

## CSCI 931 Class Activity October 19, 2010

We will do parts 1 through 4 together.

1. Create a folder on your desktop called *DictActivity*. Copy into it the file *phonebook1.py* from the course web page for today's activity. Start up IDLE. From the *File* menu of the Python shell, open the file *phonebook1.py* (within *Desktop/DictActivity*).
2. Modify *phonebook1.py* so that people can have multiple phone numbers. I.e., each dictionary entry is a list.
3. Note that *printbook* prints things out in a seemingly random order. Modify it so that it prints things out in alphabetical order. (Hint: you'll first have to convert the dictionary into a list.)
4. Modify *phonebook1.py* further so as to "invert" the phonebook: given a phone number, produce all the people who have that phone number. Do this by writing a function *invertbook* that takes no arguments, but returns a dictionary that is indexed by phone numbers and returns the list of people who have that phone number.

### Break (and more lecture)!

Do this exercise individually.

5. For each of the questions, write a regular expression that will match the marked off sections of the given string and test your answer using the *showmatch.py* file on the course website. Write up a list of the regular expressions you used.

a. Are you saying Hi to that old woman?

```
-----o-----  
-----o-----  
-----o-----  
-----o-----
```

b. Are you saying Hi to that old woman?

```
----yo-----  
-----to-----  
-----wo-----
```

c. A scratch? Your arm's off! No, it isn't!

```
-----!
```

d. A scratch? Your arm's off! No, it isn't!

A-----  
--scratch-----  
-----Your-----  
-----arm-----  
-----s-----  
-----off-----  
-----No-----  
-----it-----  
-----isn-----  
-----t-----

e. A scratch? Your arm's off! No, it isn't!

-----off!-----  
-----isn't!-----

f. 300 days until the 8th month of the 10th year

300-----  
-----8-----  
-----10-----