Final Review

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1. **Stuff on Exam**
   - Linked List -> Not Done
   - UML ->Done
   - OOP Concepts -> Done
   - stacks and queues -> Done
   - unit tests -> Watch lecture but pretty much good on this one
   - Templates classes/structs/functions -> Review this on zyBooks
   - Sorting -> Need to study
   - Ethics -> Ask what rubric we are going to use on the final
   - Liked Lists -> Need to study

2. **UML**
   - In UML '-' means private, '+' means public, '#' means protected
   - The first top box is the class name
   - The next boxes are either public, private, or protected
   - To show a class is derived from another you put an arrow from the child class to the parent class
   - The derived class only shows additional members

3. **OOP Concepts**
   - 1. Encapsulation, not giving things to you shouldnt have access to
   - 2. Abstraction, You don't interact with all the interworkings of the class or object
   - 3.Polymorphism, using virtual you can redefine functions in the child classes
   - You can make the virtual function pure virtual, which means the function must be defined in the child class

4. **Stacks and Queues**
   - A stack is like a pile of paper V's a queue is like shopping line
   - A queue is F.I.F.O
   - A stack is L.I.L.O
   - To access the elements you have to get the next element then pop() it off to get to the next one
   - stack <Type> "Name";
   - queue <Type> "Name";

5. **Linked list**
   - Walk = setting current node to it's next node

6. Templates

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7. Final notes

- 4 programming questions(answer 3, get rid of worst one), essay style (ethics, UML)
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