

CompSci 6

Introduction to Computer Science

November 8, 2011

Prof. Rodger

More on sort

- Import operator
 - `fruit = [("pear",5),("apple",9)]`
 - `fruit = sorted(fruit)`
 - `fruit.sort()` OR `fruit = sorted(fruit)`
 - arguments
 - `key=itemgetter(0)`
 - `reverse=True`

Announcements

- No reading or RQ
- Assignment 5 due Thursday
- New APT out Thursday – one APT
- Practice Test problems out – will go over on Tues. Nov 15
- Prof. Rodger no office hours this week
- Today
 - Finish example from last time
 - More on sort options
 - Regular Expressions

Regular Expressions

- Part of the compiler process
 - Can write a regular expression for each type of word in a programming language
 - Example
 - Key words – `if`, `else`, `elif`, `while`
 - Integers – `456`, `78`, `2`, `-56`
 - Float – `3.14`, `7856.2345`
 - String – `'word'`, `"this is a phrase"`
 - Special symbols – `[] + %`

Regular Expressions

- `a` - `a`
- `a*` - `a` repeated 0 or more times
- `a+` - `a` repeated 1 or more times
- `a?` – `a` 0 or 1 time, so `a` is optional
- `^` - match at the beginning of the string
- `$` - match at the end of the string
- `.` – matches anything
- `[abc]` – match `a`, `b`, or `c`
- `[a-z]` – match any character from `a` to `z`
- `[^a]` – match any character but `a`

Regular expressions with `re`

- `import re`
- `re.sub()` – substitute
- `re.compile()` – create a pattern
- `re.findall()`
- See examples

More on regular expressions

- `|` - or
- `\b` - word boundary
- `\s` - whitespace character
- `\d` – match any digit
- When using backslashes – must use `r` in front of string