PA 6 report
Arthur Chen
327003368

Rubric:

Report should show the runtime comparison with varying w against PA5.

1. Are you seeing any difference? Why do you think you are seeing a difference? Repeat some experiments on the localhost. Are the runtimes now matching with those of FIFO from PA5? If so why? Deduct 5 pts if this question is not answered.
2. The point of diminishing return should be mentioned - **deduct 5** points otherwise. Compare this point against the same for PA5.

Video link:

demo: https://youtu.be/MbIyetWd304
bonus: https://drive.google.com/file/d/1Cz9fXuZ5mtkxCVyNatSP_-8u9hz6EsR7/view?usp=sharing

Data requests PA5 vs PA6:

Command used:
PA5: ./client -n 15000 -p 15 -w X -b 1024
PA6: ./client -n 15000 -p 15 -w X -b 1024

-w	10	20	30	50	100	200	300	350	400	500
PA5	86.21	61.14	40.40	31.93	24.44	24.58	21.32	22.82	23.86	26.10
PA6	73.31	38.66	27.31	28.44	27.16	29.89	35.46	40.94	32.71	37.91

The point of diminishing return for PA5: 300
The point of diminishing return for PA6: 100

Observation:

Although PA6 has a lower point of diminishing return, PA6 preforms better with lesser number of the worker.

PA6 has worse performance comparing to PA5 on average as the number of worker increases. I believe this is due to the time taken for connection of TCP is significant.

After the program has reaches their point of diminishing return, extra connections of worker threads/channels have negative impact on the time performance.

File transfer PA5 vs PA6:

Command used:
PA5: ./client -f X -w 50
PA6: ./client -f X -w 50 -o 192.168.1.149

-f	12.csv	handout.pdf
PA5	1.54879	1.753
PA6	0.308	1.134

Observation:

using TCP to transfer file is significantly faster.