Assignment 3
Due date: 4 December 2024
TA: 薛凱駿, 楊承霖, 吳奇軒 (ECG 706)

1. (30%) Rewrite the postorder tree traversal algorithm in the lecture to be an iterative one.

    Note: You can submit a C *function* or a *pseudo-code*.

2. (30%) Write a C function to test if a doubly linked list forms an arithmetic progression（等差級數）(Please consider the following doubly linked list ADT implementation).

```c
typedef struct node *nodePointer;
typedef struct node {
    nodePointer llink;
    int data;
    nodePointer rlink;
};

struct list {
    nodePointer pHead; // points to the head of the list
    nodePointer pTail; // points to the tail of the list
};

int isArithmetic(list &L) {// Please complete this function
    ...
}
```

3. (40%) Write a C function which searches for an arbitrarily given key (i.e., integer key in the lecture) in a **max heap**. Also analyze the computing time of your function.