**Assignment Question for Python**

**Question 1: Number Pattern and Analysis**

**Write a Python program that performs the following tasks:**

**1. Input Handling:**

Prompt the user to input a positive integer N. This integer represents the number of lines in the pattern.

**2. Pattern Generation:**

Print a pattern of numbers where each line contains numbers from 1 up to the line number. For example, if N is 5, the output should be:

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

**3. Sum Calculation:**

After printing the pattern, calculate and display the sum of all the numbers printed in the pattern.

**Question 2: DNA to RNA Bioengineering**

**Your task is to determine the RNA complement of a given DNA sequence.**

The DNA and RNA have nucleotides, for DNA they are adenine(A), cytosine (C), guanine (G) and thymine (T).

And the four nucleotides found in RNA are adenine (A), cytosine (C), guanine (G) and uracil (U).

Now for a given DNA its RNA nucleotides complements will be:

G -> C

C -> G

T -> A

A -> U

**Question 3: Reverse and capitalize a given string.**

**Example:**

If the given string is input is “Saturn” then the output must be “nrutas”