# Lab 5

# CSE 4304

# Group C

# 07/02/2017

**Problem Definition:**

You need to implement a stack for this lab. The main section of the program has been illustrated below:

//Global Variables

char stack[100], top = 0, max = 99; //initialization

//Push function

void push(char item){

//implement push operation

}

//Pop function

void pop(){

//implement pop operation

}

**Tasks:**

1. Given a proper mathematical expression (infix expression) using a string your program must check whether the expression is properly balanced or not using stack. For example,

Input: [A + {B \* C – {(D / E) \* (E ^ 2)}} + 2]

Output: Valid

Input: [A+{B\*C–(D/E)\*(E^2)}}+2]

Output: Invalid

Input: [A+{B\*C–{(D/E)\*(E^2)}+2]

Output: Invalid

1. Given a proper mathematical expression (infix expression) using a string your program should print the postfix expression. For example,

Input: (5\*(6+2)-12/4)

Output: 5, 6, 2, +,\*, 12, 4, /,-

1. Given a proper mathematical expression (postfix expression) using a string your program should print the result of that expression. For example,

Input: 5,6,2,+,\*,12,4,/,-

Output: 37