

SOF 4640U: Mobile Application Development

Assignment 1

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Intents

For this assignment I intended to create an easy-to-use mortgage calculator for users of all backgrounds. The layout, design, and direction all stemmed from this idea. Being able to simple input the numbers and gather the output was the goal. There is a simple bar at the top of the screen with the application name written on it: "Mortgage Calculator 3000". Under has a paragraph giving users an introduction to using the application. Proceeding are the text areas gathering the information for the total mortgage payment, the monthly interest rate, and the period of time the payments will be paid off. A button reading calculate in all capitol letters to signify importance when pressed displays the final mortgage calculation.

For the mortgages calculations I used this calculation [1]:

$$P = \frac{L[c(1 + c)n]}{[(1 + c)n - 1]}$$

Where P = monthly payment, L = total payment, c = monthly interest rate, n = number of months.

Layouts

For the layouts I chose to do a simple alignment with the textboxes left aligned and the calculate button aligned with the period. Underneath centered has the display area for the calculation. This layout provides space for viewers to take in all the information, while being modular to smaller screen sizes, or if the user has the font size on their phone enlarged. There is also an explanation paragraph above the input area giving direction to new users. In each text box there are prompts for what users should be placing in the field. I chose a one layout application for users to not be confused with pop ups or Toasts, and let the application also occupy, although minimal, less space on the user device.

Views

The views for this app are minimal, only changing when the calculation button is pressed and information is presented on the screen. There are no dialogue boxes. The fields remain with the inputs in them to ensure the user does not forget their initial inputs, in the use case of recalculating with different values.

[1] L. Burbeck, "How to calculate your payments on a fixed-rate mortgage," *Home Guides / SF Gate*, 21-Sep-2020. [Online]. Available: <https://homeguides.sfgate.com/calculate-payments-fixed-rate-mortgage-2963.html>. [Accessed: 19-Oct-2021].