Assignment #1

Basic App Development

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Mobile Application Development - SOFE 4640U
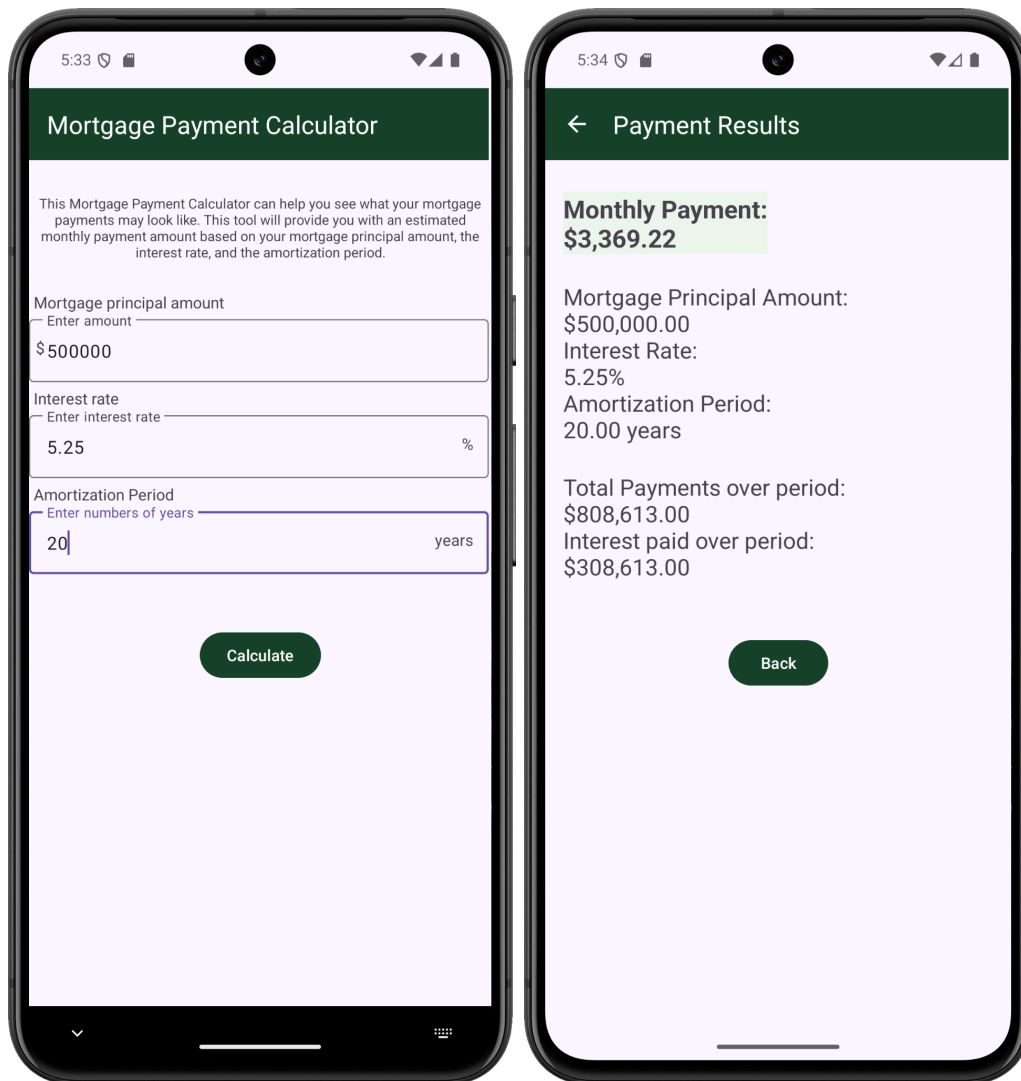
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Overview:

In this assignment I practiced Android application development, specifically on using layouts, view, and intents. To accomplish this I was tasked with creating a basic mortgage calculator application based off of TD's [Mortgage Payment Calculator](#) webapp, however my calculations specifically match [calculator.net](#)'s caclulation's which use an annual interest rate divided by 12 to come up with the monthly interest rate instead of what TD uses.

Application Screenshots:

Usage of Layouts:

For this application, two activities are used that correspond with their layouts:

❖ Activities	❖ Layouts
➢ MainActivity	➢ activity_main
➢ PaymentResults	➢ activity_payment_results

The Main Activity corresponds to the screenshot on the left side, while the Payment Results is associated with the screenshot on the right side.

Usage of Views:

The following main UI elements are presented in each layout:

- ❖ **Main Activity**
  - ➢ **Toolbar**
    - ■ Used to display the title of the Application
  - ➢ Introduction Paragraph (**TextView**)
    - ■ Introduction paragraph that introduces the application to the user.
  - ➢ Multiple Input Fields (**TextInputLayout** with **TextInputEditText**)
    - ■ Inputs for Mortgage Principal Amount, Interest Rate, and Amortization Period
  - ➢ Numerous **TextViews** for miscellaneous UI elements such as:
    - ■ Subtitles above each input field
    - ■ '$', '%' and 'years' overlaid on the input fields
  - ➢ Calculate Button (**Button**)
    - ■ Used to trigger a function to switch to the other activity and calculate the output.
- ❖ **Payment Results**
  - ➢ **Toolbar**
    - ■ Title Label to indicate that this is the Payment Results page
    - ■ Back button to go back main activity
  - ➢ Three **TextView** blocks
    - ■ Monthly Payment amount
    - ■ Mortgage Details (Parameters passed from the Main Activity)
    - ■ Monthly Payment Details (Details on the total payment after the period and the total interest paid)
  - ➢ **Button**
    - ■ Used to back to the Main Activity

Usage of Intents:

For this mobile application, I have made use of **intents to switch activities and pass data** from the main activity to the payment results activity.

GitHub Link:

https://github.com/Calizard/SOFE4640U-A1