VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI

Mini Project Report on

"FINANCIAL CALCULATOR"

Submitted in the partial fulfillment for the requirements of Mobile Application Development Laboratory of 6th semester CSE requirement in the form of the Mini Project work

Submitted By

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Under the guidance of

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
YELAHANKA, BENGALURU - 560064.

2020-2021

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Project work entitled **"FINANCIAL CALCULATOR"** is a bonafide work carried out by **Siddhanth Tripathi (1BY18CS164) and Somil Jain (1BY18CS167)** in partial fulfillment for *Mini Project* during the year 2020-2021. It is hereby certified that this project covers the *Mobile Application Development Laboratory*. It is also certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in this report.

Signature of the Guide with date
Mrs Shrivani
Assistant Professor
CSE, BMSIT&M

Signature of HOD with date
Dr. Bhuvaneshwari
Prof & Head
CSE, BMSIT&M

INSTITUTE VISION

To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

INSTITUTE MISSION

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

DEPARTMENT VISION

To develop technical professionals acquainted with recent trends and technologies of computer science to serve as valuable resources for the nation/society.

DEPARTMENT MISSION

Facilitating and exposing the students to various learning opportunities through dedicated academic teaching, guidance and monitoring.

PROGRAM EDUCATIONAL OBJECTIVES

1. Lead a successful career by designing, analysing and solving various problems in the field of Computer Science & Engineering.
2. Pursue higher studies for enduring edification.
3. Exhibit professional and team building attitude along with effective communication.
4. Identify and provide solutions for sustainable environmental development.

ACKNOWLEDGEMENT

We are happy to present this project after completing it successfully. This project would not have been possible without the guidance, assistance and suggestions of many individuals. We would like to express our deep sense of gratitude and indebtedness to each and every one who has helped us make this project a success.

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Special thanks to all the staff members of the Computer Science Department for their help and kind cooperation.

Lastly, we thank our parents and friends for the support and encouragement given throughout in completing this precious work successfully.

SIDDHANTH TRIPATHI (1BY18CS164)

SOMIL JAIN (1BY18CS167)

ABSTRACT

The aim of this project is to create an app that a user can use to carry out calculations on a daily basis. A user can have access to various calculators that are inbuilt in this application and are as follows :- Income Tax Calculation, EMI Calculation and Electricity Bill Calculation.

EMI, acronym for Equated Monthly Installment, plays a very crucial role in getting a home loan. It is the amount a customer pays every month to the bank or any other financial institution. This amount is borne by the customer till the time the loan amount is not completely paid off.

Every person needs these types of calculators at some point of their lives, and we bring all of it in one single application. All users have to do is to select a desired calculator among the three and calculate it for their personal use.

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CHAPTER 1: INTRODUCTION

A financial calculator or business calculator is an electronic calculator that performs financial functions commonly needed in business and commerce communities. It has standalone keys for many financial calculations and functions, making such calculations more direct than on standard calculators. It may be user programmable, allowing the user to add functions that the manufacturer has not provided by default.

- **GITHUB REPOSITORIES**

1. https://github.com/siddhanth0412/financial-calculator-app
2. https://github.com/somiltholia/Financial-Calculator-App

- **EMI CALCULATOR**

  The EMI calculator uses the reducing balance method to calculate loan EMI and total interest payable using key data (Principal, Interest Rate and Tenure) as provided by the user. Additional charges such as processing fees, documentation charges, etc.

- **INCOME TAX CALCULATOR**

  An Income tax calculator is a tool designed to calculate how much income tax you are liable to pay in any given financial year. The calculator provides an approximate figure of your income tax liability by taking into account various data such as your income, deductions, HRA exemption, etc.

- **ELECTRIC BILL CALCULATOR**

  A bill for money owed for electricity used. invoice, bill, account - an itemized statement of money owed for goods shipped or services rendered

