TP 07: Doubly Linked List

- The objective of this Lab is
  - To practice creating and using doubly linked list data structure in C++ language
- Individual work
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- Submit to Moodle (do not zip)
  - *A pdf report (cover, exercise and solution with screenshot)*
  - *Source codes*

Write C++ programs to create and implement doubly linked list data structure below.

1. Create an element structure and a list structure that can store a list of integer numbers. Create 4 functions to i) Create an empty list, ii) Add a number to begin of list, iii) Add a number to end of list, iv) Add a number to specific position in the list, and v) display list.

2. Using the doubly linked list from problem above. Get a number n from a user. Generate n random numbers and store in the list. Display the list. Compute summation and average of all numbers in the list then display the result on screen.

3. Using the doubly linked list from problem above. Create functions to delete the element from the list: (1) delete one element from beginning, (2) delete one element from the end of the list, (3) delete one element at the position. Display all data in the list.

4. Using the doubly linked list from problem above.
   a. Give the minimum number in the list,
   b. Give the maximum number in the list.