

DEPARTMENT OF INFORMATION TECHNOLOGY
DATA STRUCTURE LAB
BATCH- HY

Assignment 5

Due date: 30th Aug 2018

(Each program should use the linked structures to solve the given problem.)

1. Write a function to store a 2D sparse matrix using a single linked list in such a way that it will take less amount space than the 2D sparse matrix. Use this program to add two sparse matrices.
2. Write a program to categorize the words having same length with their frequency of occurring in a given text. The list should display the frequency of each word corresponding to a specific length taken as an input.
3. Suppose 7 persons are recruited in a company to do their specific tasks. Each task requires a fixed amount of time to complete and all those tasks are needed to be done in a single platform that can be shared by each employee. But as per the regulations of the company every employee should report to his/her immediate boss after doing the work every 2 units of time only. The following table shows the name of the employee, their assigned task number and total time required to complete their tasks. Find the order of the employees with different time stamps to accomplish the assigned tasks. You have to show starting time, ending time and the different time instants at which the employees shared that common platform. Take name of the employee as input who will start work first from 0th time instant.

Employee Name	Task Number	Time to complete
A	2	10
B	5	11
C	7	5
D	1	8
E	3	19
F	6	23
G	4	11