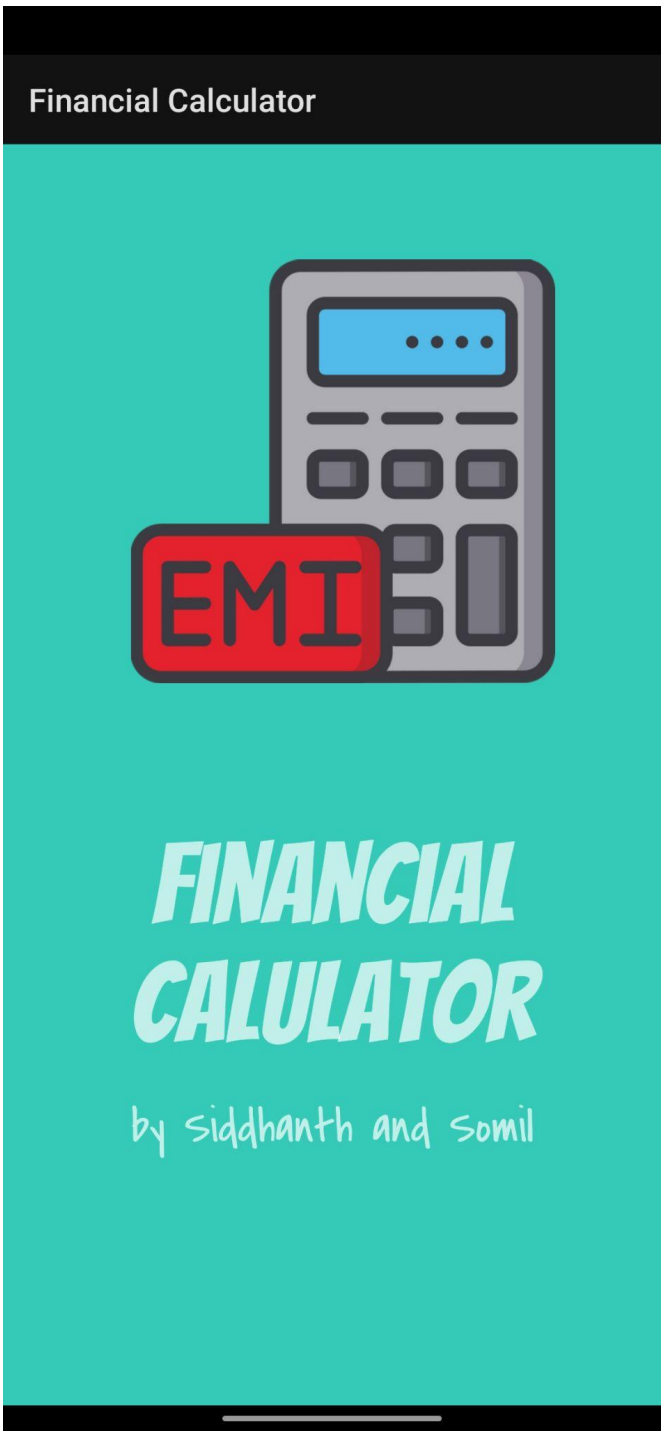
CHAPTER 2: IMPLEMENTATION

2.1 XML Files

2.1.1 activity_main.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"
    android:background="#35cab8"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/imageView3"
        android:layout_width="265dp"
        android:layout_height="289dp"
        android:layout_marginStart="10dp"
        android:layout_marginTop="60dp"
        android:layout_marginEnd="10dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.555"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@drawable/emi1" />

    <TextView
        android:id="@+id/textView7"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="40dp"
        android:fontFamily="@font/bangers"
        android:gravity="center"
        android:text="Financial calulator"
        android:textSize="70sp"
        app:layout_constraintEnd_toEndOf="parent"
```

```
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/imageView3" />

    <TextView
        android:id="@+id/textView8"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="7dp"
        android:fontFamily="@font/covered_by_your_grace"
        android:gravity="center"
        android:text="by Siddhanth and Somil"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView7" />

