

PA5 Demo Instructions

1. Run command:

```
./client -n 15000 -p 15 -w 500 -b 100
```

This should show correct histogram count (i.e., 15K) for each patient. **Deduct 30 pts** otherwise.

2. Run command:

```
./client -n 15 -p 1 -w 100 -b 100
```

There should not be any deadlock. **Deduct 5 points** otherwise. Deadlock is avoided by writing the warm up phase with some extra caution (stop sending after seeing a quit)

3. Download the PA5 PDF handout to the BIMDC directory, make sure that it has permissions if necessary, and then run the following command to request its transfer:

```
./client -f handout.pdf -w 50
```

```
diff BIMDC/handout.pdf received/handout.pdf
```

Deduct 20 pts if the files differ.

4. Open the current directory, which should not have any fifo files remaining. **Deduct 5 points otherwise.**
5. Open Histogram.cpp. There should not be any mutex lock there. **Deduct 5 points** otherwise.
6. Open client.cpp: it should have a single event polling thread and p patient threads. The event polling thread should have the following high-level functionalities. If they are all there, no deduction:
 - a. Priming phase (5 pts)
 - b. State management (10 pts)
 - c. Channel reuse until quit is found (10 pts)
 - d. Proper loop termination (send and received count match) (5 pts)
 - e. Cleaning all heap allocated objects (5 pts)
7. Report should show the runtime comparison with varying w against PA4. For data requests:
 - a. The runtime of PA5 should not be any slower. **Deduct 5 points if PA5 is slower.**
 - b. The point of diminishing return should be mentioned - **deduct 5 points** otherwise. Compare this point against the same for PA4. This time, the point may shift to the right or at least, stay roughly the same. But it should not be any worse.
 - c. Compare file transfer runtimes of PA4 and PA5 for the same file. They should be roughly the same (i.e., there is no reason to see any differences)
8. **Deduct 20 points** if there is no video demo link.