Exercise – All sections
Linked List
CS 262 – Spring 2022

The main purpose of this exercise is to practice basic operations of linked list.

Additional material: A Lab recording on how to implement a linked list is available at:
https://us-lti.bbcollab.com/recording/223f547933524796bc9bf735ade89e76

Description of the program

Code a C program that prompts the user to enter an integer to insert it in a linked list as long as the number entered by the user is greater than or equal to the previous one.

When the user enters a number less than the previous one, the contents of the list are printed, the dynamic memory is freed, and the program ends.

Example:

```
Enter a number: -6
Enter a number: 0
Enter a number: 0
Enter a number: 4
Enter a number: 2

*** My Numbers ***
-6, 0, 0, 4, 2

That's all, BYE 😃
```

Note:

- Use `fgets()` and `sscanf()` to read the user input
- Use Valgrind to verify there are no issues with the dynamic memory allocation

Here is an alternative how to define the node for your list:

```
typedef struct node{
      int number;
      struct node *next;
}node;
```

Valgrind is already installed on zeus. To run valgrind create an exe using the `-g` flag in `gcc`.

Example:

```
gcc lists.c -o lists -g -Wall
```

Run your exe as follows:

```
valgrind --leak-check=yes ./lists
```