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


Financial Calculator
EMI
FINANCIAL
CALULATOR
by siddhanth and somil

2.1.2 activity_dash.xml

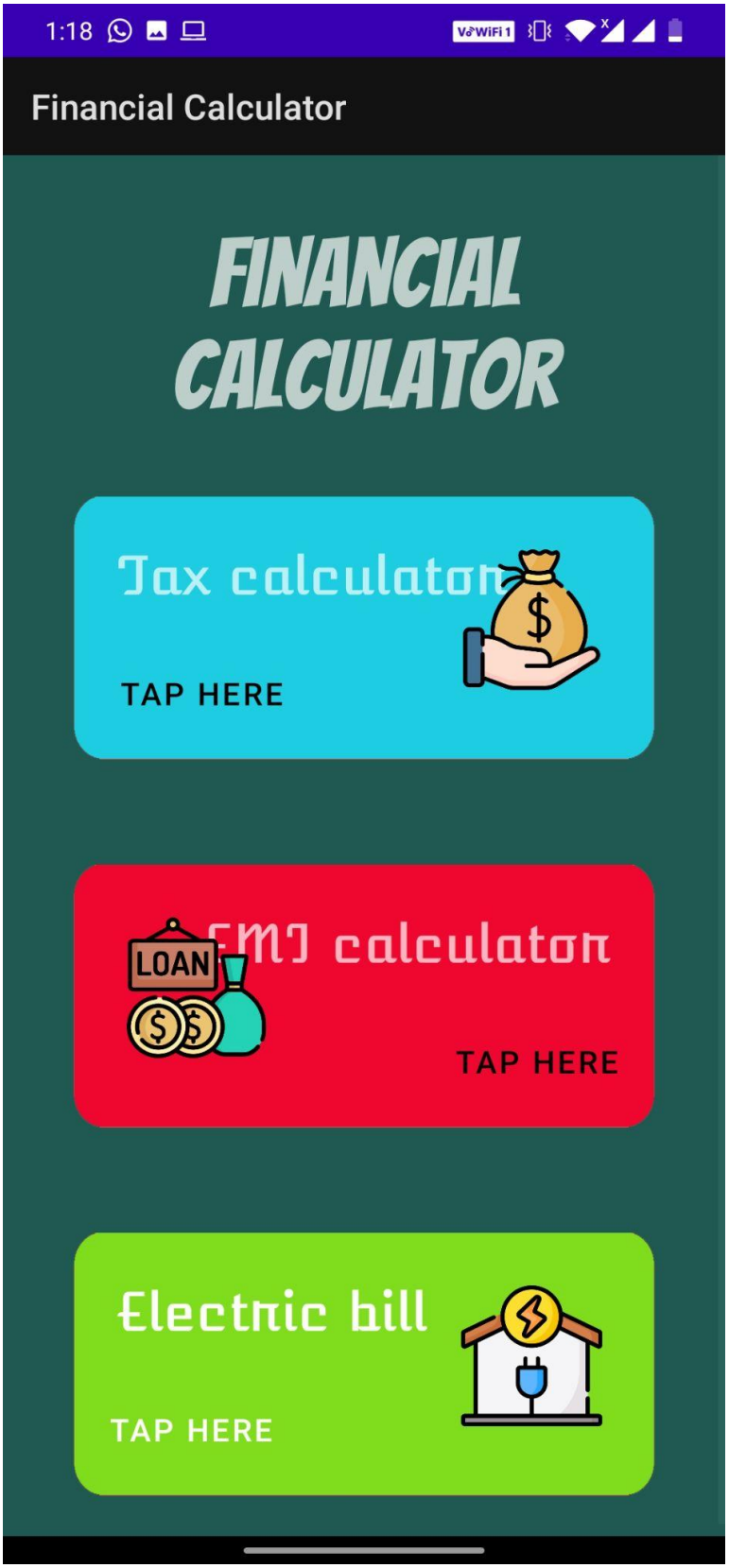
```
<?xml version="1.0" encoding="utf-8"?>
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"

    tools:context="com.example.emicalculator.DashBoard"
    android:background="#6335CAB8">

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:orientation="vertical">

<!--    <RelativeLayout-->
<!--        android:layout_width="match_parent"-->
<!--        android:layout_height="100dp">-->

<!--    </RelativeLayout>-->

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:fontFamily="@font/bangers"
        android:text="Financial Calculator"
        android:gravity="center"
        android:textSize="55sp" />

    <RelativeLayout
        android:layout_width="wrap_content"
        android:layout_height="150dp"
        android:layout_margin="30dp">
```

```
<RelativeLayout
    android:layout_width="match_parent"
    android:layout_height="150dp"
    android:background="@drawable/round_bk3">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:fontFamily="@font/atomic_age"
        android:padding="25dp"
        android:text="Tax calculator"
        android:textSize="30sp" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_marginLeft="6dp"
        android:background="@android:color/transparent"
        android:padding="20dp"
        android:text="tap here"
        android:textSize="18sp">

    </Button>

    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:layout_alignParentRight="true"
        android:layout_marginTop="20dp"
        android:layout_marginRight="20dp"
        android:padding="10dp"
        android:src="@drawable/salary">

    </ImageView>
</RelativeLayout>
</RelativeLayout>
```

```
<RelativeLayout
    android:layout_width="wrap_content"
    android:layout_height="150dp"
    android:layout_margin="30dp">


    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="150dp"
        android:background="@drawable/round_bk5">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentRight="true"
            android:fontFamily="@font/atomic_age"
            android:padding="25dp"
            android:text="EMI calculator"
            android:textSize="30sp" />

        <Button
            android:id="@+id/button2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentRight="true"
            android:layout_alignParentBottom="true"
            android:background="@android:color/transparent"
            android:padding="20dp"
            android:text="tap here"
            android:textSize="18sp">

        </Button>

        <ImageView
            android:layout_width="100dp"
            android:layout_height="100dp"
```

```
            android:layout_alignParentStart="true"
            android:layout_alignParentLeft="true"
            android:layout_marginLeft="20dp"
            android:layout_marginTop="20dp"
            android:padding="10dp"
            android:src="@drawable/loan">


        </ImageView>
    </RelativeLayout>
</RelativeLayout>

<RelativeLayout
    android:layout_width="wrap_content"
    android:layout_height="150dp"
    android:layout_margin="30dp">


    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="150dp"
        android:background="@drawable/food1">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentLeft="true"
            android:fontFamily="@font/atomic_age"
            android:padding="25dp"
            android:text="Electric bill"
            android:textColor="#FFFEFD"
            android:textSize="30sp" />

        <Button
            android:id="@+id/button3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentLeft="true"
```

```
            android:layout_alignParentBottom="true"
            android:background="@android:color/transparent"
            android:padding="20dp"

            android:text="tap here"
            android:textColor="#FFFEFD"
            android:textSize="18sp">

        </Button>

        <ImageView
            android:layout_width="100dp"
            android:layout_height="100dp"
            android:layout_alignParentRight="true"

            android:layout_marginTop="20dp"
            android:layout_marginRight="20dp"
            android:padding="10dp"
            android:src="@drawable/eco">


        </ImageView>
      </RelativeLayout>
   </RelativeLayout>
</LinearLayout>


</ScrollView>
```


1:18
Financial Calculator
FINANCIAL CALCULATOR
Tax calculator
TAP HERE
EMI calculator
LOAN
TAP HERE
Electric bill
TAP HERE

2.1.3 activity_elec.xml

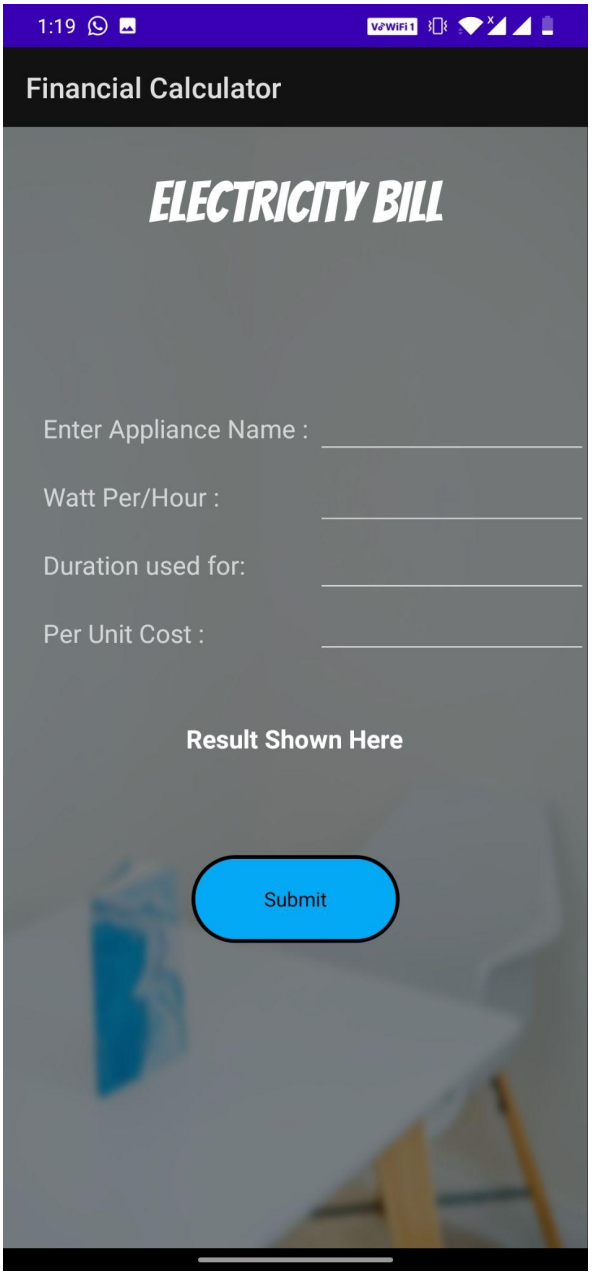
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:background="@drawable/f3"
    tools:context=".ELECActivity">


