Googling to the Max - Exercises

Getting the most from: http://www.google.com

Google Toolbars (FREE) - highlight terms, remember searches, search within a site, block pop-ups, and more:

For Internet Explorer & Firefox   http://toolbar.google.com
For other Mozilla browsers   http://googlebar.mozdev.org

#1   HOW GOOGLE "THINKS" IN DEFAULT MODE
CRAFTING BASIC GOOGLE SEARCHES

✎ AND automatically implied between terms
?   all your terms somewhere
in text of pages
in pages that link to a result page
in other pages on the same site

Ex. 1: What is matched on?
1.   Search Google for the keywords: **google page rank**
2.   Click Cached: for the page titled "Google Technology" or "Google PageRank Calculator"
3.   What is the explanation of the matching of your terms with these pages?

✎ STEMS some words
?   finds word with various endings
search **kite flying** and get matches on **kite, kites, kiting** and **flying, fly, flies**
?   turn off with + or " " as in **+kite +flying** or **"kite flying"**
✎ IGNORES common or "stop" words
?   when this happens, a gray message appears below the search box in results telling you what was ignored
?   turn off with + or " " just as for stemming
✎ RANKING FAVORS pages with your words in PHRASES, CLOSE TOGETHER, and IN THE ORDER TYPED

Ex. 2: Word order and word choice matter	
Compare the top results for searches in Google for these three sets of keywords:	
grass snake	Mostly about a kind of snake.
	By stemming also matches **snakes** and **grasses**
snake grass	Many about a kind of grass, not present in 1st search
snake in the grass	Most pages contain this expression, even though Google said **in** and **the** were ignored; also finds pages with grass snake and a few with snake grass
snake +in +the grass	Eliminates pages not containing **in** and **the** somewhere.
"snake in the grass"	Most specific and precise. Requires exact phrase in all pages.

✎ OR searching requires capitalized OR
?   Can be used between single words and phrases enclosed in quotes:
california OR oregon OR "pacific coast"
"global warming" OR "greenhouse effect"
No parentheses for nesting; keep OR searches simple

- ? PUNCTUATION THAT IS NOT IGNORED
  - **?** Apostrophe (**'**) : **peoples**, **people's**, and **peoples'** are searched as different words
  - **?** Hyphen (**-**) : **same-sex** retrieves **same-sex, same sex** and **samesex**

    Always supply the **-** to search any word that might be used hyphenated
  - **?** Accent marks in Roman-alphabet foreign languages : **éléphant** does not match **elephant** (and vice versa)

    If searching in the language where the accent is common, the accents are not required for matches. Google assumes people writing web pages in that language may or may not put the accents in.
  - **?** Asterisk (*) : Whole word wild card, allows one or more unspecified words.
- ? SYNONYM SEARCHES (~)
  - **?** Google will "think" of words with similar meaning: **~food** matches **recipes, nutrition, cooking**

    ~facts matches **information, statistics**

    ~help matches **guide, tutorial, FAQ, manual**
- ? SIMILAR PAGES (in results list) or command **related:[URL]**
  - **?** Google will "think" of pages like the one you choose, by using links to and from the page, words in the page, and the importance of pages in links.
  - **?** Uses: evaluate a questionable page by the links in and out

    find comparable pages when shopping or looking for a type of site

    broaden a search without thinking of words that might be in pages like the one you like

Ex. 3: Exploiting "FUZZY" Google options
1. Find pages about: *The one-child law of the People's Republic of China*, knowing that some people never use apostrophes properly: **one-child law people's OR peoples "republic of china"**
2. Search a name allowing varying intervening words using *:   **george * * bush**
3. To find out, *How do praying mantises hear?* try searching: **~ears praying mantis**
4. Find pages similar in focus to another page: Search for **consumer webwatch**   At the end of the website **www.consumerwebwatch.org**, click <u>Similar pages</u>.

