# EASTERN UNIVERSITY, SRI LANKA
## EXTERNAL DEGREE
## SECOND EXAMINATION IN SCIENCE -2009/2010 (2012)
## FIRST SEMESTER (May /June, 2012)
## EXTCS 251 – PRACTICAL WORK ON EXTCS 201

Answer **all** questions                                        Time: **Two** hours

A) Write a C++ program for the following Stack operations which:
   a.  Create a stack;
   b.  Check empty stack;
   c.  Return top element of the stack;
   d.  Insert an element in to a stack;
   e.  Remove an element from a stack.

The equivalent digits numbers X and Y are given below, write a program to find out the sum of these two numbers using **stack** data structure.

And also find out the result of the addition that represents an array Z like this,

$$X = 2\ 5\ 6$$
$$Y = \underline{5\ 8\ 7}$$
$$8\ 4\ 3$$
$$Z = [8, 4, 3]$$

B) Given are two one–dimensional arrays A and B which are not sorted.
   Write a program in C++ to sort them in to a single array C that contains every item from arrays A and B in **ascending** order.

For example:
        Array A= {26, 82, 18, 36, 1};
        Array B= {14, 32, 20, 30, 5}.
 Output:
        Array C= {1, 5, 14, 18, 20, 26, 30, 32, 36, 82}.