

Project 2 Write Up

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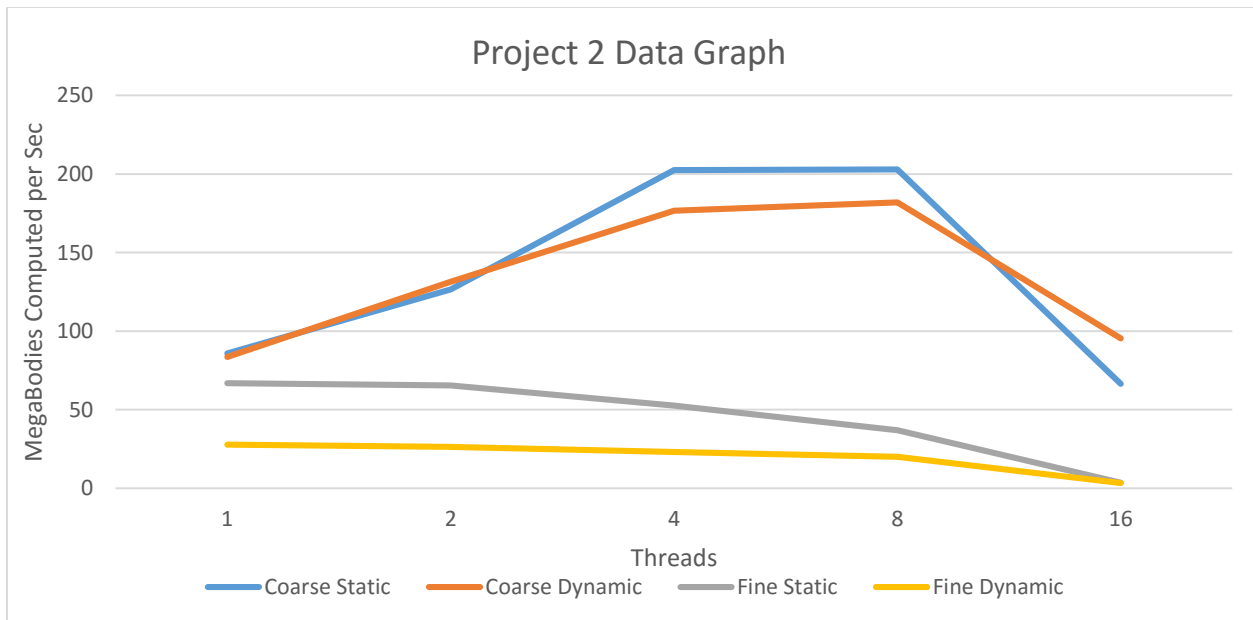
CS 475

When going through this project I decided to use the Kelly ENGR lab computer terminal. For last couple projects I was using the flip server OSU offers, but when looking at its uptime when I was using it concerned me. I was right to switch to it because I had an uptime of “load average: 0.07, 0.05, 0.01”. While computing this project I was using 8 processors the whole time.

This is the table of data I gathered for Project 2

COARSE				FINE			
STATIC		DYNAMIC		STATIC		DYNAMIC	
Threads	MegaBodies	Threads	Megabodies	Threads	MegaBodies	Threads	MegaBodies
16	66.401	16	95.308	16	3.45	16	3.376
8	202.909	8	181.9	8	36.901	8	20.058
4	202.398	4	176.59	4	52.603	4	23.126
2	126.611	2	131.311	2	65.479	2	26.234
1	85.679	1	83.526	1	66.928	1	27.722

This is the graph we got from the data above.



I noticed that the sweet spot when using Coarse-Grained parallelism is between 4 and 8. Then with Fine-Grained parallelism the more threads you use the worse it gets. Fine-Grained is also significantly slower than Coarse-Grained. Lastly, I can see that Static scheduling is proving faster than dynamic scheduling.

I believe that Coarse-Grained is much faster because while it goes through fine grained it has to go through an entire for loop instead of a for loop that is spilt up and computed at the same time.