EECE2080 Midterm

The relationship between an object and class is:

* Object is an instance of a class

What is a abstract class? What are its distinquishing features, (what is a abstract method)

* To be an abstract class, you have to have an abstract method, so virtual in it and a =0

Destructors are useful for what?

* Cleaning up memory/memory management

ADT stands for what?

* Abstract data type

What operations and behavior of these ADT

* LinkedList – find, add, remove
* Stack – pop, push, isempty
* Queue – peek, push, etc.
* List

Look at the interface stacks from the slides

What are the pro and cons of array based and pointer based implementations of the above ADT

* Con of array: you either need to declare an integer as an empty value or you had to down shift if you removed the first element

Pointer memory management (new and delete)

* If you see a new, you should see a delete
  + Determine if the code has worked correctly

Complexity is typically referred to in what ? Ans. Number of operations, size of memory used

* Typically number of operations (which relates to time); could be space/memory related

Able to look at a piece of code and estimate complexity.

* Ex: if you had three variables, n,k,z you’d have complexity n^3

The virtual override question from the quiz; virtual and override are determined at runtime: check quizzes on black board (click them and then the grade)

Exceptions, what are they used for?

* Debugging/bug catching?

Sorting algorithms, which one has best the best Worst case complexity?

* Esp: radix, quick and merge the third good one was

Know how to trace the sorting algorithms discussed in Class

* Ex: drawn

Able to draw and diagram adding and removing a node in in a LinkedList

* Ex: drawn

20 questions multiple choice; need computer

4 written questions (10% each) (tracing and linked list diagrams, probs)