Chapter 6: Measuring Internal Product Attributes: Structural Complexity

Problem Statement

How complex is the following program?

```
read x, y, z;
type = "scalene";
if (x == y or x == z or y == z) type = "isosceles";
if (x == y and x == z) type = "equilateral";
if (x >= y + z or y >= x + z or z >= x + y) type = "not a triangle";
if (x <= 0 or y <= 0 or z <= 0) type = "bad inputs";</li>
print type;
```

Is there a way to measure the complexity of this program? It has something to do with program structure (branches, nesting) and the flow of data.

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- Software structural measurement
- Control-flow structure
- Structural complexity: Cyclomatic complexity
- Data flow and data structure attributes
- Architectural measurement