- ? NUMBER RANGE allowed in searches (**..** without spaces)
  - **?** Follow search terms with beginning and ending numbers, separated by two periods.
  - **?** Can be used one sided, as *less than* or *greater than*

Ex. 4: Number range searches
1. Find pages mentioning Babe Ruth between 1921 and 1935   **"babe ruth" 1921..1935**
2. Find digital cameras priced below $300 with resolution of 4.5 to 5 megapixels (MP)   **digital camera ..$300 4.5..5 megapixels OR MP**

? Require search terms to occur in specific parts of web pages
  ? intitle: Words must occur in the official <title> field in the head part of the page
  ? site: Limit to a site or domain (first part of the URL, before the first /)
  ? inurl: Require terms to occur anywhere in URL (URL punctuation ignored)
    .   Can be combined with each other and with other search terms

Ex. 5: Limiting to parts of web pages
1. Find pages primarily about mileage in hybrid cars: **intitle:mileage "hybrid cars"**
2. Find pages about President Bush and either global warming or greenhouse effect: **bush intitle:"global warming" OR intitle:"greenhouse effect"**
3. Is there anything on this subject from the official Whitehouse site?   **site:www.whitehouse.gov "global warming" OR "greenhouse effect"**

4. Find pages containing sheet music written to commemorate the assassination of Abraham Lincoln
        site:memory.loc.gov lincoln "sheet music"
        Searches within all Library of Congress's American Memory Project pages that are in Google.
        inurl:lincoln "sheet music"
        Finds pages with "sheet music" in them and with "lincoln" somewhere in the URL.

? Limit to type of document or file extension: **filetype:**
  ? Google has many types of files besides HTML pages (doc, xls, wpd, ppt and more)
  ? <u>View as HTML</u> link in results with these file types lets you see the document without the application and avoids any virus or worm they could contain

Ex. 6: Limiting to type of document or file:
1. Find fact sheets and reports (not just web pages) about the death-rate for malignant mesothelioma in the U.S.   **filetype:pdf death-rate malignant mesothelioma "united states"**
2. Find PowerPoint presentations from reputable universities in the U.S. about the impact in China of its one-child policy   **filetype:ppt site:edu china one-child policy**

? **Google Advanced Search** does not allow *intitle:, inurl:,* or more than one *site:,* and has few date range options.
? **Pages from within a foreign country by building on the URL of a Google search result**
  ? Uses information about where the webpage server is located, as well as country coding; more comprehensive than what is available a http://www.google.com/language_tools
  ? Search on the terms you want. In your browser's Address or URL box, append to the result (without spaces):
        &restrict=country*XX* with XX being the CAPITALIZED two-letter country code
        To find country codes: Search Google for   **TLD [country name]**   or
               List of all country codes available at   http://en.wikipedia.org/wiki/List_of_Internet_TLDs

Ex. 7: Pages from within a country:

Find recipes for authentic Moroccan cuisine, from within Morroco
     Step 1: perform the search:
            recipes OR cuisine morocco OR moroccan
     Step 2: append to the resulting URL in the Address box **&restrict=countryMA**
       http://www.google.com/search?q=recipes+OR+cuisine+morocco+OR+moroccan**&restrict=countryMA**

? DEFINITIONS, THESAURUS, and ENCYCLOPEDIC LOOK-UPS
  - **?** **define:**[your words]   Finds web-based definitions, Google-ranked, and often reliable
  - **?** **search and click your word in statistics bar**   Access to published dictionary entries and other resources through Answers.com. Options vary for different words.

Ex. 8: Definitions and more:
1. Definitions:
define:internet
define:due diligence
2. Locate dictionary definitions and thesaurus terms (synonyms, antonyms, etc.) using the link in the blue statistics bar after you search:
scholarship
internet

? TRANSLATIONS
  - **?** Click <u>Translate the page</u> after a page in a foreign language
  - **?** Paste a URL or a piece of text at http://www.google.com/language_tools

Ex. 9: Translating:
1. Go to Google Advanced Search - www.google.com/advanced_search
2. Limit to PAGES IN FRENCH and search
jacques chirac avec george bush
3. Click <u>Translate this page</u> (appears with most pages in languages not in your search interface)
4. You can also translate by pasting a URL or text - www.google.com/language_tools

