Indian Institute of Engineering Science and Technology, Shibpur

Department of Information Technology
6th Semester, 2018(HX & HY)

Assignment 3- Optimization

1. **Matrix Chain Multiplication:**
   Given a sequence of matrices, write a program to find the most efficient way to multiply these matrices together. The problem is not actually to perform the multiplications, but merely to decide in which order to perform the multiplications.

2. **Shortest Path Problem:**
   Given a graph and two vertices as source and destination, write a program to find the shortest path between source and destination, if it exists. You can use any algorithm, and the graph can be directed or undirected. Comment on the complexity of your algorithm.