Assignment SU3 – Instructions

CMPG111 – Decision Structures and Boolean Logic

SU3_1   Positive, Negative, or Zero

Write a Python program that takes an integer input and prints whether it is positive, negative, or zero.

Example runs:

```
Enter a number: 2
The number is  Positive
```

```
Enter a number: 0
The number is  Zero
```

```
Enter a number: -6
The number is  Negative
```

Notes:

- Do NOT use f-strings or placeholders to print the output.
- **Submit your Python script (*.py) on CodeGrade named:** *SU3_1.py*

SU3_2   Temperature Classifier

Write a Python program that takes a temperature input (in Celsius) and prints whether it is "Freezing Cold" (below 0°C), "Cold" (0 to 10°C), "Cool" (11 to 20°C), "Warm" (21 to 30°C), or "Scorching" (31°C or higher).

Example runs:

```
Enter a temperature (in Celsius): 11
The temperature is Cool
```

```
Enter a temperature (in Celsius): 31
The temperature is Scorching
```

Notes:

- Do NOT use f-strings or placeholders to print the output.
- **Submit your Python script (*.py) on CodeGrade named:** *SU3_2.py*

SU3_3   Sticks to Triangle and Types

Write a Python program that takes three integer inputs representing the lengths of sticks and categorise them into the following categories:

- Print "Triangle possible" if the lengths of the sticks can form a triangle.
- Print "No triangle possible" if the lengths of the sticks cannot form a triangle.

> **Hint!** Check if a triangle can be formed by the given lengths of sticks using the **triangle inequality theorem**. According to the theorem, for any triangle, the sum of lengths of any two sides must be greater than the length of the third side. Therefore, you need to verify that the sum of the lengths of each pair of sides is greater than the length of the remaining side. If this condition is met for all three pairs of sides, then a triangle can be formed.

Furthermore, provide additional feedback based on the type of triangle that can be formed:

- Print "Equilateral triangle possible" if all sides are equal.
- Print "Isosceles triangle possible" if exactly two sides are equal.
- Print "Scalene triangle possible" if the sides are different.

Example run:

```
Enter the length of stick #1: 12
Enter the length of stick #2: 15
Enter the length of stick #3: 12

Triangle possible
Isosceles triangle possible
```

```
Enter the length of stick #1: 17
Enter the length of stick #2: 6
Enter the length of stick #3: 10

No triangle possible
```

Notes:

- Do NOT use f-strings or placeholders to print the output.
- **Submit your Python file (*.py) on CodeGrade named: _SU3_3.py_.**

SU3_4   Divisibility Checker

Write a Python script that takes two numbers as input and prints whether the first number is evenly divisible by the second number.

Example run:

```
Enter the first number: 10
Enter the second number: 6
10 is not divisible by 6
```

```
Enter the first number: 6
Enter the second number: 2
6 is divisible by 2
```

Notes:

- Do NOT use f-strings or placeholders to print the output.
- **Submit your Python file (*.py) on CodeGrade named: *SU3_4.py*.**