    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="28dp"
        android:layout_marginTop="200dp"
        android:text="Enter Appliance Name :"

        android:textSize="18sp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="HardcodedText" />

    <EditText
        android:id="@+id/edittext"
        android:layout_width="191dp"
        android:layout_height="48dp"
        android:layout_marginStart="220dp"
        android:layout_marginBottom="4dp"
        android:autofillHints=""
        android:ems="10"

        android:inputType="textPersonName"
        android:textSize="18sp"
        app:layout_constraintBottom_toTopOf="@+id/edittext1"
```

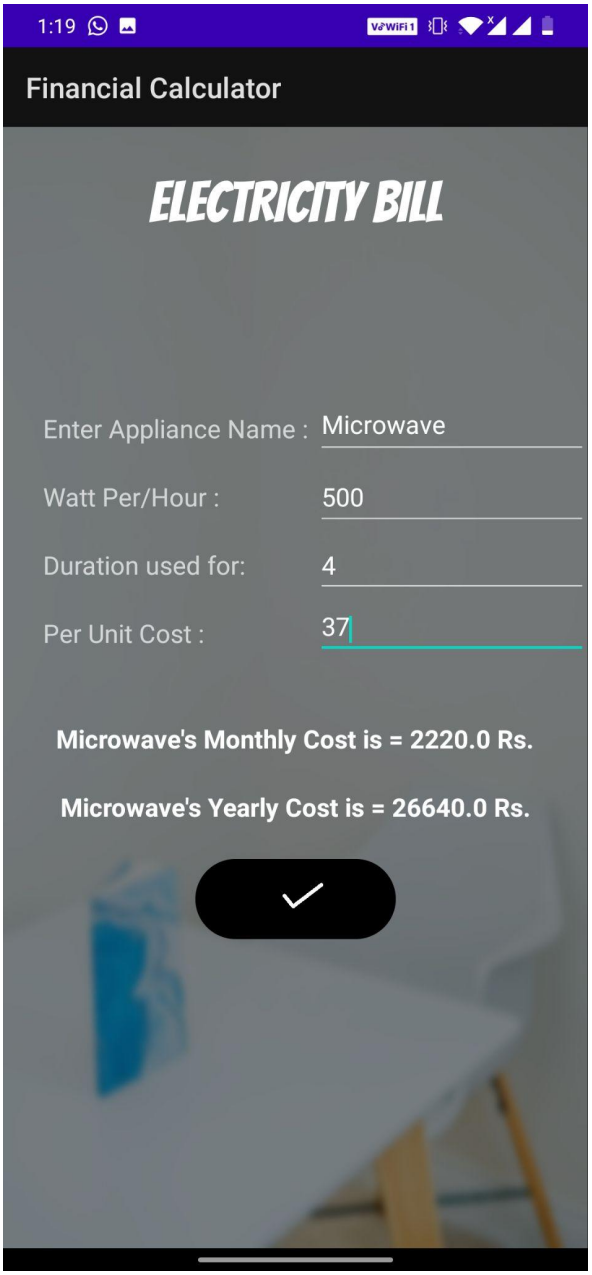
```
    app:layout_constraintStart_toStartOf="parent" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="28dp"
    android:layout_marginTop="24dp"
    android:text="Watt Per/Hour :"
    android:textSize="18sp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView"
    tools:ignore="HardcodedText" />

<EditText
    android:id="@+id/edittext1"
    android:layout_width="191dp"
    android:layout_height="46dp"
    android:layout_marginStart="220dp"

    android:autofillHints=""
    android:ems="10"
    android:inputType="number"
    android:textSize="18sp"
    app:layout_constraintBaseline_toBaselineOf="@+id/textView2"
    app:layout_constraintStart_toStartOf="parent"
    tools:ignore="HardcodedText" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="28dp"
    android:layout_marginTop="24dp"
    android:text="Duration used for:"
    android:textSize="18sp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView2"
```

```
    tools:ignore="HardcodedText" />

<EditText
    android:id="@+id/edittext2"
    android:layout_width="191dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="220dp"

    android:autofillHints=""
    android:ems="10"
    android:inputType="number"
    android:textSize="18sp"
    app:layout_constraintBaseline_toBaselineOf="@+id/textView3"
    app:layout_constraintStart_toStartOf="parent"
    tools:ignore="HardcodedText" />

<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="28dp"
    android:layout_marginTop="24dp"
    android:text="Per Unit Cost :"
    android:textSize="18sp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView3"
    tools:ignore="HardcodedText" />

