Write a Python function that calculates the factorial of a given non-negative integer. Use recursion to implement this function.

CODE:

```
def factorial(n):
    if n == 0 or n == 1:
        return 1
    else:
        return n * factorial(n - 1)   # Recursive call
num = int(input("Enter a non-negative integer: "))
if num < 0:
    print("Factorial is not defined for negative numbers.")
else:
    result = factorial(num)
    print(f"The factorial of {num} is: {result}")
```

OUTPUT: