ISAT 252—Analytical Methods IV
Programming and Problem Solving
Python Lab #9: Dictionaries
(25 points)

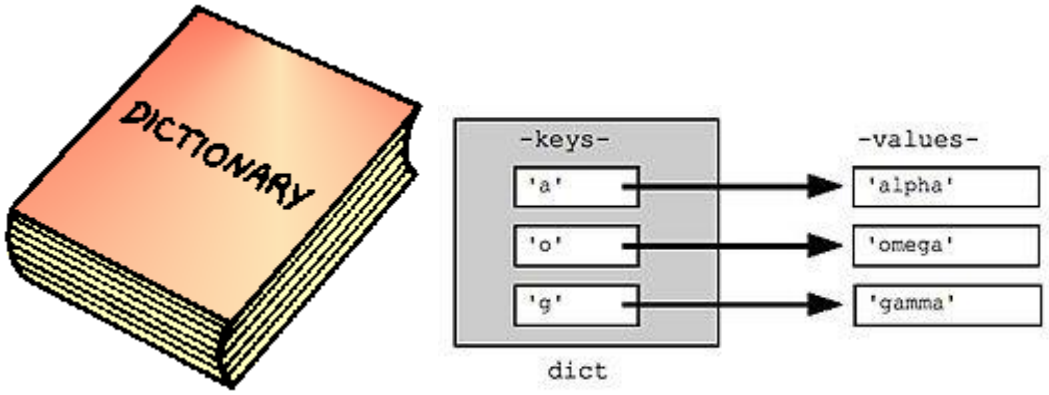
Due Date: Friday April 10, 2015

Objectives:

- Create and use Python dictionaries to solve programming problems
- Know the differences between keys and values in dictionaries
- Be able to search dictionaries for key-values pairs.

Deliverables:

1. Soft copies of:
    a. Your working program and source code
    b. Your answers to the worksheet questions
2. Hard copies of:
    a. Your source code
    b. Your answer to the worksheet questions



Course information Program

- Write a program that creates a dictionary containing course numbers and the room numbers of the rooms where the courses meet. The dictionary should have the following key- value pairs:

Course Number (key)	Room Number (value)
CS101	3004
CS102	4501
CS103	6755
NT110	1244
CM241	1411

- The program should also create a dictionary containing course numbers and the names of the instructors that teach each course. The dictionary should have the following key-value pairs:

Course Number (key)	Instructor (value)
CS101	Haynes
CS102	Alvarado
CS103	Rich
NT110	Burke
CM241	Lee

- The program should also create a dictionary containing course numbers and the meeting times of each course. The dictionary should have the following key-value pairs:

Course Number (key)	Meeting Time (value)
CS101	8:00 a.m.
CS102	9:00 a.m.
CS103	10:00 a.m.
NT110	11:00 a.m.
CM241	1:00 p.m.

The program should let the user enter a course number, and then it should display the course's room number, instructor, and meeting time.

ISAT 252—Analytical Methods IV—Programming and Problem Solving
Worksheet #9: Dictionaries (10 points)

True or False

____The keys in a dictionary must be mutable objects.

____Dictionaries are not sequences.

____A tuple can be a dictionary key.

____A list can be a dictionary key.

____The dictionary method popitem does not raise an exception if it is called on an empty dictionary.

1. Write a statement that creates a dictionary containing the following key-value pairs:

'a' : 1

'b' : 2

'c' : 3

2. Write a statement that creates an empty dictionary.

3. Assume the variable dct references a dictionary. Write an if statement that determines whether the key 'James' exists in the dictionary. If so, display the value that is associated with that key. If the key is not in the dictionary, display a message indicating so.

4. Assume the variable dct references a dictionary. Write an if statement that determines whether the key 'Jim' exists in the dictionary. If so, delete 'Jim' and its associated value.