<EditText
    android:id="@+id/edittext3"
    android:layout_width="191dp"
    android:layout_height="40dp"
    android:layout_marginStart="220dp"

    android:autofillHints=""
    android:ems="10"

    android:inputType="numberDecimal"
```

```
    android:textSize="18sp"
    app:layout_constraintBaseline_toBaselineOf="@+id/textView4"
    app:layout_constraintStart_toStartOf="parent"
    tools:ignore="HardcodedText" />


<com.spark.submitbutton.SubmitButton

    android:id="@+id/submitButton"
    android:layout_width="100dp"
    android:layout_height="50dp"
    android:layout_gravity="center"
    android:layout_marginTop="42dp"
    android:gravity="center"
    android:text="Submit"
    android:textColor="@color/black"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.501"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView5"
    app:sub_btn_background="#03A9F4"
    app:sub_btn_duration="8000"
    app:sub_btn_line_color="@color/black"
    app:sub_btn_ripple_color="#c93a36"
    app:sub_btn_tick_color="#FFFFFF" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="44dp"
    android:gravity="center"
    android:text="Result Shown Here"
    android:textColor="@color/white"
    android:textSize="18sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
```

```
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/edittext3"
        tools:ignore="HardcodedText" />

    <TextView
        android:id="@+id/textView6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="24dp"
        android:gravity="center"
        android:textColor="@color/white"
        android:textSize="18sp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView5"
        tools:ignore="HardcodedText" />

    <TextView
        android:id="@+id/textView10"
        android:layout_width="285dp"
        android:layout_height="92dp"
        android:text="ELECTRICITY BILL"
        android:textSize="40dp"
        android:fontFamily="@font/bangers"
        android:textColor="@color/white"
        android:gravity="center"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="MissingConstraints"
        tools:layout_editor_absoluteY="38dp" />

