INTERNET AND DATABASE Search Tips

**QUICK TIPS**

**NOTE:** These tips will work with most search engines in their basic search option.

* Use the plus (+) and minus (-) signs in front of words to force their inclusion and/or exclusion in searches.  
  **EXAMPLE: +meat -potatoes**  
  (NO space between the sign and the keyword)
* Use double quotation marks (" ") around phrases to ensure they are searched exactly as is, with the words side by side in the same order.  
  **EXAMPLE: "bye bye miss american pie"**  
  (Do NOT put quotation marks around a single word.)
* Put your most important keywords first in the string.  
  **EXAMPLE: dog breed family pet choose**
* Type keywords and phrases in lower case to find both lower and upper case versions. Typing capital letters will usually return only an exact match.  
  **EXAMPLE: *president* retrieves both *president* and *President***
* Use truncation (or stemming) and wildcards (e.g., \*) to look for variations in spelling and word form.  
  **EXAMPLE: librar\* returns library, libraries, librarian, etc.**  
  **EXAMPLE: colo\*r returns color (American spelling) and colour (British spelling)**
* Combine phrases with keywords, using the double quotes and the plus (+) and/or minus (-) signs.  
  **EXAMPLE: +cowboys +"wild west" -football -dallas**  
  (In this case, if you use a keyword with a +sign, you must put the +sign in front of the phrase as well. When searching for a phrase alone, the +sign is not necessary.)
* When searching within a document for the location of your keyword(s), use the "find" command on that page.
* Know the default (basic) settings your search engine uses (OR or AND). This will have an effect on how you configure your search statement because, if you don't use any signs (+, -, " "), the engine will default to its own settings.
* Know whether or not the search engine you are using maintains a stop word list (see "Stop Words" [Lesson 6.](http://www.sc.edu/beaufort/library/pages/bones/lesson6.shtml#Stop Words)) If it does, don't use known stop words in your search statement. Also, consider trying your search on another engine that does not recognize stop words.

**Quick Tips for Boolean Searches**

* In Boolean searches, always enclose OR statements in parentheses.   
  **EXAMPLE: Yosemite (campgrounds OR reservations)**
* Always use CAPS when typing Boolean operators in your search statements. Most engines require that the operators (AND, OR, AND NOT/NOT) be capitalized. Other engines will accept either CAPS or lower case, so you're on safe ground if you stick to CAPS.  
  **EXAMPLE: "immune system" AND homeopathic (medicine OR remedy)**  
  [NOTE: For more on Boolean searches, see [Lesson 8](http://www.sc.edu/beaufort/library/pages/bones/lesson8.shtml)]

**ASSIGNMENT:**

Choose one of the **EXAMPLES** from above and try it as a search on [Google's advanced search page.](http://www.google.com/advanced_search?hl=en%22)

Searching with Boolean logic and proximity operators

**WHAT'S A "BOOLEAN"?**

Boolean logic takes its name from British mathematician George Boole (1815-1864), who wrote about a system of logic designed to produce better search results by formulating precise queries. He called it the "calculus of thought." From his writings, we have derived Boolean logic and its operators: AND, OR, and NOT, which we use to link words and phrases for more precise queries.

**BOOLEAN "AND"**

The Boolean AND actually narrows your search by retrieving only documents that contain every one of the keywords you enter. The more terms you enter, the narrower your search becomes.  
  
**EXAMPLE:** truth AND justice  **EXAMPLE:** truth AND justice AND ethics AND congress

**BOOLEAN "OR"**

The Boolean OR expands your search by returning documents in which either or both keywords appear. Since the OR operator is usually used for keywords that are similar or synonymous, the more keywords you enter, the more documents you will retrieve.  
  
**EXAMPLE:** college OR university **EXAMPLE:** college OR university OR institution OR campus

**BOOLEAN "NOT" / "AND NOT"**

The Boolean NOT or AND NOT (sometimes typed as ANDNOT) limits your search by returning only your first keyword but not the second, even if the first word appears in that document, too.  
  
**EXAMPLE:** saturn AND NOT car  
**EXAMPLE:** pepsi AND NOT coke

**NESTING -- WITH BOOLEAN OPERATORS**

Nesting, i.e., using parentheses, is an effective way to combine several search statements into one search statement. Use parentheses to separate keywords when you are using more than one operator and three or more keywords.  
  
**EXAMPLE:** (hybrid OR electric) AND (Toyota OR Honda)  
(For best results, always enclose OR statements in parentheses.)

**BOOLEAN LOGIC REDUX**

Boolean logic is not always simple or easy. Different search engines handle Boolean operators differently. For example, some accept NOT, while one accepts ANDNOT as one word, others AND NOT as two words. Some require the operators to be typed in capital letters while others do not.

