



Mortgage Calculator

Welcome to your new role at our FinTech company! As part of your onboarding, you're tasked with developing a user-friendly mortgage calculator console application for our loan officers. This application will streamline the process of calculating monthly mortgage payments for our clients.





Here are the key features to consider:

Principal: The amount the client wishes to borrow.

Annual Interest Rate: The yearly interest rate offered on the mortgage.

Duration: The duration of the mortgage in years.

The application should ask for these data and automatically calculate the monthly payment for the client

Tip: to get the percentage monthly rate, you divide the annual interest rate by percentage and number of months in a year and to get the number of months from the duration you multiply it by number of months in a year.





Mortgage Calculator Formula

$$\begin{array}{l} M = ? \\ P = \$100,000 \\ r = 0.005 \\ n = 180 \end{array} \rightarrow M = P \frac{r(1+r)^n}{(1+r)^n - 1}$$

Where m is monthly payment value to be calculated
p is the principal amount
r is the rate
and n is the duration of the loan





Below is sample run and expected output

```
C:\Users\Skiru\.virtualenvs\titans-e9_ANuCP\Scripts\python.exe C:\Users\Skiru\PycharmProjects\titans\mortgagecalculator.py
Enter the principal amount: 100000
Enter the annual interest rate: 5
Enter the duration in years: 10
Your monthly payment is $1,060.66
```



semicolon
