

Problem Statement

Develop a mortgage calculator app, which has the following requirements.

1. Use Textview and EditText components to ask the user of this application for four input data:

- a. House Price
- b. Down Payment Amount
- c. Annual Interest Rate (i.e., enter 4.5 instead of 4.5%)
- d. Length of the Mortgage Loan (in years)

2. Once the user of this application enters the data, he or she clicks a Calculate button to display the output (use TextView objects) on the same screen similar to the following:

Monthly payment: xxx.xx

Total payment: xxxxx.xx

3. The user should be able to clear the input data as well as the output data by clicking a Cancel button.

To calculate monthly payment, let us define the following variables to make it easier to set up:

Monthly Interest Rate = Annual Interest Rate / (12 * 100)

***Months = Number of months over which loan is amortized
= (Length of Mortgage in Years * 12)***

Loan Amount = (House Price – Down Payment Amount)

Assuming that payments are paid at the end of month, the mortgage's monthly payment formula is as follows:

Loan Amount * Monthly Interest Rate

Monthly Payment = ----- 1 - (1 + Monthly Interest Rate)^{-Months}

The total payment is calculated as follows:

Total payment = Monthly payment * Months