CISC 235 2015W
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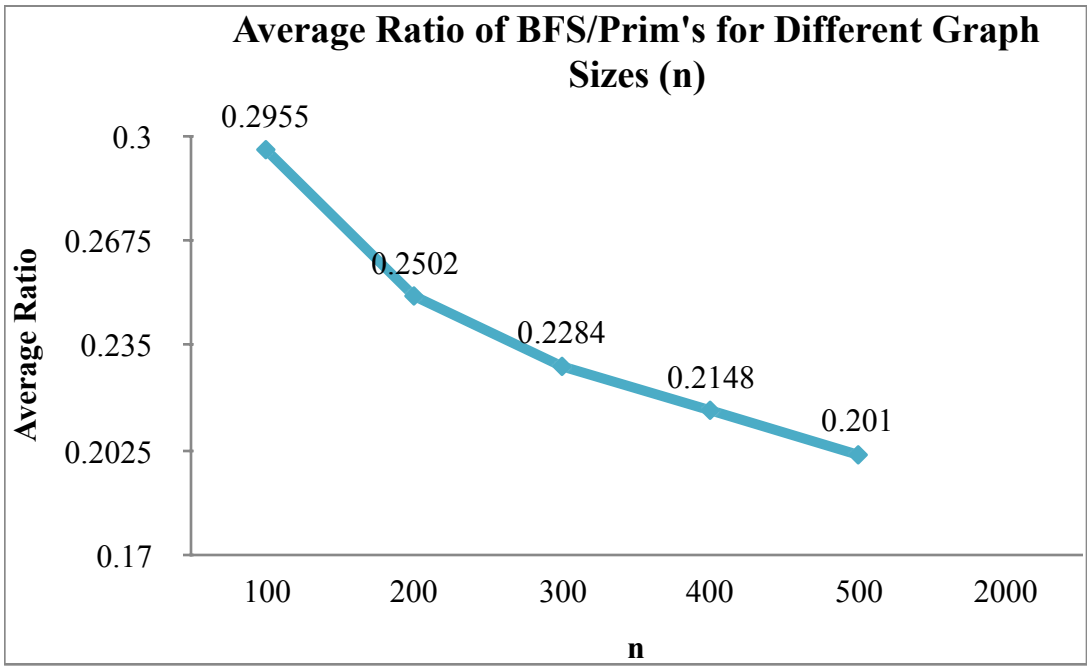
I confirm that this submission is my own work and is consistent with the Queen's regulations on Academic Integrity.



The graph showing the data taken from running my program shows an exponential decrease in the average ratio of Breadth First Search/Prim's MST Algorithm as the size of the graph increases. From this we can see that as the graph increases in size, BFS becomes much less efficient in terms of the weight of the spanning tree it produces, in comparison to Prim's minimum spanning tree. This is probably because as the graph size grows, so do the possible minimum spanning trees, making it less and less likely that BFS will produce a tree with a low weight.

It is also notable that for each value for n, the weights of the trees produced using Prim's on each of the 10 random graphs showed very little fluctuation, despite the random values used in the graphs.

I also ran the program using 1000 as a value for n, and got 1.96 as my result. From this, I would estimate that when n is 2000, the Average ratio would fall around 1.9, or slightly higher.