# Sequential Matrix Multiplication
Regd no: 22555

Objective

Given square matrices A and B size N. Develop a sequential C code for Matrix. Perform a matrix multiplication. Use the method where rows of A are multiplied by columns of B. Tabulate the execution time taken with different sizes of the matrices. Plot the change in the total execution time.

Results

Size	Time Taken(s)	Average
100	0.007526	
100	0.006833	0.007482
100	0.008087	
500	0.618611	
500	0.616116	0.6189193333
500	0.622031	
800	2.571338	
800	2.570593	2.593571
800	2.638782	
1000	5.239224	
1000	5.380874	5.567787333
1000	6.083264	
2000	84.969289	
2000	92.210735	89.064508
2000	90.0135	
5000	1494.147554	
5000	1491.22175	1498.585461
5000	1510.38708	

Time Taken(s) vs. Size
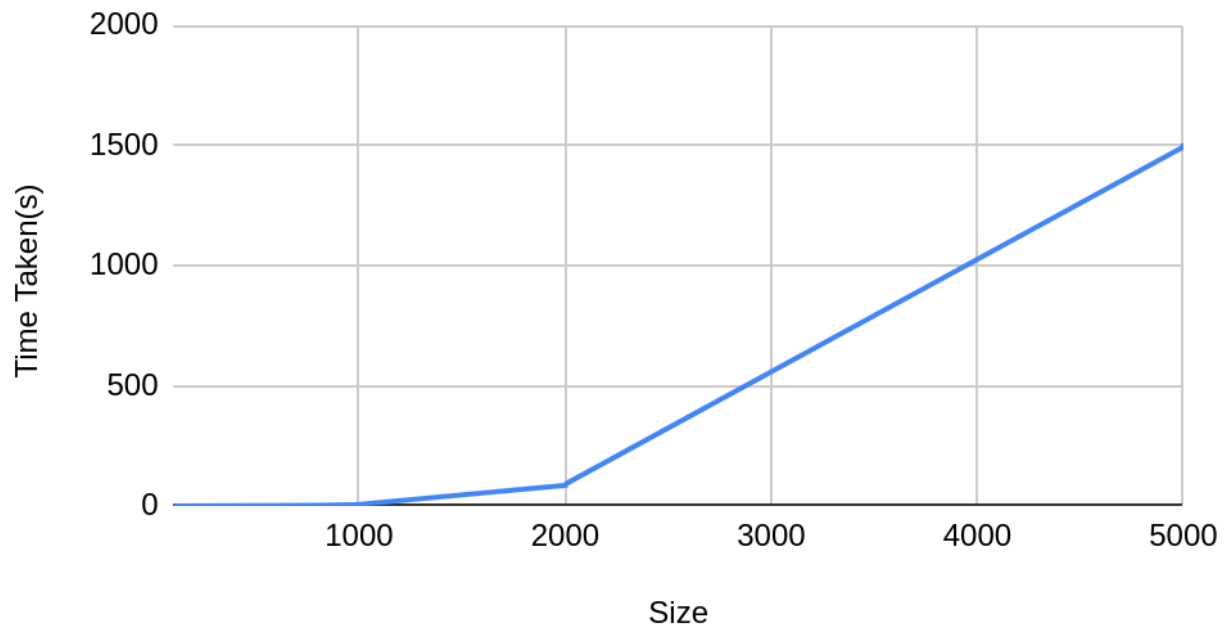
Observation

There is quadratic increase in the time with the increase in the size of the matrices.