Problem Set 1 Exercise #20: Type of Triangle

Reference: Lecture 3 notes

Learning objective: Selection statements

Estimated completion time: 20 minutes

Problem statement:

Write a program **PS1_Ex20_Triangle.java** that reads three positive integers denoting lengths of three sides of a triangle and check triangle's type:

- o **Not a triangle**

  The length of any side is longer or equal to the sum of the other two sides.

- o **Equilateral**

  All sides of a triangle have the same length.

- o **Isosceles**

  Two sides are equal in length and not equilateral.

- o **Scalene**

  It is a triangle AND all sides are unequal (which also implies not isosceles and not equilateral).

Sample run #1:

```
100 3 4
Not a triangle
```

Sample run #2:

```
5 5 5
Equilateral
```

Sample run #3:

```
5 3 3
Isosceles
```

Sample run #4:

```
4 3 5
Scalene
```