? CALCULATOR and CONVERSIONS - parentheses accepted to sequence and clarify expressions
  - **?** **Mathematical functions** (+,-,*,/,% of, *n*th root of, sqrt(nn), ^ for exponentiation)
  - **?** **Advanced math** (Trig: sin, cos, tan, sec, csc, cot, etc.; Inverse trig: arcsin, arcos, arctan, etc.; Hyperbolic trig: sinh, cosh, tanh, etc.; Logarithms; Exponential functions; Factorials; and more)
  - **?** **Many mathematical constants** (pi, imaginary numbers, and more)
  - **?** **Units of measure and conversions**
    - . MASS: kilograms or kg, grams or g, grains, pounds or lbs, carats, stones, tons, tonnes, etc.
    - . LENGTH: meters or m, miles, feet, inches, Angstroms, cubits, furlongs, etc.
    - . VOLUME: gallons, liters or l, bushels, teaspoons, pints, drops, etc.
    - . AREA: square miles, square kilometers, acres, hectares, etc.
    - . TIME: day, seconds or s, years, centuries, sidereal years, fortnights, etc.
    - . ELECTRICITY: volts, amps, ohms, henrys, etc.
    - . ENERGY: Calories, British thermal units or BTU, joules, ergs, foot-pounds, etc.
    - . POWER: watt, kilowatts, horsepower or hp, etc.
    - . INFORMATION: bits, bytes, kbytes, etc.
    - . QUANTITY: dozen, baker's dozen, percent, gross, great gross, score, etc.
    - . NUMBERING SYSTEMS: decimal, hexadecimal or hex, binary, roman numerals, etc.
    - . QUICK FACTS: currency in countries, population, biographies
  - **?** **Physical constants** (atomic mass units or amu, Avogadro's number, Botzmann constant, Faraday constant, gravitational constant, mass of a proton, mass of each planet and of the sun, permeability of free space, etc.)

Ex. 10: Calculating and converting:

1. How many carats in a pound?
        1 lb in carats
2. How many square feet in 2.5 hectares?
        2.5 hectares in square feet
3. Value of 1555 in hexadecimal?
        1555 in hex
4. The mass of an electron?
        mass of an electron
5. How many bits in a 2.5 gigabytes?
        2.5 gigabytes in bits
6. What is the currency in Uganda?
        currency in uganda

?   SHORTCUTS to many other kinds of publicly available information
- **?**   Area codes (U.S.), defined by maps - type **3 digit code**
- **?**   Airport conditions - type **airport code** or **city** and the word **airport**
- **?**   Flight tracking - type the word **airline** and the **flight number**
- **?**   Maps - type an **address**
- **?**   Stock info - type **one or more NYSE, AMEX, NASDAQ, or mutual fund codes**
- **?**   White pages - type **rphonebook: name   address**
- **?**   Yellow pages - type **bphonebook: name   address**
- **?**   Zip codes - type a **zip code**
- **?**   Movies - type **movies: city, st   or movies: zip code**

?   STANDARD NUMBER LOOKUPS
- **?**   Parcel tracking for UPS, FedEx, USPS - type the **number**
- **?**   US patent lookup - type the word **patent** and the **number**
- **?**   UPC product identification - type the **code**
- **?**   VIN vehicle info, history - type the **number**

Ex. 11: Shortcuts and standard number lookups:

1. What part of the U.S. is in the zip code 87455
        87455   Look below the map at the town and state.
2. Are there currently any delays at O'Hare airport in Chicago?
        chicago airport   or   **ord airport**
3. What's playing in Berkeley?
        movies:berkeley, ca

? UNIVERSITY SEARCHES
- **?**   Conduct a search within the website of a university - you specify the topic
- **?**   **http://www.google.com/options/universities.html** has long list of University links to start searching from

Ex. 12: University searches:
Go to Google Advanced Search. At the bottom, click on Universities. Choose any university from the list and search for information on: **graduate admissions**

