate, double period) {
    rate /= 1200;
    period *= 12;
    return (principal * rate * Math.pow(1 + rate, period)) / (Math.pow(1 + rate, period) - 1);
}

private double calculateTotalInterest(double principal, double rate, double period) {
    return (calculateEMI(principal, rate, period) * period) ;
}
}

```

```

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

    <TextView
        android:id="@+id/name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="Gaurav Amarnani"
        android:textSize="25sp" />

    <EditText
        android:id="@+id/principalEditText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:hint="Enter principal amount"

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android:inputType="numberDecimal" />
```

```
<EditText  
    android:id="@+id/rateEditText"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:hint="Enter rate of interest"  
    android:inputType="numberDecimal"  
    android:layout_below="@id/principalEditText"/>
```

```
<EditText  
    android:id="@+id/periodEditText"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:hint="Enter loan period in years"  
    android:inputType="numberDecimal"  
    android:layout_below="@id/rateEditText"/>
```

```
<Button  
    android:id="@+id/calculateButton"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:text="Calculate"  
    android:layout_below="@id/periodEditText"/>
```

```
<TextView  
    android:id="@+id/emiTextView"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="16dp"  
    android:text="EMI:"  
    android:textSize="18sp"  
    android:layout_below="@id/calculateButton"/>
```

```
<TextView  
    android:id="@+id/totalInterestTextView"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="16dp"  
    android:text="Total Interest:"  
    android:textSize="18sp"  
    android:layout_below="@id/emiTextView"/>
```

```
</RelativeLayout>
```

10000

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CALCULATE

EMI: Rs.879.16

Total Interest: Rs.879.16