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GitHub link: https://github.com/ilyasaqsa/Python-lab

LAB: 08

Task 1:

Make a calculator using the function the code should use only 2 operands(+ and -) for division and multiplication as well

```python
def add(a, b):
    return a + b

def subtract(a, b):
    return a - b

def multiply(a, b):
    result = 0
    negative = False
    if b < 0:
        b = -b
        negative = not negative
    if a < 0:
        a = -a
        negative = not negative

    for _ in range(b):
        result = add(result, a)

    return -result if negative else result

def divide(a, b):
    if b == 0:
        return "Error: Division by zero"

    negative = False
```

```
    if a < 0:
        a = -a
        negative = not negative
    if b < 0:
        b = -b
        negative = not negative

    count = 0
    total = a
    while total >= b:
        total = subtract(total, b)
        count = add(count, 1)

    return -count if negative else count
print("Add: ", add(10, 5))
print("Subtract: ", subtract(10, 5))
print("Multiply: ", multiply(4, -3))
print("Divide: ", divide(20, 4))
print("Divide: ", divide(7, 3))
```

```
Add:  15
Subtract:  5
Multiply:  -12
Divide:  5
Divide:  2
```

Task 2:

Write a functions that ask the user the shape and make the star shaped.
(Like it asks the shape (triangle or Rectangle) and make that shape.

```
def print_shape():
    shape = input("Which shape do you want to print? (triangle/rectangle): ").strip().lower

    if shape == "triangle":
        height = int(input("Enter the height of the triangle: "))
        for i in range(1, height + 1):
            print("*" * i)

    elif shape == "rectangle":
        rows = int(input("Enter the number of rows: "))
        cols = int(input("Enter the number of columns: "))
        for _ in range(rows):
            print("*" * cols)

    else:
        print("Invalid shape. Please choose either 'triangle' or 'rectangle'.")


print_shape()
```

```
Which shape do you want to print? (triangle/rectangle):  triangle
Enter the height of the triangle:  5
*
**
***
****
```

```
def print_shape():
    shape = input("Which shape do you want to print? (triangle/rectangle): ").strip().lower()

    if shape == "triangle":
        height = int(input("Enter the height of the triangle: "))
        for i in range(1, height + 1):
            print("*" * i)

    elif shape == "rectangle":
        rows = int(input("Enter the number of rows: "))
        cols = int(input("Enter the number of columns: "))
        for _ in range(rows):
            print("*" * cols)

    else:
        print("Invalid shape. Please choose either 'triangle' or 'rectangle'.")


print_shape()
```

```
Which shape do you want to print? (triangle/rectangle):  rectangle
Enter the number of rows:  4
Enter the number of columns:  4
****
****
****
****
```