Coming Up

- Sunday @ 10: Week 3 Exercise due

- Monday: Catch-up day -- more boolean and if examples

  - No office hours from 4-5

- Tuesday: Assignment 1 due

- Wednesday: string formatting

- Friday: while loops

- Friday Tutorial: Assignment 1 Quiz

Any burning questions before we start?

`if` statements

- Simplest form:

```
if expression:
    body
```

- How it's executed:

1. Evaluate the expression.

2. If the result is `True` then execute the body.

3. If the result is `False`, skip the body.

- Example:

```
if temperature < 0:
    print "Brrr, it's freezing!"
```

- The *expression* must be a boolean expression.

- The *body* can be any number of statements. It can even include other if statements.

Extension: chaining ifs
Any number of expressions and their bodies.

```
if expression1:
    body
elif expression2:
    body2
elif expression3:
    body3
```

- How it's executed:

  Evaluate the expressions, in order. For the first one that evaluates to `True`,

  - execute the associated body

  - and terminate the if-statement (*without* checking further conditions).

Compare this

```
    if sunny:

        print "I love the sunshine!"

    elif warm:

        print "Yay, it's nice and warm."
```

vs

```
    if sunny:

        print "I love the sunshine!"

    if warm:

        print "Yay, it's nice and warm."
```

Option: else
Executed if none of the previous expressions evaluates to `True`:

```
if grade >= 80:
    letter_grade = "A"
elif grade >= 70:
    letter_grade = "B"
elif grade >= 60:
    letter_grade = "C"
elif grade >= 50:
    letter_grade = "D"
else:
    letter_grade = "F"
```