



Intro to Higher Order Functions

David E. Culler

CS8 – Computational Structures in Data Science

<http://inst.eecs.berkeley.edu/~cs88>

Lecture 3

Feb 8, 2016

Administrative issues

- Tues lab session to help bio 1a!
- Homework 2 due Tuesday
- Project 1 Cuke going out soon
 - First part is homework liks



1/25/16

UCB CS88 Sp16 L1

2

Computational Concepts Toolbox

- Data type: values, literals, operations,
 - e.g., int, float, string
- Expressions, Call expression
- Variables
- Assignment Statement
- Sequences: tuple, list
- Data structures
- Tuple assignment
- Call Expressions
- Function Definition Statement
- Conditional Statement

Iteration:

- data-driven (list comprehension)
- control-driven (for statement)
- while statement



1/25/16

UCB CS88 Sp16 L1

3

Computational Concepts today

- Higher Order Functions
- Functions as Values
- Functions with functions as argument
- Assignment of function values
- Higher order function patterns
 - Map, Filter, Reduce
- Function factories – create and return functions



1/25/16

Big Idea: Software Design Patterns

UCB CS88 Sp16 L1

4



1/25/16

UCB CS88 Sp16 L1

5