

# SOFTWARE CRAFTMANSHIP

## Assignment

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Q1 . simple interest.

$$\text{Simple Interest} = \frac{P \times R \times T}{100}$$

Where:

- $P$  is the principal amount
- $R$  is the rate of interest per annum
- $T$  is the time in years

Code : -

```
✓ def calculate_simple_interest(principal, rate, time):  
    interest = (principal * rate * time) / 100  
    return interest  
  
principal = float(input("Enter the principal amount: "))  
rate = float(input("Enter the rate of interest (in %): "))  
time = float(input("Enter the time period (in years): "))  
  
interest = calculate_simple_interest(principal, rate, time)  
  
print(f"The Simple Interest is: {interest}")  
|
```

Output : -

Using 1 example inputs

```
\subhrajeet\.vscode> & "C:/Program Files/Python312/python.exe" c:/Users/subhrajeet/.vscode/.vscode/main.py
Enter the principal amount: 2000
Enter the rate of interest (in %): 12
Enter the time period (in years): 3
The Simple Interest is: 720.0
```

## Q2 :- calculator

```
def calculator():
    # Ask user for operation
    operation = input("Enter operation (+, -, *, /): ")

    # Get user input for numbers
    num1 = float(input("Enter first number: "))
    num2 = float(input("Enter second number: "))

    # Perform the operation
    if operation == '+':
        print(f"{num1} + {num2} = {num1 + num2}")
    elif operation == '-':
        print(f"{num1} - {num2} = {num1 - num2}")
    elif operation == '*':
        print(f"{num1} * {num2} = {num1 * num2}")
    elif operation == '/':
        if num2 != 0:
            print(f"{num1} / {num2} = {num1 / num2}")
        else:
            print("Cannot divide by zero!")
    else:
        print("Invalid operation")

# Run the calculator
calculator()
```

Output : using some example inputs,

Addition ----

```
Enter operation (+, -, *, /): +
Enter first number: 20
Enter second number: 100
20.0 + 100.0 = 120.0
PS C:\Users\subhrajeet\.vscode>
```

Subtraction ---

```
Enter operation (+, -, *, /): -  
Enter first number: 100  
Enter second number: 20  
100.0 - 20.0 = 80.0  
PS C:\Users\subhrajeet\.vscode> █
```

Multiplication ---

```
Enter operation (+, -, *, /): *  
Enter first number: 20  
Enter second number: 20  
20.0 * 20.0 = 400.0  
PS C:\Users\subhrajeet\.vscode> █
```

Division ----

```
Enter operation (+, -, *, /): /  
Enter first number: 100  
Enter second number: 20  
100.0 / 20.0 = 5.0  
PS C:\Users\subhrajeet\.vscode> █
```