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





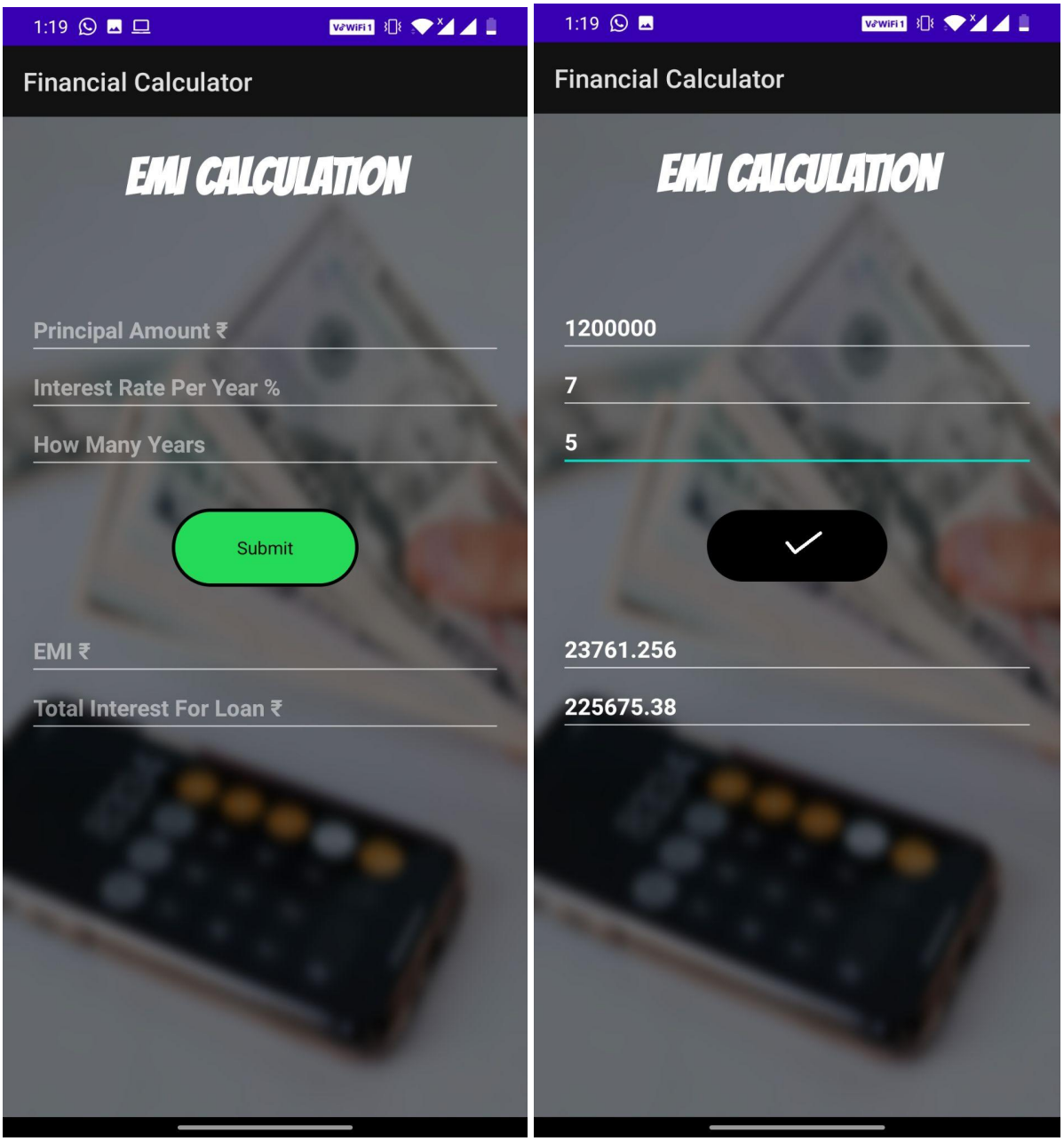
2.1.4 activity_emi.xml

```
<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="@drawable/f2"
    tools:context=".EMIActivity">
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_marginTop="136dp"
    android:orientation="vertical"
    android:paddingLeft="20dp"
    android:paddingTop="10dp"
    android:paddingRight="20dp"
    app:layout_constraintTop_toTopOf="parent"
    tools:layout_editor_absoluteX="-3dp">

    <EditText
        android:id="@+id/principal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:digits="0123456789."
        android:hint="@string/hint_principal"
        android:inputType="number"
        android:singleLine="true"
        android:textStyle="bold"

        tools:ignore="Autofill" />

    <EditText
        android:id="@+id/interest"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:digits="0123456789."
        android:hint="@string/hint_interest"
        android:inputType="number"

        android:singleLine="true"
        android:textStyle="bold"

        tools:ignore="Autofill" />

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

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:digits="0123456789."
    android:hint="@string/hint_years"
    android:inputType="number"

    android:textStyle="bold"
    tools:ignore="Autofill" />

<com.spark.submitbutton.SubmitButton

    android:id="@+id/submitButton"
    android:layout_width="0dp"
    android:layout_height="50dp"
    android:layout_gravity="center"
    android:gravity="center"
    android:text="Submit"
    android:textColor="@color/black"
    app:sub_btn_background="#25da59"

    app:sub_btn_duration="8000"
    app:sub_btn_line_color="@color/black"
    app:sub_btn_ripple_color="#c93a36"
    app:sub_btn_tick_color="#FFFFFF" />

<EditText
    android:id="@+id/emi"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="@string/hint_emi"
    android:inputType="number"
    android:maxEms="0"
    android:textStyle="bold"
    tools:ignore="Autofill"
    android:textColor="@color/white"/>

<EditText
```

```
            android:id="@+id/interest_total"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="@string/hint_interest_total"
            android:inputType="number"
            android:textStyle="bold"
            tools:ignore="Autofill"
            android:textColor="@color/white"/>

    </LinearLayout>

    <TextView
        android:id="@+id/textView11"
        android:layout_width="417dp"
        android:layout_height="82dp"
        android:fontFamily="@font/bangers"
        android:gravity="center"
        android:text="EMI CALCULATION"
        android:textColor="@color/white"
        android:textSize="40dp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.615"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="MissingConstraints"
        tools:layout_editor_absoluteY="29dp" />


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



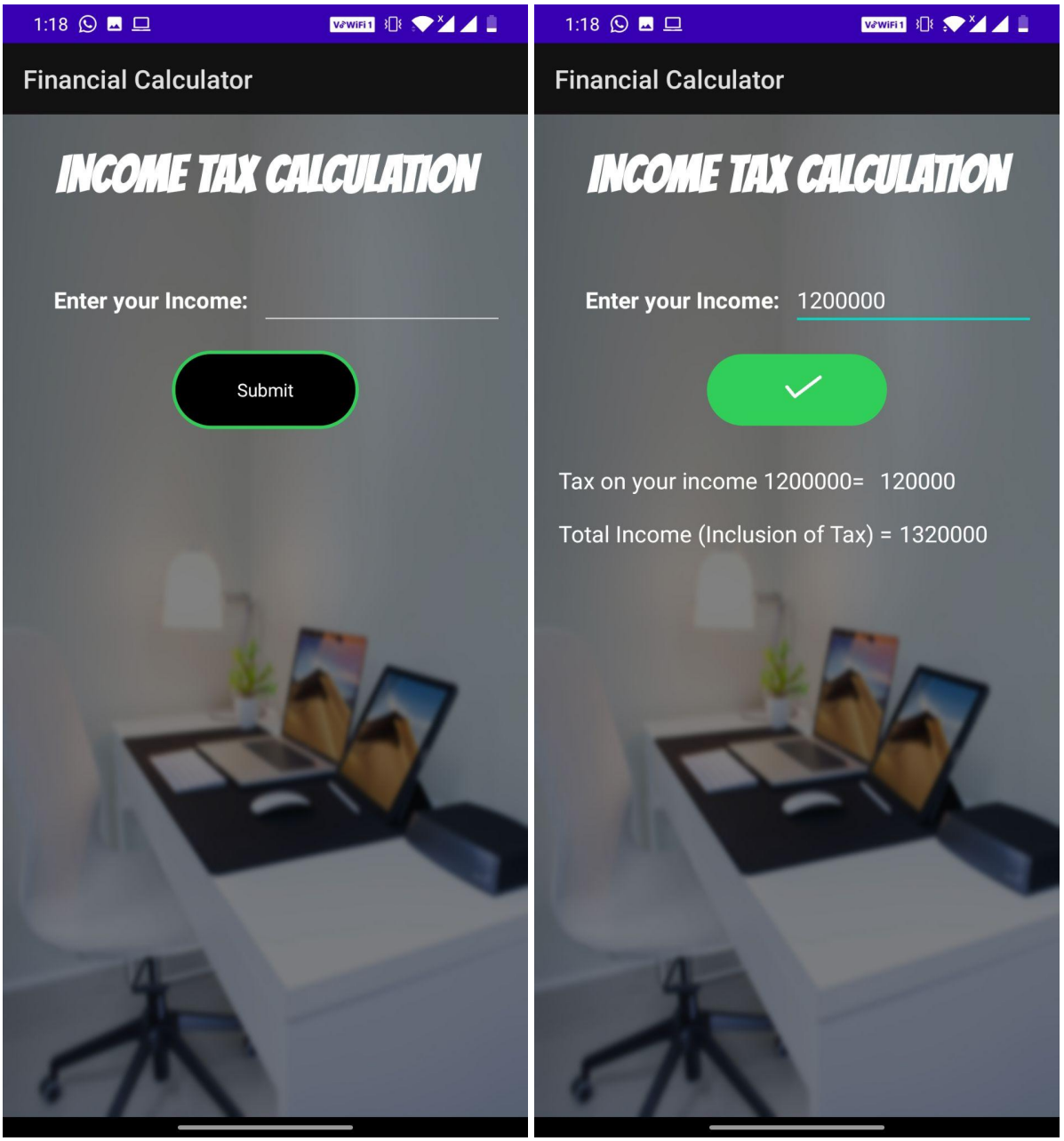
2.1.5 activity_income.xml

