Assignment-3

Analysis and Design of Algorithms

Deadline: 10.01.2024 15:30 PM

Write a C++ program to find the optimal number of multiplications required to multiply 5, 10, 15, 20, 25, and 30 matrices in a chain using dynamic programming paradigm. Also, extract the optimal order in the chain of the above-mentioned matrices. Get the size of each matrix in a chain of matrices by randomly selecting dimensions satisfying the constraint of multiplying any two matrices. Estimate time complexity in terms of asymptotic notations. Find out the execution time taken for all instances of matrices in a chain. Report this in a document file. Compare your analysis in asymptotic notation and the execution time taken in the case of each chain. The comparison should include text, tables, and graphs.

Note: Please follow the deadline. There is no tolerance for cheating or plagiarism. Compress your file as yourname-yourrollno-A2.zip. Submit it to ADA-F23-A3 folder on fs