Lab 4: Infix to postfix conversion using Stack

Compile with GCC 5.2.1@Ubuntu Gnome – VM workstation

With C90 ‘Standard’

**4.**

Use Single Linked List

Use SLL to stack, array

Functions

init(return Pointer, with allocation)

isEmpty(get Pointer, return if pointer is empty or not)

push(get LinkedList and value, push value front of Linked List)

push\_back(get LinkedList and value, push value back of Linked List)

top(get LinkedList, return top value of LinkedList)

back(get LinkedList, return back value of LinedList)

pop(get LinkedList, return top value of LinkedList, erase front)

pop\_back(get LinkedList, return back value of LinkedList, erase back)

view(get LinkedList, print elementary of LinkedList)

Algorithm

* + If ‘(‘ inputed, push ‘(‘ to stack,
  + If ‘)’ inputed, pop at stack while top of stack == ‘(‘ , and push to postfix list
  + If operator inputed, pop at stack, until the value of top’s order is higher priority then inputed operator. Input the poped operator to postfix list.
  + If ‘#’ inputed, pop at stack while isn’t empty, push at postfix list.