Beyond Lists:
Other Data Structures

CS303E: Elements of Computers
and Programming
August 1, 2012

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iClicker Question

After the following code executes, what
are the contents of `mySet`?

```
mySet=set([1,2,3,1,4])
mySet.add(3)
mySet.remove(1)
```

A. 1, 2, 3, 3, 4   C. 4, 3, 2
B. 2, 3, 1, 4, 3   D. None of the above

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iClicker Question

You want to create a sorted collections
of different types. What data
structure should you use?

A. Strings
B. Lists
C. Tuples
D. Dictionaries

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iClicker Question

Which of the following data structures is
unordered?

A. String
B. Tuple
C. List
D. Set

iClicker Question

Which statement correctly adds an element to its data structure? You can assume that the variable names are descriptive.

A. `mySet.append(4)`
B. `myDictionary.append("dozen", 12)`
C. `myList.append(7)`
D. `myTuple.append(9)`

iClicker Question

What is the result of the following code?

```
x=[1,2,3]
y=[4,5,6]
z=x+y
```

A. `z=[[1,2,3],[4,5,6]]`
B. `z=[1,2,3,4,5,6]`
C. `z=[1,2,3,[4,5,6]]`
D. `Error`

iClicker Question

What is the result of the following code?

```
x=[1,2,3]
y=[4,5,6]
x.append(y)
```

A. `x=[[1,2,3],[4,5,6]]`
B. `x=[1,2,3,4,5,6]`
C. `x=[1,2,3,[4,5,6]]`
D. `Error`

Exercise

A) Write a main() function that:
1) Opens a file for reading and puts the 2nd word of each line in a list
2) Removes duplicate words from the list
3) Sorts the words into lexicographic order (Do not use sort()!)
B) Write a function that accepts a list of words and, using that list, creates a dictionary where each word is a key and its value is the length of the word. The function should return the dictionary.
C) Add code to your main() function to:
1) Call the function you wrote in (B) and store the return value
2) Print the contents of the dictionary to a file with each key separated from its value by a tab and with each key/value pair on its own line. The keys should be in lexicographic order.

Announcements

- Test next week!
- Same time, same place
- Assignment 7 will be posted soon
- Sample exams will be posted soon
  - WARNING: Your exam 3 will include more data structures
- iClicker score for July will be posted soon