Lab assignment 10

Reading material: Bradley chapter 8.1, malloc, free man pages

- Declare a pointer to an integer, and assign it to dynamically allocated variable. Assign a value to the variable. Increment the value by passing the variable by reference to a function named Increment(). In the main program, print the value of the variable before and after incrementing. After this, clear the allocated space and exit the program.
- Develop a program that creates a linked list of integers. Accept the integers as command line arguments. Traverse the list from the beginning to the end. Print the address of the head node and the number of elements in the list. Define types NodeType and ListType and write functions MakeNode(), AddNode().
- Develop a program that demonstrates some of the differences between linked lists and arrays. First, create a list of N elements. For each element, the data stored in the list is the address of the element. Next, create an array of N elements (for example, they could be integers). As before, store the addresses of the array elements in the array. Print the elements of the list and the array. What do you observe?
- Develop a program which accepts integers from the user and makes a list. The user *does not* provide the number of elements. Continue accepting integers until the user inputs -1. Then, use a function called Increment() which increments all elements in the list. In the main program, print the input integers in a single line before and after incrementing. You will need to use dynamic allocation since the number of elements are not known in advance. Make use of functions from question 2.