`process` Design

`process greenerthumb` data.

Programs

All programs accept `greenerthumb` ICD JSON messages from STDIN and report results to STDOUT. Each program terminates with a message printed to STDERR if any JSON message is malformed.

`summarize`

`summarize` reads all input until STDIN is closed and then reports a 5-number-summary for each data-type along with how many instances of that data-type were included.

`flatten`

`flatten` smooths data by keeping a sliding window of 3 instances of a data-type and replacing it with a weighted average of the 3 instances biased towards the middle instance. The first instance and last instance have a copy of themselves used as the instance to the left and right of them.

The left and right values are weighted by 1/6 each while the middle value is weighted 2/3.

`filter`

`filter` instances of data-types by specifying a list of ANDing conditions in the set of less than or equal to, less than, equal, greater than, and greater than or equal to and filtering STDIN according to the conditions.

An epsilon value for comparisons can also optionally be passed. The system epsilon is used otherwise.

`clean`

`clean` reads all input until STDIN is closed and filters instances that are more than a passed number of standard deviations away from the mean.