SUMMARY

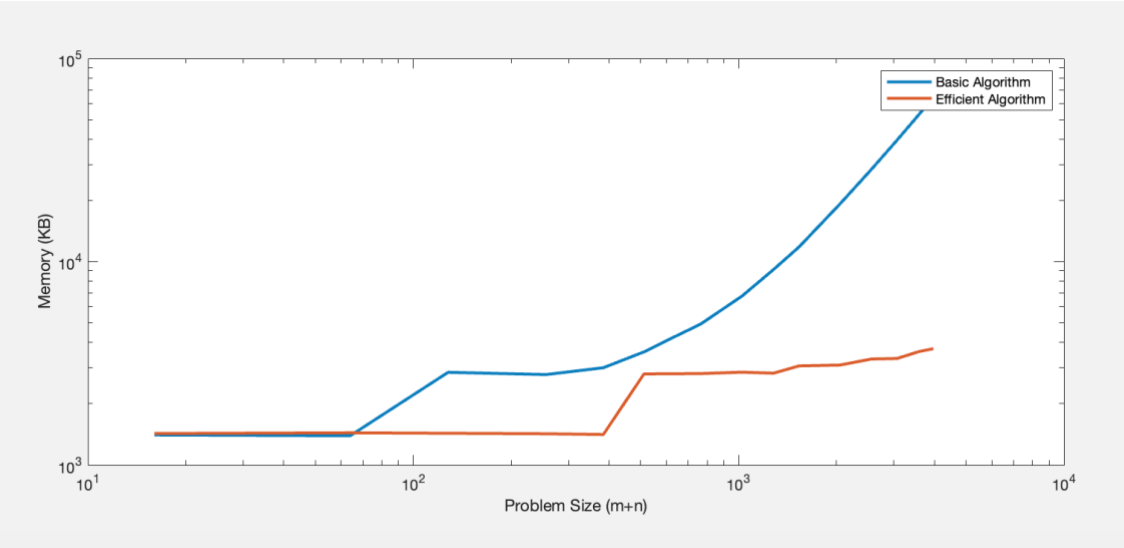
USC ID/s: 1417356257(Qingyu Zhou) ; 5804740637(Rajasimha Reddy Jerry Sivaram Reddy)

M+N	Time in MS (Basic)	Time in MS (Efficient)	Memory in KB (Basic)	Memory in KB (Efficient)
16	0.15	0.255	1404	1428
64	0.393	0.187	1392	1440
128	0.625	0.561	2856	1432
256	0.602	0.505	2784	1424
384	1.719	1.084	3008	1412
512	2.135	1.997	3600	2804
768	3.647	3.37	4956	2816
1024	5.099	6.97	6768	2860
1280	8.985	9.133	9144	2828
1536	10.588	10.58	11840	3072
2048	18.471	24.314	19208	3100
2560	28.631	34.672	28452	3320
3072	42.437	45.186	39664	3340
3584	54.63	68.499	52968	3612
3968	73.002	104.901	64356	3732

Datapoints

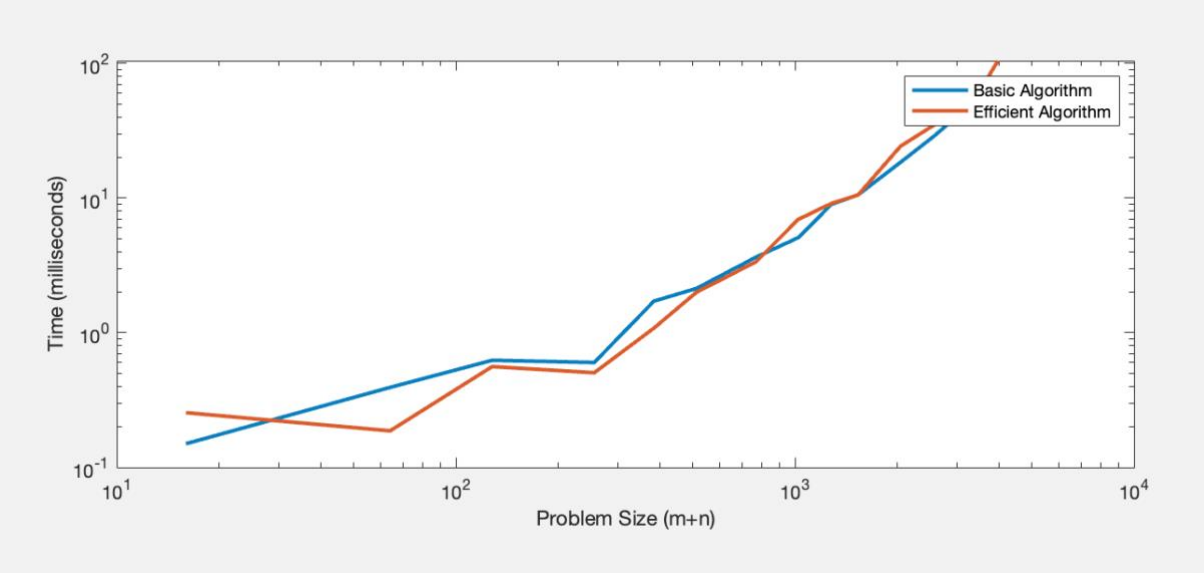
Insights

Graph1 – Memory vs Problem Size (M+N)



Nature of the Graph (Logarithmic/ Linear/ Polynomial/ Exponential)
Basic: Polynomial
Efficient: Linear
*Explanation: The basic algorithm builds a (m*n) array storing the minimum costs, so the memory used by basic algorithm is O(m*n). The efficient algorithm only takes a 2*(m) array for minimum costs, which is O(m).*

Graph2 – Time vs Problem Size (M+N)



Nature of the Graph (Logarithmic/ Linear/ Polynomial/ Exponential)
Basic: Polynomial
Efficient: Polynomial
*Explanation: Both of the basic algorithm and efficient algorithm need to calculate (m*n) elements of the minimum cost table, so the time of both algorithms is O(m*n).*

Contribution

(Please mention what each member did if you think everyone in the group does not have an equal contribution, otherwise, write “Equal Contribution”)
<USC ID/s>: <Equal Contribution>
1417356257 : Equal Contribution
5804740637 : Equal Contribution