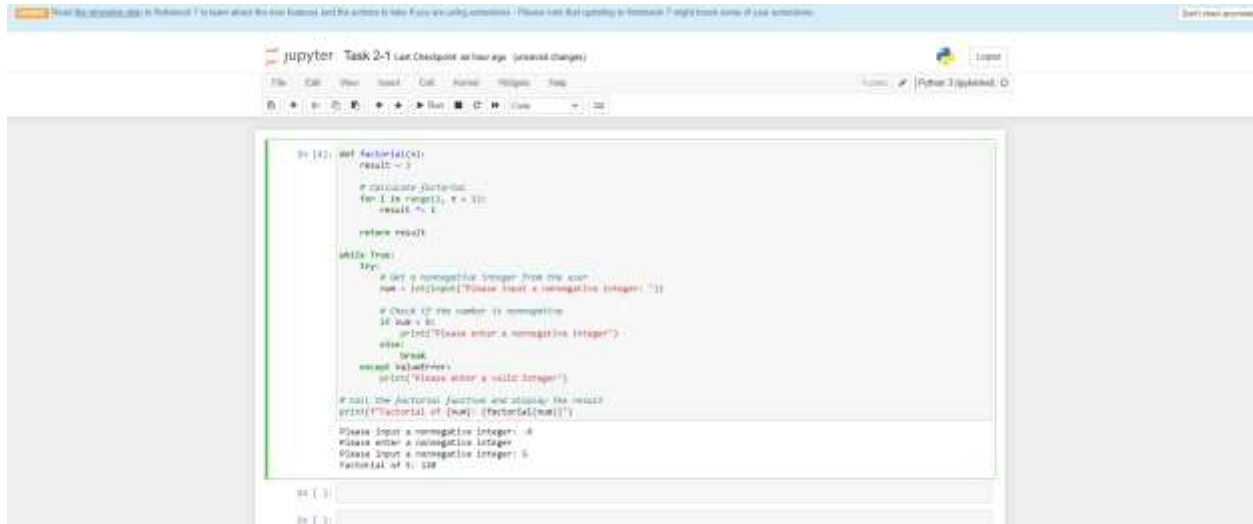


## Task 2.1

Define a function which accepts a passed argument and calculates its factorial. A program accepts user's input and calls the function. (Please DO NOT use recursive function call in the function definition.) (Sample output as shown in the following figure is for demonstration purposes only.)



```

In [42]: def factorial(n):
        result = 1
        # calculate factorial
        for i in range(1, n + 1):
            result *= i
        return result

        while True:
            try:
                # Get a non-negative integer from the user
                num = int(input("Please input a non-negative integer: "))
                # Check if the number is non-negative
                if num < 0:
                    print("Please enter a non-negative integer")
                    # Break
                    break
            except ValueError:
                print("Please enter a valid integer")
        # Call the factorial function and display the result
        print(f"Factorial of {num}: {factorial(num)}")

        # Please input a non-negative integer: 4
        # Please enter a non-negative integer: 5
        # Factorial of 5: 120
  
```