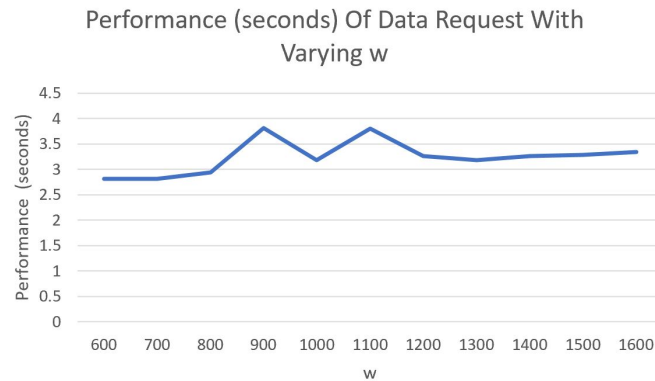


Sumedh Tadimeti
PA4 - Threading and Synchronization
April 9th, 2020

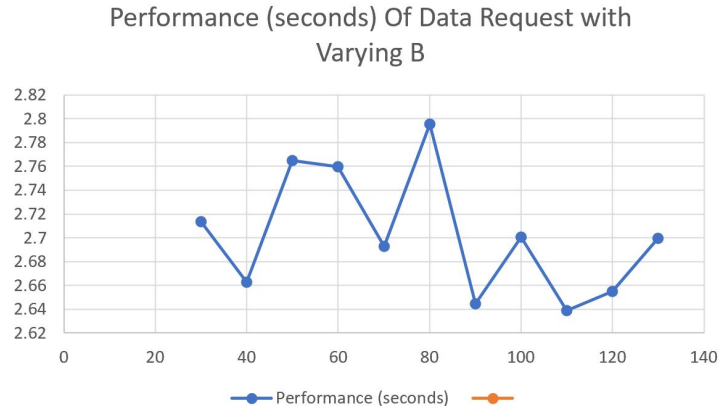
Data Requests:

Below are the tables and graphs for data requests:

Data Request	
w	Performance (seconds)
600	2.81144
700	2.81522
800	2.93574
900	3.81291
1000	3.17893
1100	3.79695
1200	3.26412
1300	3.17605
1400	3.25638
1500	3.28074
1600	3.33896



Data Request	
b	Performance (seconds)
30	2.71352
40	2.6625
50	2.76489
60	2.7597
70	2.69294
80	2.79528
90	2.64446
100	2.70043
110	2.63879
120	2.65503
130	2.69957

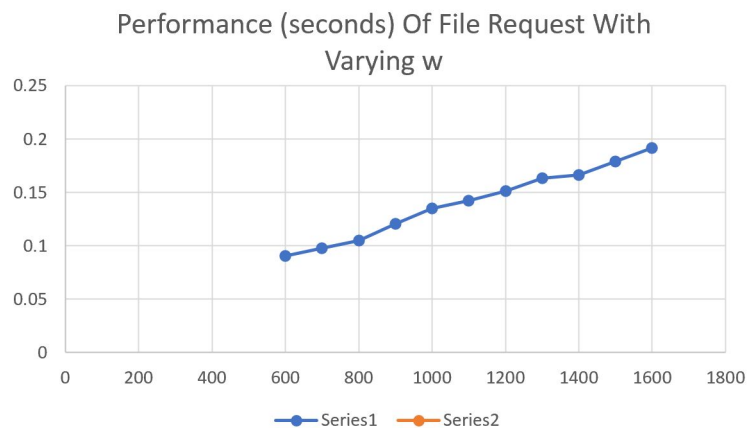


When coming to the change of performance when requesting data points with changing w as the number of w increases the performance increases. Other than a few outliers which can be due to many lurking variables it follows a linear scaling. However, there is no correlation between performance of data requests and b. This might be due to many lurking variables like background processes and pre-existing threads.

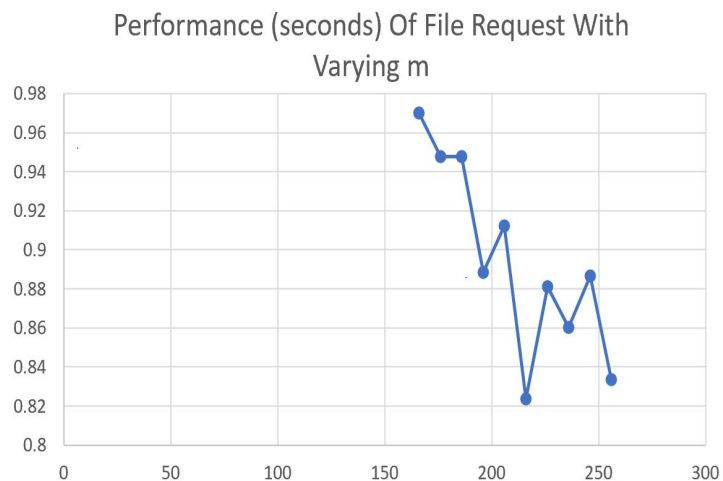
File Requests:

Below are the tables and graphs for file requests:

File Request			
w	Performance (Seconds)		
600	0.0907		
700	0.09764		
800	0.10503		
900	0.12069		
1000	0.13497		
1100	0.142		
1200	0.15134		
1300	0.16306		
1400	0.16653		
1500	0.17922		
1600	0.19174		



File Request			
m	Performance (Seconds)		
256	0.83345		
246	0.88645		
236	0.86021		
226	0.88117		
216	0.82381		
206	0.91218		
196	0.88835		
186	0.94784		
176	0.94793		
166	0.96997		



Much like above, the performance when requesting files with changing w increases as the number of w increases. There is a pretty strong linear correlation here. On the other hand, as the number of m decreased the performance decreased. There is not a strong linear correlation here, but you can find a line of best fit, and vaguely observe one.