



# Managing Complexity

CS2263 – Systems Software Development

## References

Lu, Yung-Hsiang. 2015. CRC Press. New York. Pp 9-27 (Chapter 8)



# Lecture Learning Outcomes

At the conclusion of this presentation students should be able to:

- List two ways of managing complexity in software programs



# Thinking About Complexity

Speed/Efficiency ▲ 🐢	N/A	1
	N/A	2
	✗	▶ ✓
	Works	



# Managing Complexity

1. Do one thing at a time
  - What is a function?
2. If something is hard, break it down into steps
  - Multiple statements
  - Multiple functions
3. Readability, clarity
  - Variable names
  - Comments
  - Blank lines



# Managing Complexity: Ideas

1. Use functions to hide details
  - e.g. `mallocString()`
2. Don't do two things at once
  - e.g. `*argv++`
3. Don't deal with more than one level of indirection at a time
  - consider `**argv`
  - consider `* (++*argv)`
    - I'm unsure if you can even do this.