Some search engines use drop-down menu options to spell out the Boolean logic in short phrases. For example, "All of the words" or "Must contain" equates to AND; "Any of the words" or "Should contain" equates to OR; and "Must not contain" equates to NOT.

**IMPLIED BOOLEAN OPERATORS**

Implied Boolean operators use the plus (+) and minus (-) symbols in place of the full Boolean operators, AND and NOT. Typing a (+) or (-) sign in front of a word will force the inclusion or exclusion of that word in the search statement.  
  
**EXAMPLE: +dementia -alzheimers**

Similarly, putting double quotation marks (" ") around two or more words will force them to be searched as a phrase in that exact order.  
  
**EXAMPLE:** "green tea"

While full Boolean operators are usually accepted only in the advanced search option of search engines, implied Boolean operators are accepted in the basic search options of most search engines.

**PROXIMITY OPERATORS**

Proximity, or positional, operators (NEAR, ADJ, SAME, FBY) are not really part of Boolean logic, but they serve a similar function in formulating search statements.

Not all search engines accept proximity operators, but a few accept NEAR in their advanced search option. The NEAR operator allows you to search for terms situated within a specified distance of each other in any order. The closer they are, the higher the document appears in the results list. Using NEAR, when possible, in place of the Boolean AND usually returns more relevant results.  
  
**EXAMPLE:** phylogeny NEAR ontogeny   
**EXAMPLE:** de Vere NEAR Shakespeare

Even fewer search engines accept ADJ (adjacent to). ADJ works as a phrase except that the two terms, which must appear adjacent to each other in the webpage, can appear in any order.  
  
**EXAMPLE:** Ernest ADJ Hemingway  
**EXAMPLE:** endangered ADJ species  
returns both Ernest Hemingway and Hemingway Ernest; endangered species and species endangered.

Other proximity operators, such as SAME (keywords found in the same field) and FBY (followed by), are used as advanced searching techniques in library and other specialized databases that contain bibliographic citations or references to journal articles, but are not yet employed by search engines.

**ASSIGNMENT:**

Choose one of the **EXAMPLES** from above and try it as a search on [Google's advanced search page.](http://www.google.com/advanced_search?hl=en)

[NOTE: On some other search engines, you may have to select "Exact phrase," "Any of the words," "Must contain," etc. You may also have to indicate if it's a Boolean search.](http://www.google.com/advanced_search?hl=en)

What to do if ...

**YOUR SEARCH RETURNS A "ZILLION" DOCUMENTS**

You probably typed only one term, and it was pretty common. Think of some synonyms. Try adding at least two more specific terms to your string.

**YOUR SEARCH RETURNS TOO FEW DOCUMENTS**

You're probably searching in the wrong place or your search is too narrow. Maybe you didn't configure your search correctly. Maybe the information you seek isn't on the Web. Try omitting some of your search terms. Try your search on another engine, metasearcher, directory, people search, or specialty resource. Ask for help.

**YOUR SEARCH RETURNS A "404 -- FILE NOT FOUND" MESSAGE**

This message tells you that the file you seek has been moved, removed, or renamed. Go back to the search engine and do a phrase search or a field search on the title. Try shortening the URL to see if the file might still be on the same server. Try your search on [*Google,*](http://www.google.com) which maintains cached copies of pages.

**YOUR SEARCH RETURNS A "SERVER DOES NOT HAVE A DNS ENTRY" MESSAGE**

This message tells you that your browser can't locate the server (i.e. the computer that hosts the Web page). It could mean that the network is busy or that the server has been removed or taken down for maintenance. Check your spelling and try again later.

**YOUR SEARCH RETURNS A "SERVER ERROR" OR "SERVER IS BUSY" MESSAGE**

The server you are attempting to contact may be offline, may have crashed, or may be very busy. Try again later.

**YOU CAN'T FIND THE HOME PAGE FOR A WELL-KNOWN PRODUCT OR ORGANIZATION**

Try guessing, experimenting with different top-level domain names by using the name, brief name, or the acronym. Many organizations use one of these in their URL.  
  
**EXAMPLE:** [www.dell.com](http://www.dell.com) (for Dell Computers); [www.redcross.org](http://www.redcross.org) (for the American Red Cross)

**Note:** This doesn't always work. You won't find the American Medical Association this way. The "ama" acronym was grabbed first by the American Marketing Association, so their URL is: [www.ama.org,](http://www.ama.org) while the American Medical Association had to settle for [www.ama-assn.org](http://www.ama-assn.org). However, it is worth a try.

Finally, if you are using FireFox as your browser or your browser is a recent Netscape upgrade, type in the word or phrase without anything else and, if Firefox or Netscape can, they will match it and take you to the site automatically.

**ASSIGNMENT:**

For more information on error codes, go to About.com's [Decoding Error Messages](http://www.learnthenet.com/english/html/96error.htm) and read the column.