SOFE 4640U: Mobile Application Development

Assignment 1

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Overview:

The task for assignment 1 was to create an EMI calculator which is relatively simple (as mentioned in the requirement) compared to existing calculators provided by banks. EMI (Equated Monthly Installment) is the amount a loan holder has to pay to their bank every month until their loan is paid off completely [1].

The formula to calculate the EMI is:

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

Where:

P is the principal loan amount

r is the rate of interest calculated on a monthly basis

n is the tenure for the loan in the number of years [1].

For the convenience of the user, the interest rate and the loan tenure were asked on an annual basis instead of a monthly basis, since that information is easier for the user to provide, and the application converts the values in its calculations.

Layout and views:

As the application had two activities, each representing a page, the there were 2 layouts as well. The style chosen was relatively simple for this assignment: a toolbar with the title at the top, the input/ouput fields in the middle, and a button that navigates between both activities, sending over the respective data of each activity accordingly.

Intents:

An intent was created in each activity, and both differed slightly. As shown in the images, the intent in the home page activity was used not just for navigation to the result page, but also to send a String of text “Your EMI:” and the EMI value calculated from user inputs to the result page.

For the intent in result page activity, the intent was simply used just to navigate back to the home page activity.

References:

[1] “EMI Calculator for Home Loan, Car Loan & Personal Loan in India,” EMI Calculator, https://emicalculator.net/ (accessed Oct. 2, 2024).