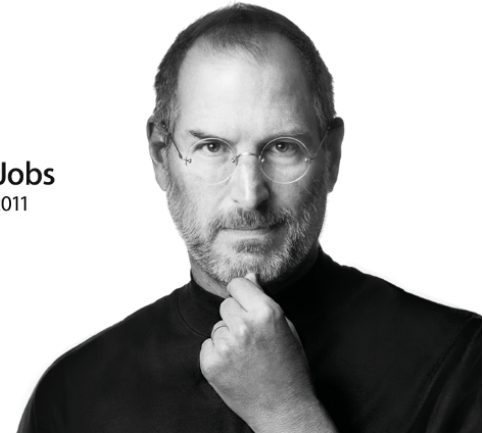# CompSci 6
## Introduction to Computer Science

October 6, 2011

Prof. Rodger

Steve Jobs
1955-2011

## Announcements

- Read for next time Chap. 8
- Reading Quiz on Blackboard (not up yet)
  – Due before class next time
- No lab Thur-Monday

## Tuples

- Like a list, but cannot change them
  – Define them with ","
    (5, 7, 8)    or   5, 7, 8
- Use most list operations on them
  – they are a type of list

## Example

x = (4, 6, 8)

y = 9, 5, 6

print x

print y

print x[1]

print y[1]

y[0] = 2

z = ([5,6], [7,8])

print z

z[0][1] = 12

print z

z[0].append(4)

print z

z[0].remove(5)

z[0].remove(12)

z[0].remove(4)

print z

## Reading from Files

- Must open file, close file
- Easiest way, read one line as a string and then process it

```
inputfile = open("datafile.txt")
for line in inputfile:
    line = line.strip()
    ''' do something with line '''
    inputfile.close()
```

## Example: Generate groups of CompSci 6 students randomly

- How does Prof. Rodger sort you into groups?
- Do you think she does it by hand?

- Read list of students from a file
- Put names into a list
- Randomly shuffle the names
- Print them out in groups of three

## Example: Which state has the highest murder rate?

- Get datafile
  - Infochimps – Crime rate by states 2004 and 2005
- Csv file – separator is comma
- Data may be messy – look at it
- How do we figure out which state had the highest/lowest murder rate?