- ✍ **Images**
  - **?** One of the largest images database - 1.3+ billion (Yahoo Images boasts 1.5 billion)
- ✍ **News**
  - **?** 4,500 news feeds, 30 days of news
- ✍ **Shopping**
  - **?** Froogle - shopping sites from Google web page database + merchant-supplied machine-readable catalogs
- ✍ **Local (and Maps)**
  - **?** Draggable images, satellite view, local (yellow pages), driving directions
  - **?** Google web pages + several yellow page directories
  - **?** For finding businesses and services, two search boxes: enter a place or address and a topic
- ✍ **Groups**
  - **?** Google **Groups** - Usenet Newsgroups back to 1981
- ✍ **Videos**
  - **?** Videos submitted by people, from broadcasts and TV
  - **?** Viewable in Flash if **?** button in the thumnail
  - **?** Search close captioning to locate
- ✍ **More in Google Labs - labs.google.com**
  - **?** Google **Sets** - generate items in a set you start
  - **?** Google **Suggest** – as you type, suggests options for search terms (also in Japanese)

Ex. 13: Sampling Google databases:
At the Google homepage (http://www.google.com), click on **more>>**
1. Go to **video.google.com** and find a film called "What old people do for fun."
2. Go to Advanced Image Search. Find **full color** pictures in **JPG** format of **mona lisa**.
3. Go to **local.google.com**
Drag the US map so that an area of California is centered in the screen
Drag the map to reposition it in your hometown (or another area)
Click Satellite (upper right)
Click Local and search for something like **restaurants** or **hotels**
Try driving directions between two addresses

#6 G O O G L E B O O K S E A R C H and G O O G L E S C H O L A R

Two of Google's initiatives directly involve published information and access to published information

Google Scholar (scholar.google.com)
- **?** Search for journal articles in scholarly publications
- **?** Large, interdisciplinary database - from citations in web pages and from some journal publishers
- **?** Advanced search allows author and other searches
- **?** Integrated with UC-elinks

Google Book Search (books.google.com)
- **?** Full-text of some books with links to where to buy
- **?** Promises to digitize millions of publications in libraries - may link to library holdings if public domain

Ex. 14:
1. In print.google.com, search **rock climbing peru**
2. At scholar.google.com, search for an article by somebody Koontz or Coontz about how the institution of marriage has changed, been transformed, and reflects transformations in society over the ages.
In Scholar Advanced Search; **marriage** required in TITLE and **koontz OR coontz** in AUTHOR

Table Comparing GOOGLE BOOK SEARCH and GOOGLE   SCHOLAR

Two of Google's initiatives rather directly involve libraries, published information, and access to published information, both on web pages and in print.

	Google Book Search	Google Scholar
Google's goal	To "organize the world's information and make it universally accessible and useful" focused on content of books	To "search specifically for scholarly literature" in many formats
How to use	Through the special search box at books.google.com	Through special a search box at scholar.google.com
What's included	? Publisher-supplied publications; also authors of self-published and out-of-print publications can submit their works as the publisher ? Publications supplied by selected libraries (Harvard, Stanford, U of Michigan, Oxford, NYPL), most public domain ? Google scans, digitizes, and indexes words in each book for free (no charge, no profit) ? Library search reaches some libraries through First Search	? Mostly articles, but some citations to books ? Full-text of online articles found by Google's robot-like crawlers from academic publishers, professional societies, preprint repositories, and scholarly articles posted on the web ? Citations to articles and books found in lists of references in publications found by Google's robot-like crawlers
What you get	? Scanned full text to search and browse ? Printing of pages or images if public domain ? Snippets or excerpts of copyright books when publisher has not permitted full text online ? Copy of table of contents and index ? Link to publisher, bookstores, and libraries if a scanned library copy ? Paid advertisements related to your search, as in Google web search	? Full text if freely available or if provided by the publisher with permission ? UCelinks available when we have a subscription (other universities too – set in Preferences) ? Works with Proxy Servers ? Citation or abstract (not full text) if protected by copyright ? Links to citations to most articles (like a "who cites whom") ? Occasionally, "Library Search" tries to locate a library near you that owns the book. Partial implementation of OCLC holdings links
Search tips	? Search from **books.google.com** ? **Advanced Search** http://books.google.com/advanced_book_search ? **intitle:** to limit	? Go to **scholar.google.com** or **Scholar Advanced Search** http://scholar.google.com/advanced_scholar_search ? Enter author name, publication name, and/or subject words
More information	**About Google Book Search** books.google.com/googlebooks/about.html	**About Google Scholar** scholar.google.com/scholar/about.html