Software Engineering

The system design phase

* Create the design for your solution
* Concrete on how things work
* Different approaches
  + Top-down
  + Bottom-up
  + Object-orientated
* The top down approach starts with the big picture it breaks down from there into smaller segments
  + Start with an overall solution
  + “zoom in” on your solution
    - “zoom in” on those steps and figure out what they need
* Bottom- up
  + Start with our goal and figure out what we can do to achieve our goal
  + Work your way up
  + Beginnings are small but grow
* Object-Orientated Design
  + Encapsulation
    - The grouping of related ideas into one unit, which can thereafter be referred to by a single name
    - Making fields private
    - Access through public methods
  + Inheritance
    - Subclasses that derive from a parent class
  + Polymorphism
    - Ability of an object to take many forms
* Run time error
  + Your program crashes at runtime