

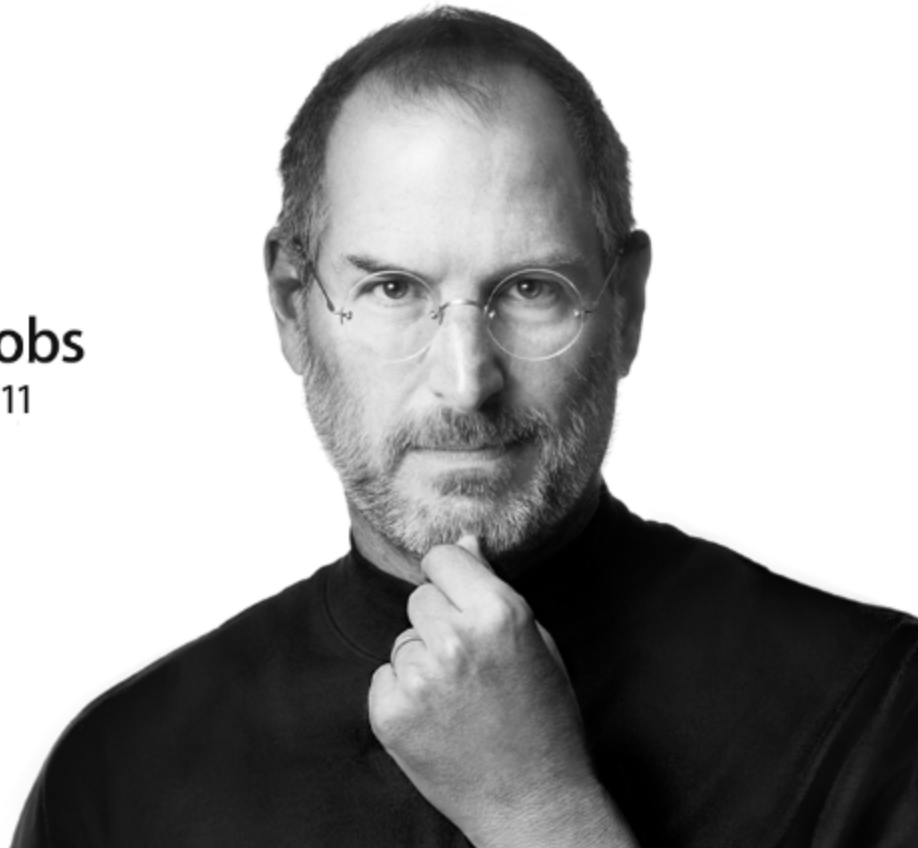
CompSci 6

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?