BOOLEAN SEARCHING

How it can help you do effective database and Internet searching

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What is Boolean searching?

• It is based on a method of logic developed by George Boole, a 19th century English mathematician.

• Most online databases and Internet search engines support Boolean searches.

• It allows you to do effective searches by cutting out many unrelated documents.

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Basic Boolean Operators:

- AND
- OR
- NOT

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AND

• Using AND narrows your search.
• It retrieves documents that contain both of the search terms or keywords that you specify.
• The more terms you connect with AND, the fewer search results you will find.
Example Using AND:

- **Poverty AND Crime**
- Documents are retrieved containing both search terms.
- Blue shaded area represents search results.
OR

• Using OR broadens your search.
• It retrieves documents that contain either of the search terms or keywords that you specify, but not necessarily both.
• The more terms you connect with OR, the more search results you will find. (Remember: OR gives you more!)
• Use it to search for similar terms.
Example Using OR:

- **College OR University**
- Documents are retrieved containing either search term.
- Gold shaded area represents search results.
NOT

- Using NOT narrows your search.
- It retrieves documents that do not contain a search term in your search.
- Use NOT to exclude a term from your search and to find fewer results.
Example Using NOT:

- **Cats NOT Dogs**
- Documents are retrieved containing only information on cats, and nothing on dogs.
- Purple shaded area represents search results.
Advanced Boolean Search Techniques

- "Quotation Marks"
- (Parentheses)

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“Quotation Marks”

• Using quotation marks narrows your search.

• It requires words to be searched as a phrase in the exact order that you type them within the quotation marks.

• Helpful for searching multiple-word terms, places, or a person’s name.

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Examples Using “ ”

- “global warming”
- “New York City”
- “Brad Pitt”

Note: Using “quotation marks” will give you different search results than if you use the AND operator between each word without quotes.
(Parentheses)

• (Parentheses) allow you to combine any of the Boolean operators together in combination.
• Use NOT and OR together to **limit** your search.
• Use AND and OR together to **expand** your search.
• Using ( ) allows you to combine two possible searches into one, and it saves you time.

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Example #1 Using (  )

• “alternative energy” NOT (wind OR solar)

• Using this search string would allow you to find documents about alternative energy, but not wind or solar methods - it would only give you other methods.

• Your search is narrowed by using NOT, and you exclude more by using OR.

How could this be divided into 2 searches?

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Example #2 Using ( )

- “peanut butter” and (salmonella OR “food poisoning”)
- Using this search string allows you to find anything about peanut butter as it relates to salmonella or food poisoning.
- Salmonella and food poisoning are two related terms. So combining them in ( ) with OR helps us find more info.

How could this be divided into 2 searches?

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How do I know which Boolean Operators to use?

- AND
- OR
- NOT
- " "
- ( )

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Sample Question #1

- I want to find information about cloning humans.
- You may want to try a couple of search strings for more varied results.
- Possible searches:
  - cloning AND human
  - “human cloning”
Sample Question #2

• I want to find information about either Brad Pitt or his wife, Angelina Jolie.

• Suggested search:
  - “Brad Pitt” OR “Angelina Jolie”
Sample Question #3

• I want to find information about mummies, but not mummies in Egypt.

• Suggested search:
  - mummies NOT Egypt
Sample Question #4

- I want to find information about behavior in cats.
- **Consider**: is there more than one term used for a cat?
- Possible search:
  - behavior AND (cats OR felines)
Sample Question #5

• I want information on designing web sites, but not on specific web design software programs.

• Consider: which software programs help you create web sites?

• Possible searches:
  - “web site design” NOT (Dreamweaver OR “Front Page”)
  - “web site design” NOT software

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Boolean Search Tips

• If you find too many search results, you may need to narrow your search. Revise your search by adding additional terms using AND, or excluding a term using NOT.

• If you do not find enough search results, you may need to expand your search. Try using synonyms for your search term using OR.
Boolean Search Tips

• You may need to try searching for your search terms in several different ways to find different results.

• If you are still having problems finding what you need, consider these questions:
  - Is my topic too broad?
  - Is my topic too specific?
  - What are some other search terms I can use?
  - How can I search these terms differently?
Remember:

• Your friendly library staff is here to help if you need further assistance!

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Happy Searching!

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