```
<?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="fill_parent"
    android:layout_height="fill_parent"
    android:background="@drawable/f1"
    tools:context=".IncomeActivity">
```

```
<EditText
    android:id="@+id/edit1"
    android:layout_width="190dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="10dp"
    android:ems="10"
    android:inputType="number|numberDecimal"
    android:labelFor="@id/edit1"

    app:layout_constraintBaseline_toBaselineOf="@+id/text1"
    app:layout_constraintStart_toEndOf="@+id/text1"
    tools:ignore="Autofill" />

<TextView
    android:id="@+id/text1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="4dp"
    android:text="Enter your Income:"
    android:textAlignment="center"
    android:textColor="@android:color/white"
    android:textSize="18sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/edit1"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.166" />


<TextView
    android:id="@+id/text2"
    android:layout_width="0dp"
    android:layout_height="200dp"
    android:layout_marginStart="19dp"
```

```
    android:layout_marginEnd="10dp"
    android:fontFamily="sans-serif"
    android:textColor="@android:color/white"
    android:textSize="18sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/submitButton" />

<com.spark.submitbutton.SubmitButton

    android:id="@+id/submitButton"
    android:layout_width="100dp"
    android:layout_height="50dp"
    android:foregroundGravity="center"
    android:gravity="center"
    android:text="Submit"
    android:textColor="@color/white"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/text1"
    app:sub_btn_background="@color/black"
    app:sub_btn_duration="8000"
    app:sub_btn_line_color="#31ce5a"
    app:sub_btn_ripple_color="#c93a36"
    app:sub_btn_tick_color="#FFFFFF" />

<TextView
    android:id="@+id/textView11"
    android:layout_width="417dp"
    android:layout_height="82dp"
    android:fontFamily="@font/bangers"
    android:gravity="center"
    android:text="INCOME TAX CALCULATION"
    android:textColor="@color/white"
    android:textSize="40dp"
    android:textStyle="bold"
```

```
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.615"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="MissingConstraints"
        tools:layout_editor_absoluteY="29dp" />

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



2.2 JAVA Files

2.2.1 MainActivity.java

```
package com.example.emicalculator;

import androidx.appcompat.app.AppCompatActivity;
import android.app.Application;
import android.content.Intent;
import android.os.Handler;

import android.os.Bundle;
import android.view.View;
import android.view.WindowManager;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.TextView;

import static android.view.WindowManager.LayoutParams.FLAG_FULLSCREEN;

public class MainActivity extends AppCompatActivity {

    private static int SPLASH_SCREEN= 4000;


    Animation topAnim,bottomAnim;
    ImageView image;
    TextView logo,slogan;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        getWindow().setFlags(FLAG_FULLSCREEN, FLAG_FULLSCREEN);
        setContentView(R.layout.activity_main);

        topAnim= AnimationUtils.loadAnimation(this,R.anim.top_animation);
        bottomAnim= AnimationUtils.loadAnimation(this,R.anim.bottom_animation);
```

```
        image = findViewById(R.id.imageView3);
        logo = findViewById(R.id.textView7);
        slogan = findViewById(R.id.textView8);

        image.setAnimation(topAnim);
        logo.setAnimation(bottomAnim);
        slogan.setAnimation(bottomAnim);

        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
                Intent intent = new Intent(MainActivity.this,DashBoard.class);
                startActivity(intent);
                finish();
            }
        },SPLASH_SCREEN);

    }
}
```

2.2.2 EMIActivity.java

```
package com.example.emicalculator;
import androidx.appcompat.app.AppCompatActivity;

import android.app.Activity;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;


public class EMIActivity extends AppCompatActivity {

    TextView emiCalcBtn;
```

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

    final EditText P = findViewById(R.id.principal);
    final EditText I = findViewById(R.id.interest);
    final EditText Y = findViewById(R.id.years);
    final EditText TI = findViewById(R.id.interest_total);
    final EditText result = findViewById(R.id.emi);



    emiCalcBtn = findViewById(R.id.submitButton);

    emiCalcBtn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

            String st1 = P.getText().toString();
            String st2 = I.getText().toString();
            String st3 = Y.getText().toString();

            if (TextUtils.isEmpty(st1)) {
                P.setError("Enter Principal Amount");
                P.requestFocus();
                return;
            }

            if (TextUtils.isEmpty(st2)) {
                I.setError("Enter Interest Rate");
                I.requestFocus();
                return;
            }

            if (TextUtils.isEmpty(st3)) {
                Y.setError("Enter Years");
                Y.requestFocus();
```

```
            return;
        }

        float p = Float.parseFloat(st1);
        float i = Float.parseFloat(st2);
        float y = Float.parseFloat(st3);

        float Principal = calPric(p);

        float Rate = calInt(i);

        float Months = calMonth(y);

        float Dvdnt = calDvdnt(Rate, Months);

        float FD = calFinalDvdnt(Principal, Rate, Dvdnt);

        float D = calDivider(Dvdnt);

        float emi = calEmi(FD, D);

        float TA = calTa(emi, Months);

        float ti = calTotalInt(TA, Principal);

        result.setText(String.valueOf(emi));

