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CS-4230

A5

Cyclomatic complexity of my flow chart is 8. I calculated this based on the number of predicates (7) + 1

To generate test cases from the flow graph:

Written in Python. Run using python3 main.py from the root directory of the program.

If there is a line to read: Read the line using python file reading

Is comment: Check if the line starts with # using line.startswith(‘#’)

If yes print the comment and go to the next line

If no run calculate run check\_triangle() function

Is valid length: Check if lengths are valid. I.e. test for length 0

If no return “not a triangle”

If yes:

Has valid sides: check if triangle sides are valid, check for negative.

If no return “not a triangle”

If Yes

Check for triangle inequality: if a <= 0 or a + b <= c:

If no: return “not a triangle”

If yes:

Check for equilateral: a == b == c

if yes return “equilateral”

if no:

check for isosceles: if a == b or b == c or a == c

if yes return “isosceles”

if no default return “scalene” since it’s the option left.

Continue loop until there are no more lines to read

A diagram of a triangle

Description automatically generated