

# Data Structure Assignment 4

## Programming Homework1

(Textbook p.186 Exercises6(e))

這次的題目是利用 Linked-list 這種資料結構來解決 Sparse Matrix 相乘的問題。

題目 Input 為一個  $m \times n$  矩陣跟一個  $n \times p$  矩陣, Output 應為一個  $m \times p$  矩陣。

(The homework is sparse matrix multiplication and the data structure you should use is "Linked list". The Input is one  $m \times n$  matrix and one  $n \times p$  matrix. The output should be one  $m \times p$  matrix.)。

Example input:

2

3

1 0 0

2 3 0

3

2

9 8

0 7

0 0

Example output :

9 8

18 37

# Data Structure Assignment 4

## Programming Homework2

(Textbook p.186 Exercises6(f))

同程式第一題，利用 Linked-list 解決 Sparse Matrix 轉置的問題

(Use linke-list datastructure to implement the transpose function of sparse matrix)

Example input:

3

3

1 2 3

4 5 6

7 8 9

Example output :

1 4 7

2 5 8

3 6 9

### General Information:

- Deadline : 2016/12/2 23:55.
- Upload your assignment to Moodle system.
- Upload file format: Student-Id\_Name.rar , Ex.P76991094\_王小明.rar
- Your file should consist of the following items: **Source Code & Readme file**  
(Program description)
- Late homework will not be accepted.
- Any copies will be scored as zero. Do not plagiarize