

# TY Coding Assignment 01

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Create a python program to calculate Simple Interest and Compound interest for a loan over a specified period.

## Task 01

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1. Ask the User for the loan amount.
2. Ask for the duration of the loan.
3. Ask for the Interest Rate in %
4. Calculate the Simple Interest of the Loan
5. Display the Amount of interest due and the total sum paid back.

## Task 02

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1. Comment out the Code using `"""` (3 quotes either side of the code)
2. Copy the code and make the following modifications.
3. Change the calculation from simple interest to compound interest (See hint below)
4. Display the total amount of interest Due and the final amount paid back.

Here are the components needed to calculate compound interest:

Principal amount (P)

Rate of interest in decimal form (r)

Number of times the interest is compounded annually (n)

Overall tenure (t)

If you know these, then you're ready to calculate the owed amount. Now, what's the formula for compound interest?

Here's the formula for calculating compound interest as it would be typed into Python:  $CI = P * (1 + r/n) ** (n*t)$ .

To solve, plug the described information into the designated spots. Then divide the rate (r) by the number of times compounded (n) and add it to one.

Next, multiply the number of times the interest compounds annually (n) by the overall tenure amount (t). Combine this number and the parenthetical number, then multiply this number by the principal (P). Voilà! Compound interest calculated.

## Task 03

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1. Comment out the Code using `"""` (3 quotes either side of the code)
2. Copy the code and make the following modifications.
3. Ask the user which type of loan they are getting and display the relevant information as required (Hint: Copy the relevant blocks from the previous code used)

## Notes:

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When working on this assignment use the 3 Bs where appropriate if you are stuck

B: Brain – try to solve the issue yourself first

B: Buddy – If you cannot solve the issue then ask a buddy for help

B: Browser – If your buddy can't help then look for a possible answer on the internet. Use ChatGPT or an equivalent AI tool if you can to help you arrive at a solution