        TI.setText(String.valueOf(ti));

    }
  });
}

public float calPric(float p) {

  return (p);

}
```

```
public float calInt(float i) {
    return (i / 12 / 100);
}
public float calMonth(float y) {
    return (y * 12);
}
public float calDvdnt(float Rate, float Months) {
    return (float) (Math.pow(1 + Rate, Months));
}
public float calFinalDvdnt(float Principal, float Rate, float Dvdnt) {
    return (Principal * Rate * Dvdnt);
}
public float calDivider(float Dvdnt) {
    return (Dvdnt - 1);
}
public float calEmi(float FD, Float D) {
    return (FD / D);
}
public float calTa(float emi, Float Months) {
```

```
        return (emi * Months);

    }

    public float calTotalInt(float TA, float Principal) {

        return (TA - Principal);

    }
}
```

2.2.3 IncomeActivity.java

```
package com.example.emicalculator;

import android.app.Activity;
import android.annotation.SuppressLint;
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 IncomeActivity extends AppCompatActivity {

    EditText et;
    TextView tx;
    TextView tx1;
    TextView b1;

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

```
        et=findViewById(R.id.edit1);
        tx=findViewById(R.id.text1);
        tx1=findViewById(R.id.text2);
        b1=findViewById(R.id.submitButton);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

                try {
                    Integer.parseInt(String.valueOf(et.getText()));
                    calculate();
                }
                catch (Exception e) {
                    Toast.makeText(getApplicationContext(), "You have exceeded the Input Limit!",
Toast.LENGTH_LONG).show();
                    tx1.setText("");
                }
            }
        });
    }


    @SuppressLint("SetTextI18n")
    public void calculate()
    {
        long Total = 0;
        long Tax=0;
        long in= Integer.parseInt(et.getText().toString());
        if (in >= 200000 && in < 1000000)
        {
            Tax= (in * 5)/100;
            Total = in + Tax;
        }
        else if(in >= 1000000 && in < 2000000)
        {
            Tax = (in * 10)/100;
```

```
        Total = in + Tax;
      }
      else if(in >= 2000000 && in < 3000000)
      {
        Tax= (in * 15)/100;
        Total = in + Tax;
      }
      else if (in >= 3000000 && in < 4000000)
      {
        Tax = (in * 20)/100;
        Total = in + Tax;
      }
      else if(in >= 4000000 && in < 5000000)
      {
        Tax = (in * 25)/100;
        Total = in + Tax;
      }
      else if (in >= 5000000 && in < 7000000)
      {
        Tax = (in * 30)/100;
        Total = in + Tax;
      }
      else if (in >= 7000000 && in < 10000000)
      {
        Tax = (in * 35)/100;
        Total = in + Tax;
      }
      else if (in >= 10000000)
      {
        Tax = (in * 40)/100;
        Total = in + Tax;
      }
      tx1.setText("Tax on your income "+et.getText()+"= \t"+Tax+"\n \n"+
            "Total Income (Inclusion of Tax) "+"= \t"+Total);
    }
}
```

2.2.4 DashBoard.java

```
package com.example.emicalculator;

import android.content.Intent;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;

public class DashBoard extends AppCompatActivity {

    Button b1;
    Button b2;
    Button b3;

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

        b1 = findViewById(R.id.button1);
        b2 = findViewById(R.id.button2);
        b3 = findViewById(R.id.button3);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent= new Intent(DashBoard.this,
com.example.emicalculator.IncomeActivity.class);
                startActivity(intent);
            }
        });

        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent=new Intent(DashBoard.this, com.example.emicalculator.EMIActivity.class);
```

```
            startActivity(intent);
        }
    });

    b3.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent intent=new Intent(DashBoard.this, com.example.emicalculator.ELECActivity.class);
            startActivity(intent);
        }
    });
  }
}
```

2.2.5 ELECActivity.java

```
package com.example.emicalculator;
import androidx.appcompat.app.AppCompatActivity;

import android.app.Activity;
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 ELECActivity extends AppCompatActivity{
  TextView textView5,textView6;
  EditText     edittext, edittext1, edittext2, edittext3    ;
  TextView         button ;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_elec);
    Toast.makeText(this, " Kindly fill all the details", Toast.LENGTH_SHORT).show();
    edittext = findViewById(R.id.edittext);
    edittext1 = findViewById(R.id.edittext1);
```

```
        edittext2 = findViewById(R.id.edittext2);
        edittext3 = findViewById(R.id.edittext3);
        textView5 = findViewById(R.id.textView5);
        textView6 = findViewById(R.id.textView6);

        button = findViewById(R.id.submitButton);
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                int a =Integer.parseInt(edittext1.getText().toString())  ;
                int b =Integer.parseInt(edittext2.getText().toString())  ;
                float c =Float.parseFloat(edittext3.getText().toString())  ;
                String d = edittext.getText().toString() ;

                float sum = a * b * 30;
                float sum1 =  sum/1000 ;
                float sum2 =  sum1 * c ;
                float sum3 =  sum2 * 12 ;
                textView5.setText(d +"'s Monthly Cost is = "+ sum2 + " Rs.")  ;
                textView6.setText(d +"'s Yearly Cost is = "+ sum3 + " Rs.")  ;
                Toast.makeText(getApplicationContext(), "form is submitted", Toast.LENGTH_SHORT
).show();


            }

        });
    }

}
```

CHAPTER 3: REFERENCES

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4. Marx, Johan (2009), Using Financial Calculators for Time Value of Money Calculations, Pearson South Africa, ISBN 9781770256804, This booklet explains how to use 2 different financial calculators ... namely the Hewlett-Packard 10-BII [and] Texas Instrument BA II plus.