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Practical-4

Aim: - Write a program using functions.

a) Python Program to Find Factorial of Number
b) Python Program to Find Sum of Natural Numbers Using Recursion

- Python Program to Find Factorial of Number

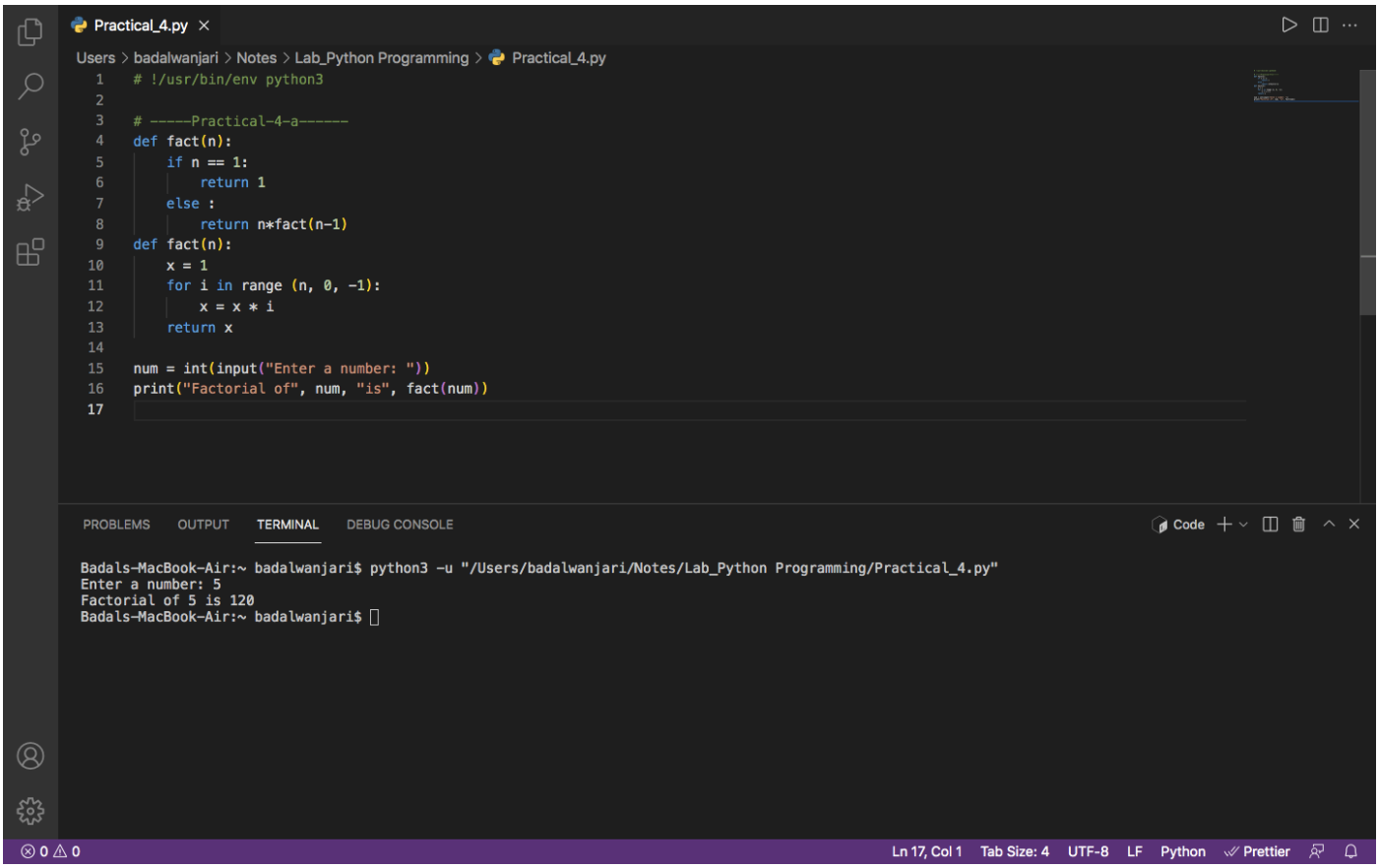
Program:

```
# -----Practical-4-a------
def fact(n):
    if n == 1:
        return 1
    else :
        return n*fact(n-1)
def fact(n):
    x = 1
    for i in range (n, 0, -1):
        x = x * i
    return x

num = int(input("Enter a number: "))
print("Factorial of", num, "is", fact(num))
```

Output:

```
Enter a number: 5
Factorial of 5 is 120
```

Screenshot:


