

## Lab 4.2 – Create an array list

### Learning Goals

- 1) Develop your ability to create object like functionality in C using a combination of structs, typedef, and pointers.
- 2) Develop your ability to use malloc to request memory on the heap.
- 3) Develop your skills with arrays.

### Background

List functionality is fundamental to all modern programming languages. In Python, lists are created with the command “[ ]”. In Java, the ArrayList object provides this functionality. In C, such functionality is not part of the standard libraries.

### Your Task

In this assignment, you will implement a general list object for integers. The module will provide standard list functions like **append**, **insert**, **get**, **find**, and **delete**.

The interface **intlist.h** has been provided for you.

The test program **listtest.c** has also been provided for you. Listtest needs to read **nums.txt** from **stdin**. For example, you will run the program with a command like the following:

```
./a < nums.txt
```