



# Collections

BBM 101 - Introduction to Programming I

Hacettepe University

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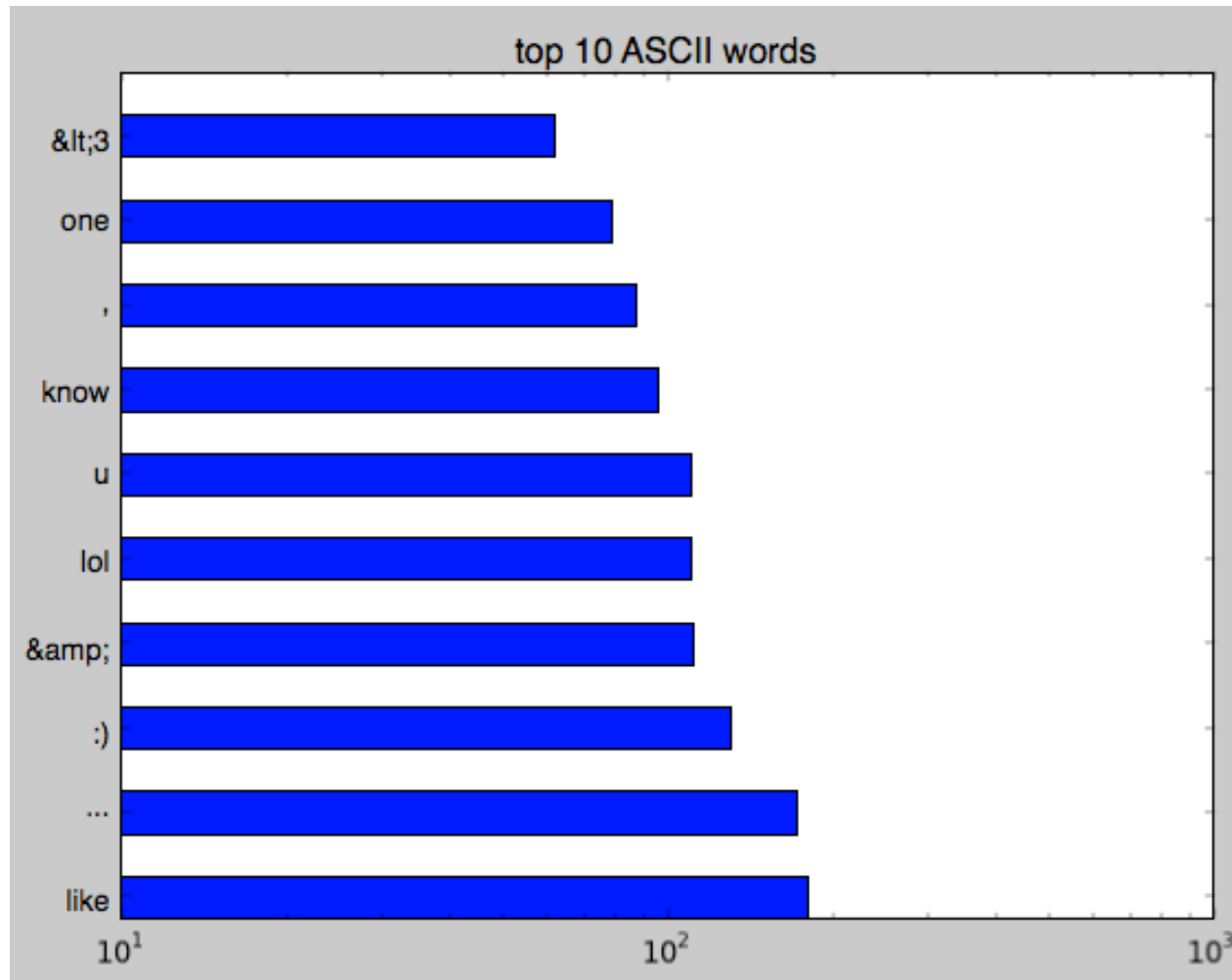
Slides based on material prepared by Ruth Anderson, Michael Ernst and Bill Howe in the course CSE 140  
University of Washington

# Count the Words in a Document

Assume you start with a list of words:

```
"to be or not to be that is the question  
whether tis nobler in the mind to suffer  
the slings and arrows of outrageous fortune  
or to take arms against a sea of troubles  
and by opposing end them to die to sleep  
no more".split()
```

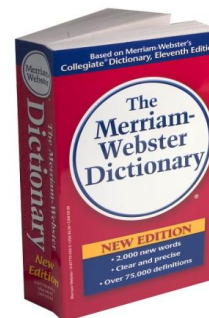
# Count the Occurrences of Each Word (Make a Histogram)



Most common words on Twitter

# A Collection Groups Similar Things

- List: ordered
- Set: unordered, no duplicates
- Tuple: unmodifiable list
- Dictionary: maps from values to values  
Example: word → definition



# Data Structures

- *A data structure is way of organizing data*
  - Each data structure makes certain operations convenient or efficient
  - Each data structure makes certain operations inconvenient or inefficient
- Example: What operations are efficient with:
  - a file cabinet sorted by date?
  - a shoe box?