Practical_4.py
Users > badalwanjari > Notes > Lab_Python Programming > Practical_4.py
# !/usr/bin/env python3
# -----Practical-4-a------
def fact(n):
if n == 1:
return 1
else :
return n*fact(n-1)
def fact(n):
x = 1
for i in range (n, 0, -1):
x = x * i
return x
num = int(input("Enter a number: "))
print("Factorial of", num, "is", fact(num))
PROBLEMS
OUTPUT
TERMINAL
DEBUG CONSOLE
Code
Badals-MacBook-Air:~ badalwanjari$ python3 -u "/Users/badalwanjari/Notes/Lab_Python Programming/Practical_4.py"
Enter a number: 5
Factorial of 5 is 120
Badals-MacBook-Air:~ badalwanjari$
0 0
Ln 17, Col 1
Tab Size: 4
UTF-8
LF
Python
Prettier

- [Python Program to Find Sum of Natural Numbers Using Recursion]

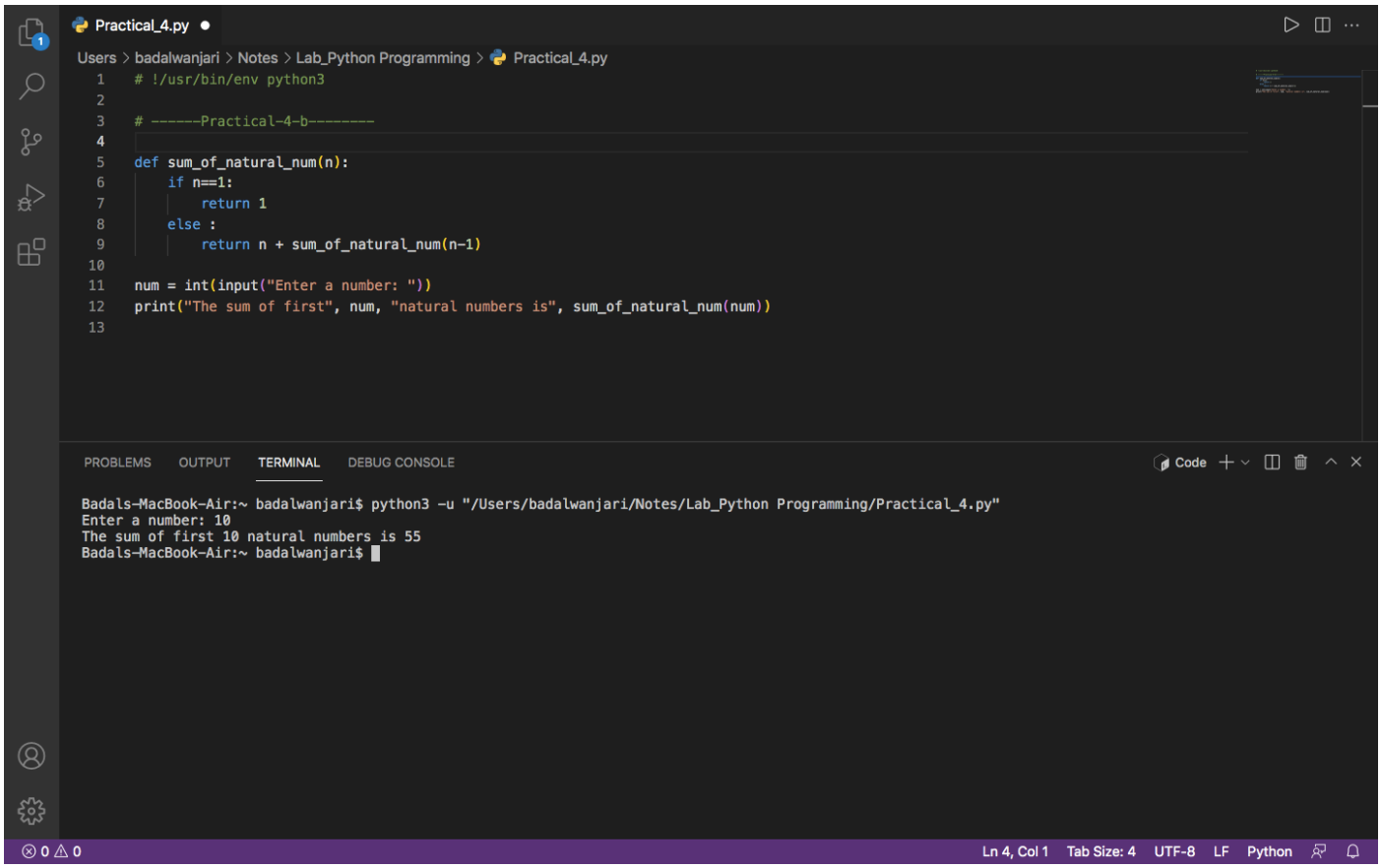
Program :

```
# ------Practical-4-b--------

def sum_of_natural_num(n):
    if n==1:
        return 1
    else :
        return n + sum_of_natural_num(n-1)

num = int(input("Enter a number: "))
print("The sum of first", num, "natural numbers is", sum_of_natural_num(num))
```

Output:

```
Enter a number: 10
The sum of first 10 natural numbers is 55
```

Screenshot :



Result: I have studied functions in python and completed practical-4.