LING 388: Computers and Language

Lecture 4
Today's Topic

• Homework 2 review
Egghead
Egghead

2. **nerd** or **geek**

1. "While its true origins are a bit murky, it's widely agreed that "egghead" reached the height of its usage in 1952, when then-vice-presidential candidate Richard Nixon used it to describe the Democratic candidate for president, Adlai Stevenson -- whose **balding head** certainly conjured images of an egg. But his supporters were quickly labeled **eggheads** as well, and thus the term took on a political meaning. It came, eventually, to mean approximately what the word "elitist" means today."
Happenstance

orig. U.S.
A. n.

Something that happens by chance, an event or circumstance considered to be influenced by chance; chance, luck. Also: a coincidence.

B. adj. (chiefly attrib.).

Characterized by or resulting from chance or luck; haphazard, random; coincidental.

1857 *Weekly Wisconsin* 18 Mar. We are informed that a ‘considerable happenstance’ occurred in ‘The Woods’, a short distance north-east of this village a few days since.

1883 *Elyria (Ohio) Republican* 15 Nov. 5/2 This little ‘happenstance’ reminds us that ‘Joshua Whitcomb’ will be in the December programme for this city.

1916 G. *O’Keeffe* *Lett.* Feb. in *G. O’Keeffe & A. Pollitzer Lovingly, Georgia* (1990) 144 I’ll not want to see them again unless I by some accident—or happenstance I find that my bubble didn’t break.

1905 *Archit. Rev.* Mar. 47/1 The regular treatment of the beginning of the lines is not carried out in their endings, which come very much in a ‘happenstance’ manner.

1963 D. B. *Hughes* *Expendable Man* v. 149 The abortionist hadn’t killed her, he would have no need of the happenstance tool.

1965 *Billboard* 11 Sept. 6/2 He couldn’t estimate how many [record] labels there were in LKos Angeles because their existence is so happenstance.
Happenstance vs. Happenchance
Happenchance

A chance occurrence; (good or bad) fortune, chance, luck. Cf. HAPPENSTANCE n.

1847 J. WRIGHT Anacreontic Poems 11 Guisbro' Spa... Then down came the barrow, and Clark on his back, but this was a base happen-chance.

1876 F. K. ROBINSON Gloss. Words Whitby Happen-chance, or Happen-keease, a matter of casual occurrence.


1941 Sat. Evening Post 22 Mar. 24/3 Even if by happen-chance a hailstorm didn't come along and ruin the crop, there was always something to fight.

1946 M. C. SELS Horseman's Encycl. 306 The introduction of polo to England was pure happen-chance.

B. adj. (chiefly attrib.). Characterized by or resulting from chance or luck; random, haphazard.

1905 N.-Y. Tribune 15 Apr. 6/ The happen-chance methods of the prospector with a shovel and a pan.

1961 W. Bradon Indians (1987) xii. 323 The Plains Indian is an excellent happenchance choice as an Indian symbol.

1996 N. W. S. Cranfield in C. Cross Patronage & Recruitment in Tudor & Early Stuart Church 132 The survival of an interim list...is too happenchance to allow for any far-reaching conclusions.
Egghead

• whiteboard => predictable from white + board
• egghead = geek/nerd => less predictable from egg + head
• egghead = bald guy => somewhat predictable from egg + head

• Idiom:
  • meaning of compound word not (very) predictable from its parts

• Question:
  • can you think of some other compound words that are idioms?
Idioms and Compounds

• Example: *fireman*

• Meaning?

4. A person (esp. a man) employed to extinguish fires, *esp.* a member of a fire service trained to extinguish fires and to provide other emergency and rescue services; a firefighter.

Cf. *firewoman n.* at *fire n.* and *int. Compounds 2a.*

Now the most common sense.

1668 J. Winthrop *Let.* 12 Nov. in H. Oldenburg *Corr.* (1968) V. 158 Those in the house all of them but one were preserved by a timely *Firemen*, being awakened, at the beginning of the fire.

1716 J. Gay *Trivia III.* 77 The *Fire-man* sweats beneath his crooked Arms.

Idioms and Compounds

• Example: *fireman*
• Meaning?

1. A person (esp. a man) employed to tend a fire or furnace, esp. (in later use) in a steam engine or steamship.

1377–8  in J. T. Fowler *Extracts Acct. Rolls Abbey of Durham* (1901) III. 587  Ric'o fireman bracine pro bonitate, 12d.


