

## LAB 02

### Question 1

Implement the following method using array and linked list on asking user to push and pop the integers and get the size of the stack.

*push(e):* Adds element *e* to the top of the stack.

*pop():* Removes and returns the top element from the stack(or null if the stack is empty).

*top():* Returns the top element of the stack, without removing it (or null if the stack is empty).

*size():* Returns the number of elements in the stack.

*isEmpty():* Returns a boolean indicating whether the stack is empty

### Question 2

Implement the following method using array and Linked List on asking the user to enqueue and dequeue the integers and to display the elements in the Queue.

*enqueue(e):* Add element *e* to the back of the Queue *Q*.

*dequeue():* Remove and return the first element from queue *Q*.

*first():* Return a reference to the front of the queue *Q*, without removing it; an error occurs if the queue is empty

*is\_empty():* Returns true if queue *Q* does not contain any elements.

*len(Q):* Return the number of elements in queue *Q*;