類組：電機類　科目：資料結構(3002)　　　　　　　　　共＿＿1＿＿頁　第＿＿1＿＿頁

※請在答案卷內作答

問答題：

1. (15%)Write a pseudo code for poping data from a stack.

2. (20%) Given a link list structure as

```
struct Node
{
    int data;
    struct Node* next;
};
```
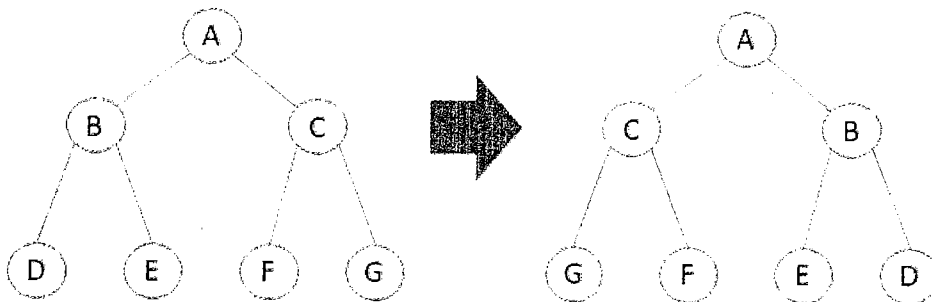
A list head: struct Node *Head, A particular middle list element struct Node *Mid. Write a program to delete Mid from the list.

3. (20%) Illustrate how data changes while using mergesort to sort:{50 43 51 83 60 33 21} and write down merge sort's time complexity.

4. (10%) "Block chain" is one of the hottest topic in the information technology. Which calculation algorithm is the core of block chain? Briefly describe this algorithm.

5. (20%)Please use recursion to flip(left-right) a binary tree.

ex:

6. (15%)What's the two common data structure to store Graph ? Compare the pros and cons in using memory between this two data structure.