Lab 2 Feedback

• Getting a little tougher in grading
  ➢ Paying more attention to style (e.g., variable names), efficiency, readability, good output
  ➢ More strict on adhering to problem specification
  ➢ Constants
    • Not everyone understood why we use constants
    • Demonstrate program more than once if gets input from user or outcome changes when run again

Lab 2 Feedback: Common Issues

• Over string
  ➢ If variable assigned value of raw_input, it is a string already
  ➢ "\" is a string
• Only need to use str
  ➢ In print when don’t want the space that is added by the comma and have a number
  ➢ In input statement because need to pass in one string as the prompt parameter

Lab 2 Feedback: Common Issues

• Format specifiers
  ➢ Use whenever I say "displays X decimal places"
  ➢ Use width when need columns
  ➢ Otherwise, just precision is usually enough
    • "%.2f" -- exactly the width of your number, with two decimals of precision
• Problem 2: asked for built-in function
  ➢ round

Review: Testing with if Statements

• Make sure have test cases that execute each branch in control flow diagram
  ➢ i.e., Each execution path is “covered”

Lab 2 Feedback: Common Issues

• Efficiency

```python
i=4
for j in xrange(1, 9):
    result = i % j
    print i, "%", j, "=", result
```

vs

```python
for j in xrange(1, 9):
    result = i % j
    print i, "%", j, "=", result
```

Review: Testing with if Statements

• Make sure have test cases that execute each branch in control flow diagram
  ➢ i.e., Each execution path is “covered”

```python
if d <= speedlimit:
    print message
    if clockspeed > 90:
        fine += 200
        print fine message
```

```python
# get user input
if clockspeed <= speedlimit:
    print "Continue …"
else:
    diff = clockspeed - speedlimit
    fine = 50 + 5 * diff
    if clockspeed > 90:
        fine += 200
        print "fined $" + str(fine) + "."
```
Review: Efficiency of if statements

• Which is more efficient?

```python
if x < 0:
    print x, "is negative"
else:
    print x, "is 0 or positive"
```

• Which is more efficient?

```python
if x < 0:
    print x, "is negative"
else:
    print x, "is 0 or positive"
```

Lab 3 Overview

• Practice Python programming
  ➢ Advanced For loops
  ➢ If statements
  ➢ Using random module

• More difficult word problems
  ➢ If and Loops opened up world of new problems
  ➢ Work out as much as possible, then move on and come back to problem later with a fresh mind