CIS 122

Homework 1 Review
Homework Review

- Almost all homework received
  - Everyone has finished parts 0, 1, 2

- Feedback tonight
  - Homework grades
  - Homework solutions

- Review right now
  - Parts 1 & 2
def FtoC(Ftemp):
    """Converts temperature from Fahrenheit to Celsius"""
    Ctemp = (5.0/9.0) * (Ftemp - 32)
    return Ctemp

def CtoK(Ctemp):
    """Converts temperature from Celsius to Kelvin"""
    Ktemp = Ctemp + 273
    return Ktemp
def FtoK(Ftemp):
    """Converts temperature from Fahrenheit to Kelvin"""
    Ctemp = (5.0/9.0) * (Ftemp - 32)
    Ktemp = Ctemp + 273
    return Ktemp

def FtoK(Ftemp):
    """Converts temperature from Fahrenheit to Kelvin"""
    Ctemp = FtoC(Ftemp)
    Ktemp = CtoK(Ctemp)
    return Ktemp
def myMax(a, b):
    """Return the larger of a and b""
    if a > b:
        return a
    else:
        return b
def myMax3(a, b, c):
    """Return the largest of a, b, and c"""
    if a > b and a > c:
        return a
    elif b > a and b > c:
        return b
    else:
        return c
def myMax3(a, b, c):
    """Return the largest of a, b, and c"""
    if a > b and a > c:
        return a
    elif b > a and b > c:
        return b
    else:
        return c

def myMax3(a, b, c):
    """Return the largest of a, b, and c"""
    d = myMax(a, b)
    e = myMax(c, d)
    return e
Homework Review - Part 3

- Generally correct approach

- Small missed cases
  - Letters don't wrap around
  - Some letters don't wrap around
  - Non-letters do wrap around
Ironing out Bugs

● We all write buggy code
  ○ Easy to fix if we know what they are
  ○ How do we catch them?

● Testing code
  ○ I give you some test cases
  ○ Run known input through functions
  ○ Check output

● My test cases don't catch everything
  ○ Run tests of your own
Ironing out Bugs

● We can't check everything
  ○ That's a lot of input
  ○ Can we never be sure our code works?

● Technically no...
  ○ But we can be pretty sure

● Test smart
  ○ If one input works, similar inputs probably also work
  ○ Test different kinds of inputs
  ○ Try to cover all cases
Ironing out Bugs - myMax

- Three important cases
  - $a > b$
  - $a < b$
  - $a == b$

- Three test cases (at least)
  - myMax(1,2)
  - myMax(2,1)
  - myMax(3,3)
What cases should we test?
   ◦ Come up with a test for each
Ironing Out Bugs

- Always check your edge cases
- If your function deals with numbers
  - Make sure it works for 0
- If your function deals with strings
  - Make sure it works on the empty string
- If your function works up to a specific bound
  - Check that bound
Ironing out Bugs

- I don't need to see your test cases
  - Don't need to print out results
  - Don't need to submit records

- If you've tested your code, it will be evident
  - Your code will work