40.317 Homework 1

This assignment is due at <u>11:59 p.m. on Wednesday 3rd June</u>. You may complete it with a partner; if you choose to do so, be sure to list both of your names on all your submissions.

You are given two Python scripts, a client and a server, which communicate with each other via ZeroMQ to form a simple distributed application. The client code is complete; the server code is not complete. Finish the server code to form a complete, working application.

To receive credit for this assignment, you must submit two things:

- Your completed server script.
- One screen shot showing your server script generates zero warnings when run through the `pycodestyle` style-checking utility.
- One or more screen shots showing your client/server work as expected. Your screen shots must demonstrate that your server rejects invalid inputs. Examples of invalid inputs include:
  - An unsupported command
  - Too many inputs
  - Too few inputs
  - Inputs of the wrong type, e.g. a string instead of a number
  - A negative number when only a positive number is OK
  - A purchase attempt without enough cash on hand
  - A sale attempt without enough shares on hand

Appendix: Python scripts via a Windows prompt

You can freely ignore this appendix if you use MacOS, or if you intend to always run your Python scripts via the Anaconda Prompt.

1. During the installation of Anaconda 3, tick the box to add the path to python.exe to your PATH environment variable.
2. The remaining instructions will allow you to run a Python script from a Windows command prompt by simply typing "\<script name> \<argument(s)>" as well as "python \<script name> \<argument(s)>". They summarise the contents of this Stack Overflow article: https://stackoverflow.com/questions/29540541/executable-python-script-not-take-sys-argv-in-windows
   a. The Registry key
      `HKCR\Applications\python.exe\shell\open\command`
      must contain the string
      `"<Path to python.exe>\python.exe" "%1" %*`
   b. The Registry key
      `HKCR\py_auto_file\shell\open\command`
      must contain the string
      `"<Path to python.exe>\python.exe" "%1" %*`
   c. In either of these Registry keys, the trailing `%*` *might* be missing, in which case you should (carefully) add it.