1. Given square matrices A and B size N.
2. Develop a sequential C code for Matrix Multiplication: C=AXB. Use the method where rows of A are multiplied to columns of B.
3. Check for correctness of your program.
4. Execute the code for Matrices of Int, for size N = 10^3, 10^5, 10^6, 10^8 and 10^10.
5. Tabulate the execution time taken in each case, wherever you have a definite estimate of execution time. It is good to take the average time of a few runs on the same set of matrices. Mention in the report the number of runs you have taken to consider the average execution time.
6. Plot the change in the total execution time to compare.
7. Interpret or explain the changes you find in the plot(Item No 6).
8. Can you relate the changes in the plot in Item No 6, to the Hardware you are using?
9. What if you use submatrix multiplication to accomplish the task? Your Comments with justification.