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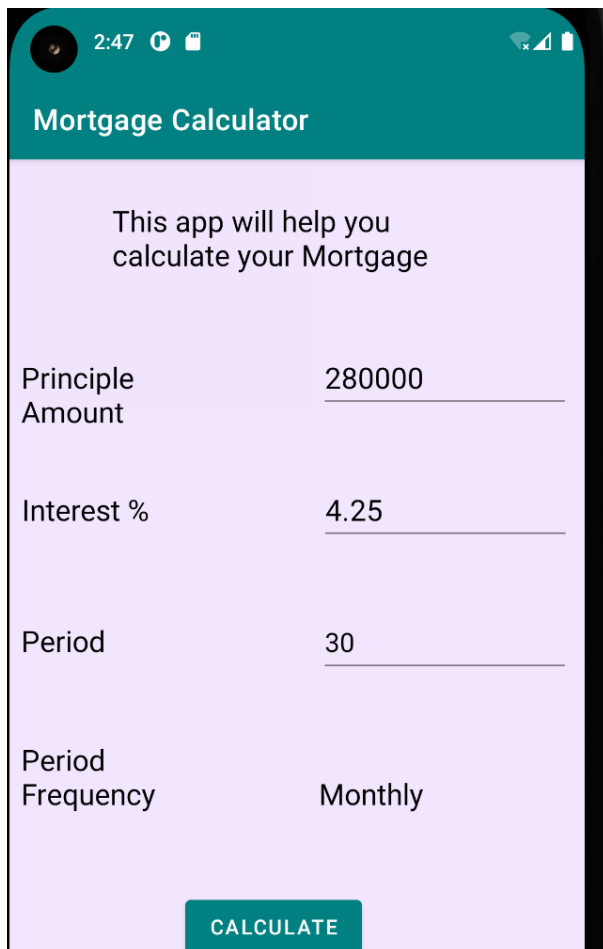
Assignment 1

Student Number: 100702168

APP Description

The application was developed in order to help a user calculate the EMI (equated monthly installment) based on the given principal amount. The user can enter their principal amount, interest and the length of mortgage payment. Based on the provided input from the user, the application will calculate the required EMI. The application incorporates different layouts, views and intent to make the application easy to use.

Home Screen



Mortgage Calculator

This app will help you calculate your Mortgage

Principle Amount

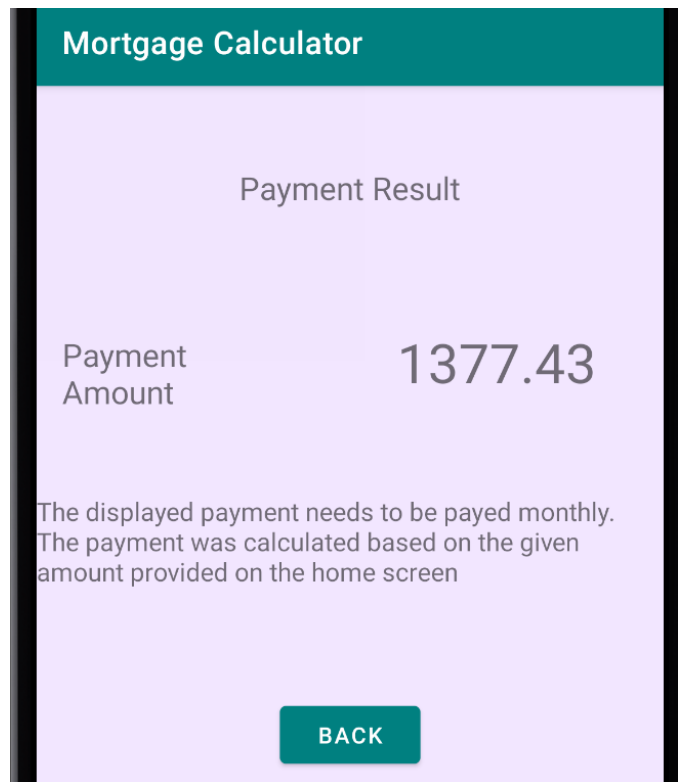
Interest %

Period

Period Frequency

CALCULATE

Result Page



Mortgage Calculator

Payment Result

Payment Amount **1377.43**

The displayed payment needs to be payed monthly.
The payment was calculated based on the given amount provided on the home screen

BACK

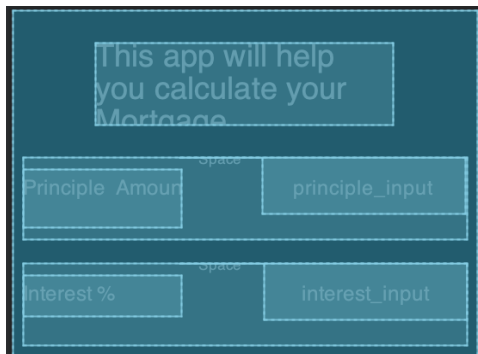
Equation used for calculating the EMI mortgage

$$M = P \cdot \frac{r \cdot (1+r)^n}{(1+r)^n - 1}$$

Functionality

Layout:

Table Row: A layout defines the structure of a user interface in an application. All elements in a layout can be distinguished using a hierarchy of ViewGroup and a View object. In my application, I have used the "tableRow" constraint layouts structure to align the different views within the ViewGroup for example the Principle Amount (textView) and the input box(Number Decimal view) are placed inside tableRow (viewGroup) to align horizontally.



View TextView and Number(Decimal): A view class represents the basic building blocks for user interface components. Some of the key functionality of a view class are event handling and drawing. Examples of views are buttons, textView and widgets. In my application I have incorporated textViews and buttons. I have used textViews as place holders to guide users how to use the application.

A screenshot of the input form. It has a light purple background. On the left, there are three labels: 'Principle Amount', 'Interest %', and 'Period'. To the right of each label is an input field. The first input field contains 'eg.10,000', the second contains 'eg. 2 (2%)', and the third contains 'eg. 2 (Year)'. Below these input fields, there is a text box with the text 'Payment Amount' and a numeric input field containing '0'. Below the text box, there is a small text note: 'The displayed payment needs to be payed monthly. The payment was calculated based on the given amount provided on the home screen'. At the bottom right, there is a green button labeled 'BACK'.

Button(intent- navigation): Intent is a messaging object that is used to request an action from another app component. There are two different types of intents. Explicit intent and Implicit intent. Explicit intents are specifically used with the application in conjunction with other app components to perform a task. Implicit intents are used in conjunction with another app component to perform or handle a task. In my application I have used intent for navigation between two activities and to pass data from one activity to another. For example the homepage will accept the user input and perform the required calculations and display the answer on the second activity.

A screenshot of the output form. It has a light purple background. At the top, there is a label 'Payment Result'. Below it, there is a text label 'Payment Amount' and a large numeric value '1377.43'. Below this, there is a small text note: 'The displayed payment needs to be payed monthly. The payment was calculated based on the given amount provided on the home screen'. At the bottom left, there is a green button labeled 'BACK'. To the right of this, there is another form with three labels: 'Interest %', 'Period', and 'Period Frequency'. The corresponding input fields contain '4.25', '30', and 'Monthly'. At the bottom right of this form, there is a green button labeled 'CALCULATE'.