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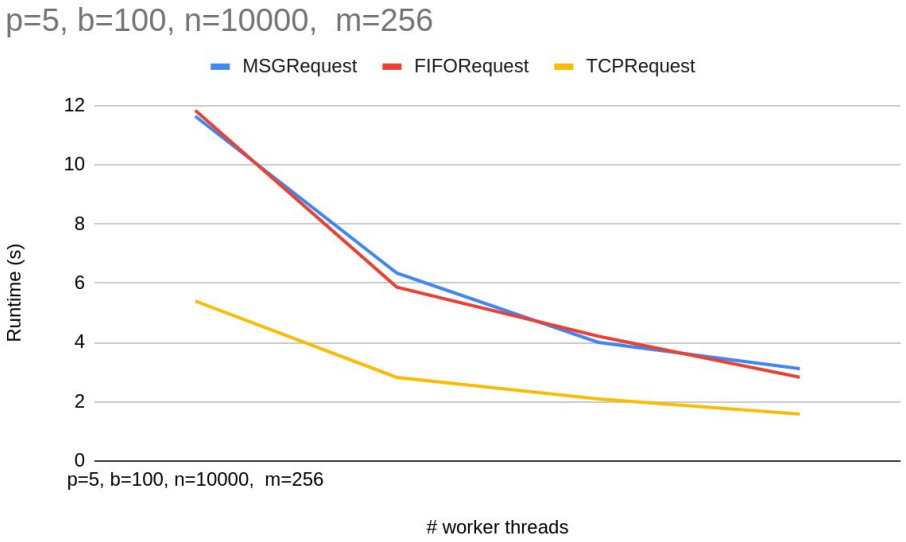
PA6 Report

Programming assignment 6 adds TCP connection potential to the previous assignment's base code and adds 2 additional input arguments, -h for specifying the host name and -r for specifying the port number of the server process. Varying the command line arguments result in different runtimes for each of the various IPC. Results can be found below with varying values of of threads and requests for TCP, FIFO and MQ.



	p=5, b=100, n=10000, m=256			
w=	25	50	75	100
MSGRequest	11.63693	6.346589	4.003778	3.117087
FIFORequest	11.831734	5.868954	4.211645	2.825743
TCPRequest	5.399893	2.820931	2.09189	1.58057

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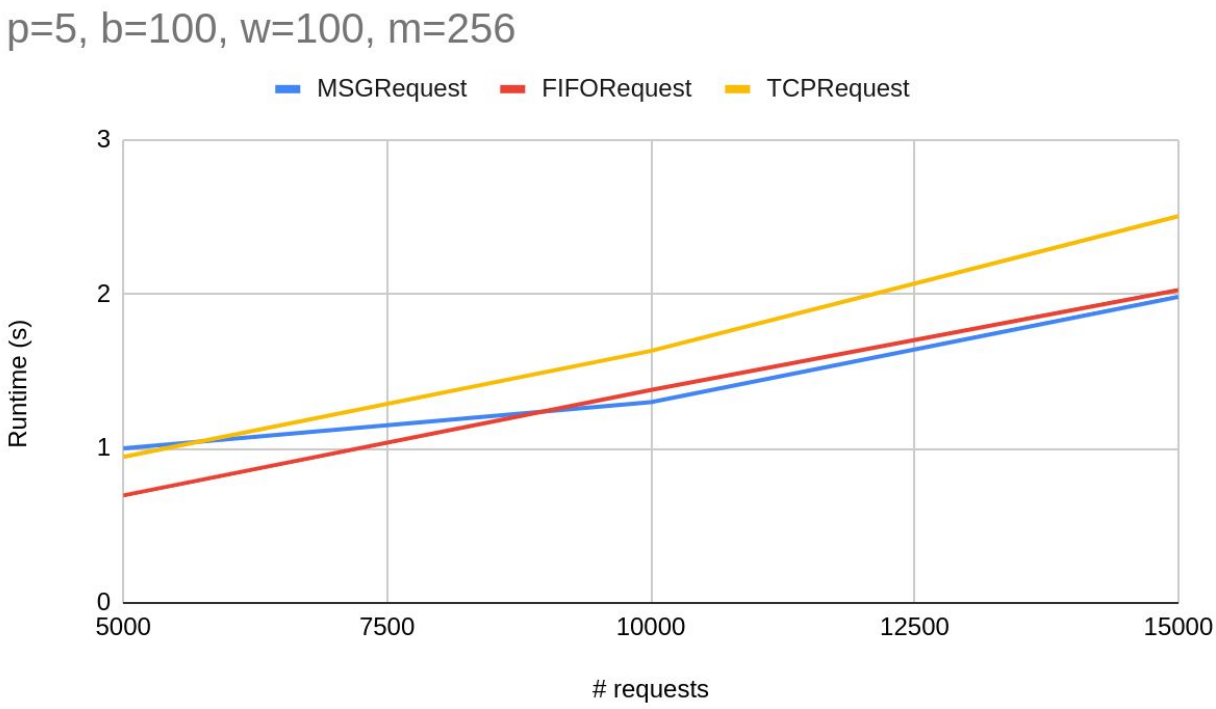

n=	5000	10000	15000
MSGRequest	1.00134	1.300344	1.982
FIFORequest	0.695846	1.379093	2.025595
TCPRequest	0.944822	1.631738	2.505027

As you can see above the TCP requests have overall lower runtimes compared to the Message Requests and FIFO Requests, even as the number of worker threads increased. However, when increasing the number of requests per patient the TCP request had runtimes that were above the other two connection types.

During testing it was discovered that there is a limit on the number of requests that can be made by the TCP request, which is around 20000 requests per patient