1657  R. Ligon *True Hist. Barbados* 53  One or two of these were Firemen that made the fires in the furnaces.

1784  J. Wedgwood in *Philos. Trans.* (Royal Soc.) 74 367  The fire about the oven was...kept as even and steady as possible, by an experienced fireman, under my own inspection.
Idioms and Compounds

• Example: **fireman**
• Meaning?

†2. A person (esp. a man) who uses firearms; a gunner. Obs.

1625 W. C. Dutch Survery 6 Our Fire-men plye this place with their Shotte both great and small, and worke some remarkable damage upon the Enemies.

1648 Ld. HERBERT Life (1770) 51 Notwithstanding all that our Firemen speak against it [sc. archery].

1720 D. Defoe Mem. Cavalier 191 The Cannoniers and Firemen were killed.

†3. A zealous or fervent man. Cf. FIRE n. 13d. Obs.

1648 Mercurius Pragmaticus No. 21. sig. Aa1r An Acompt...of the Commissioners private conference with his Majestie, and of the great Fury of the Firemen of Independency against the Gentlemen.

1709 R. Steele Tatler No. 61. ¶1 I had last Night the Fate to drink a Bottle with Two of these Fire-men.
Back to Python

• We have seen how the underlying hardware implements:
  • integers
  • floating point numbers
  • ASCII codes
  • UTF-8 characters

• These are the basic data types. We can form:
  • strings
  • lists
  • sets
  • tuples ... etc.
Python 3.6.4 documentation

Welcome! This is the documentation for Python 3.6.4.

Parts of the documentation:

- What's new in Python 3.6?
  or all "What's new" documents since 2.0
- Tutorial
  start here
- Library Reference
  keep this under your pillow
- Language Reference
  describes syntax and language elements
- Python Setup and Usage
  how to use Python on different platforms
- Python HOWTOs
  in-depth documents on specific topics
- Installing Python Modules
  installing from the Python Package Index & other sources
- Distributing Python Modules
  publishing modules for installation by others
- Extending and Embedding
  tutorial for C/C++ programmers
- Python/C API
  reference for C/C++ programmers
- FAQs
  frequently-asked questions (with answers!)
Python

• `math.sqrt()`

<table>
<thead>
<tr>
<th>Python</th>
<th>Mathematics</th>
<th>English</th>
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</thead>
<tbody>
<tr>
<td>pi</td>
<td>$\pi$</td>
<td>An approximation of pi.</td>
</tr>
<tr>
<td>e</td>
<td>$e$</td>
<td>An approximation of $e$.</td>
</tr>
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<td>sin(x)</td>
<td>sin $x$</td>
<td>The sine of $x$.</td>
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<tr>
<td>cos(x)</td>
<td>cos $x$</td>
<td>The cosine of $x$.</td>
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<tr>
<td>tan(x)</td>
<td>tan $x$</td>
<td>The tangent of $x$.</td>
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<td>asin(x)</td>
<td>arcsin $x$</td>
<td>The inverse of sine $x$.</td>
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<td>acos(x)</td>
<td>arccos $x$</td>
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<td>arctan $x$</td>
<td>The inverse of tangent $x$.</td>
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<td>log(x)</td>
<td>ln $x$</td>
<td>The natural (base $e$) logarithm of $x$</td>
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<td>log10(x)</td>
<td>log$_{10}$ $x$</td>
<td>The common (base 10) logarithm of $x$.</td>
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<td>exp(x)</td>
<td>$e^x$</td>
<td>The exponential of $x$.</td>
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<td>ceil(x)</td>
<td>$\lfloor x \rfloor$</td>
<td>The smallest whole number $\geq x$</td>
</tr>
<tr>
<td>floor(x)</td>
<td>$\lfloor x \rfloor$</td>
<td>The largest whole number $\leq x$</td>
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</tbody>
</table>

complex numbers: import cmath

Table 3.2: Some math library functions.
cmath library

- [https://docs.python.org/3.6/library/cmath.html](https://docs.python.org/3.6/library/cmath.html)
Python

- [https://docs.python.org/3/tutorial/introduction.html](https://docs.python.org/3/tutorial/introduction.html)
- Numbers
- Strings
- Lists
Strings

```python
5
>>> len(s[0])
1
>>> s = ''
>>> len(s)
0
>>> s = ' '  
>>> len(s)
1
>>> s = '日'
>>> len(s)
1
>>> s1 = 'white'
>>> s2 = 'board'
>>> s1 + s2
'whiteboard'
>>> s1 + '-' + s2
'white-board'
>>> s2 + s1
'boardwhite'
>>> s = s1 + '-' + s2
>>> s
'white-board'
```