1. **Object Diagram**- Know the difference between a reference variable and value variable
   1. **Reference** – Refers to the object in the heap. Points to the heap, and the values in the heap

Small program, put a breakpoint, execute is at a point and draw object diagram from that. Only reference variables and objects in the heap. **DO NOT DRAW VALUE VARIABLES**

1. State Diagram – States, Transitions, and Actions on the Transitions. Some specifications for the state diagram on a specific scenario, might need to correct
2. SOLID Principles – memorize definition, and then rewrite the definitions in your own words. Need to know how to identify in uml, correct in uml.
   1. How to detect them in code, and then how to correct them.
   2. S – If program is less than .5 cohesion rate, then not cohesive, need to split it.
   3. OCP – Shapes, code may be closed for some functions but open for another. The behavior cannot change
   4. LSP – Using subtypes in place of the supertypes. Using children in place of the parent. About using inheritance and not breaking the code. IS\_A relationship.
   5. ISP – Interface should not have methods it doesn’t need to use.
   6. DIP – Details should depend on abstraction, and abstraction should depend on the requirements?
3. Strategy Pattern? – When there is a method that can be implemented in different ways, use the strategy to implement something.

Can say anything about it, show that you know the principles well.