

# COMP 110/L Lecture 1

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Some of the slides adapted from Dr. Kyle Dewey

# About Me

- I research network function virtualization
- This is my first semester at CSUN

# Questions

- CS Major/Non-major?
- Programming experience?
- Not first semester?

# What is Computer Science?

“If you really want to understand something, the best way is to try and explain it to someone else. That forces you to sort it out in your own mind... that's really the essence of programming. By the time you've sorted out a complicated idea into little steps that even a stupid machine can deal with, you've certainly learned something about it yourself.” - *Douglas Adams, Dirk Gently's Holistic Detective Agency*

# What is Computer Science?

- The fundamental core of Computer Science is problem solving.
- Computers do not solve problems, you do
- Computers are dumb!
- It is up to you, the user, to approach a complex problem, study it, understand it, and develop a solution to it.
- Computers only automate solutions

# What is Computer Science?

- Computational sciences have become a fundamental tool of almost every discipline.
- Biologists use massively distributed computing models to simulate protein folding and other complex processes.
- Meteorologists can predict weather and climactic changes with ever greater accuracy.
- Computer Science is not programming.  
Programming is a necessary skill, but it is only the beginning!

# What is software development?

## (General problem solving process)

- **Design**
  - Simply a plan on the construction of a solution
- **Implementation**
  - Building prototype solutions to test the feasibility of the design.
- **Testing**
  - Finding, designing, and developing test cases that can be used to test your solution.
- **Refinement**
  - We may want to make the solution more efficient, cheaper, simpler or more elegant.

# What is programming?



# What is programming?

“In my experience, you assert control over a computer—show it who’s the boss— by making it do something unique. That means programming it...

If you devote a couple of hours to programming a new machine, you’ll feel better about it ever afterwards.”

*-Michael Crichton, Electronic Life*

# Exercise: Make a Sandwich

# Writing Correct Instructions is Hard

- Computer requires unambiguous direction
  - Humans can “figure it out”
- Many commonly-used operations
- IKEA instructions vs. computer instructions

# Programming is a Skill

- Years of practice needed
- You won't be able to write Facebook when you're done with the class
- This class gives a basic foundation to build on

# Syllabus