**Final Project Report Contents and Project Grading Information**

Even if you choose not to do final project parts 4 and/or 5, you should still submit this report about final project parts 1 – 3.

* Describe *briefly*, but *informatively*, an implementation decision you made (i.e., where the implementation details were not specified in the requirements) in two (2) of the final project parts (not including part 2 because it required no independent decisions).
* Describe *briefly*, but *informatively*, how you tested parts 1, 3, 4 and 5 to assure that you had met the requirements.
* With the final version of the server you submit, find the parameters that allow your server to run at a steady state on your computer with the value of **MAX\_LETTERS = 1 billion**.

For example, on my machine (this is my part 3 so there is no issue of slow clients), when running producers and consumers simultaneously, using a BUFSIZE of 4K, my steady state is this:

./producers 3333 600 10.0 1 &

./consumers 3333 600 10.0 1 &

With producers and consumers both arriving at a rate of 10/second, all of them succeed. If I change the rate slightly, to 12/second, then I get failures: rejections and empty results files.

Try varying both the client arrival rate (as in my example above) **and** varying BUFSIZE. Discuss the results that you get, and their meaning. For example, why does this happen, what do empty txt files mean, why do you get the REJECT versus the BYTE\_ERROR messages, and so on.

If you do parts 4 and 5, discuss the effects of slow clients and handling them. And if you do part 5, discuss how the statistics that you gathered gave you insights into the behavior of your server.

During your final project “live grading”, you should be able to demonstrate what you wrote about this on your machine.

**Scoring**: If you do not do one of the final project parts 4 ***or*** 5, you can score up to 85% on the project, and if you do not do both parts 4 and 5, you can score up to 70%. Parts 1-3, the report and live grading are integral to the project. The extra clients in part 5 can earn up to an extra 5% each.

**Note**: completing part 5 requires the extra statistics listed in the part 4 specification, so not doing part 4 means not handling the rejection of slow clients.