1. Analysis

The variables I have identified to use for state and structure were a string constant for data file name, a double array for storage of the max, min, mean, sum statistics, and a logger for output and configuration of the log formatting inside of a static initializer.   
  
There were several local variables of integer streams where I leveraged the builder pattern, an enum for the statistics array indexing to ease readability, and a functional interface for handling checked file exceptions when iterating over a stream of integers writing to a file.

These decisions were implemented to address ease of maintenance where a single change can be cascaded throughout the application ultimately moving to a. configuration or properties file if necessary in addition to reducing cyclomatic complexity to a minimum level.

Graphical user interface, text

Description automatically generated

Columns Defined as: Cognitive Complexity, Essential Cyclomatic Complexity, Design Complexity, Cyclomatic Complexity respectively

Graphical user interface, text, application

Description automatically generated

1. Flowchart

