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FYCS A

PRACTICAL 7

7	Functions and Recursion Write a program to calculate the factorial of a number using: ● A normal function. ● A recursive function.

'''Functions and Recursion

Write a program to calculate the factorial of a number using:

● A normal function.

● A recursive function'''

```
# Factorial using normal (iterative) function
def factorial_iterative(n):
    result = 1
    for i in range(1, n + 1):
        result *= i
    return result

# Factorial using recursive function
def factorial_recursive(n):
    if n == 0 or n == 1:   # Base case
        return 1
    return n * factorial_recursive(n - 1)  # Recursive call

# Taking user input
num = int(input("Enter a number: "))
```

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```
# Display results

print("Factorial (Iterative):", factorial_iterative(num))

print("Factorial (Recursive):", factorial_recursive(num))
```

```
>>>
= RESTART: C:/Users/admin/Documents/PCACS PYTHON/PRACTICAL 7 PYTHON PROGRAMMING
FY BSc. COMPUTER SCIENCE-C 1400. KRISHNA KAMLESH SINGH.py
Enter a number: 5
Factorial (Iterative): 120
Factorial (Recursive): 120
>>>
```