

**North South University**

**Department of Electrical & Computer Engineering**

**assignment**

**CSE 427** Section: 1

Spring 2019

Submitted to: Shaikh Shawon Arefin Shimon (SAS3)

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Repository Link: https://github.com/gazishafayet05/North-South-University.git

1. List all the input variables, including the state variables

* S1
* S2
* S3
* SCALENE
* ISOSCELES
* EQUILATERAL
* INVALID

1. Define Characteristics of the Input Variable. Make sure you cover all input variables.

S1, S2 and S3 are the sides of the triangles.

In SCALENE triangle, all 3 sides are different as they are not equal. (S1!=S2 && S2!=S3 && S1!=S3)

In ISOSCELES triangle, out of 3 sides, 2 sides are equal in value and the 3rd side is different in value. (S1==S2 && S1!=S3 || S1==S3 && S3!=S2 || S2==S3 && S1!=S2)

In EQUILATERAL triangle, all 3 sides are equal in value. (S1==S2 && S2==S3)

Invalid is when it is not valid.

1. Define Characteristics of Inputs.

Inputs will be given in integer value. The result of the input will be given based on the condition of the input. If three separate integer values are given in input, then it will show Scalene Triangle. If out of the 3 values, 2 values are same in integer value, then it will be declared as Isosceles Triangle. If all the 3 values are given same during input as integer numbers, then it will be declared as Isosceles Triangle. And if any of the input is given anything except integer numbers, then it will show that it is invalid.

1. Partition the characteristics into blocks.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Partition | b1 | b2 | b3 | b4 |
| q1= ”Geometric Classification” | scalene | Isosceles, not equilateral | equilateral | invalid |

1. Define values for each block.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameters | b1 | b2 | b3 | b4 |
| Triangle | (2,3,4) | (5,5,6) | (4,4,4) | (3,2,1) |