Won Yong Ha

Professor Jeff Whitmer

CSCI-A 290

4 June 2016

MINI 3 Assignment

1. Pointers in C
2. Precis (Hoover):

A pointer is a construct used to store an address of a variable. We declare a variable to be a pointer-type variable by preceding its name with the asterisk symbol.

1. Summary

A pointer is a value that designates the address, of some value. Points are variables that hold a memory location. We can have a pointer to any variable type. The unary or monadic operator “&” gives the address of a variable. The indirection of dereference operator “\*” gives the contents of an object pointed to by a pointer. We are using pointer because it is the only way to express some computations, it produces compact and efficient code, and it provides a very powerful tool.

My Summary

A pointer is a one of the data types that provides in C. The pointer is not assigned only one type but saving the memory address of the data. Also there are two different ways to using the pointer. “\*” is returning contents and “&” is returning the actual memory address.

1. Summary URLs
   1. https://en.wikibooks.org/wiki/C\_Programming/Pointers\_and\_arrays
   2. https://www.cs.cf.ac.uk/Dave/C/node10.html
   3. http://www.tutorialspoint.com/cprogramming/c\_pointers.htm
2. Struts in C
3. Precis (Hoover):

A structure is a construct used to group a set of variables together under one name. The first step in using a structure is to declare its organization. Structure variables can in many cases be treated exactly like regular variable. However, structures can be combined with arrays, pointers, and other structure, making the syntax and usage complicated.

1. Summary

A structure in the C programming language is a complex data type declaration that defines a physically grouped list of variables to be placed under one name in a block of memory, allowing the different variables to be accessed via a single pointer, or the structure declared name which returns the same address.

My Summary

The structure is a one of the data types in the C language that well organized and easy accessible data structure. Structure can contains many kinds of data at once. Also it can contains pointers too.

1. Summary URLs:
   1. https://en.wikipedia.org/wiki/Struct\_(C\_programming\_language)
   2. http://www.cprogramming.com/tutorial/c/lesson7.html
   3. http://www.tutorialspoint.com/cprogramming/c\_structures.htm
2. Linked Lists in C
3. Precis:

Linked lists are best and simplest example of a dynamic data structure that uses pointers for its implementation. A linked list is a set of dynamically allocated nodes, arranged in such a way that each node contains one value and one pointers. The pointer always points to the next member of the list. If the pointer is NULL, then it is the last node in the list.

1. Summary:

Linked lists are a way to store data with structures so that the programmer can automatically create a new place to store data whenever necessary. Specifically, the programmer writes a struct definition that contains variables holding information about something and that has a pointer to a struct of its same type (it has to be a pointer--otherwise, every time an element was created, it would create a new element, infinitely). Each of these individual structs or classes in the list is commonly known as a node or element of the list.

My Summary

Linked list is a chain of the one structure which contain at least one variable and pointer that stores the address of the next variable. The linked list usually using very complicated or long array that usually cannot determine the length of the array.

1. Summary URLs:
   1. http://www.cprogramming.com/tutorial/c/lesson15.html
   2. http://www.tutorialspoint.com/data\_structures\_algorithms/linked\_list\_program\_in\_c.htm
   3. http://cslibrary.stanford.edu/103/LinkedListBasics.pdf