Geography 111 Exercise  
Constructing Searches with Boolean Operators

Boolean Operators are the words that are used in search phrases to connect concepts.

Boolean Operators are the words AND, OR, NOT. Sometimes the phrase AND NOT is used in place of NOT. Sometimes the word NEAR is used as an operator. The same concept is used in math and is called "set theory".

Boolean Operators can be used to search almost all online databases: library catalogs, research databases, and the web. All web search engines use some form of Boolean operators - sometime AND is +, NOT is -

Searches using Boolean Operators can be drawn using Venn Diagrams.

vernal pools AND fairy shrimp

\[ \text{VP} \cap \text{FS} \]

vernal pools OR fairy shrimp

\[ \text{VP} \cup \text{FS} \]

vernal pools NOT fairy shrimp

\[ \text{VP} \setminus \text{FS} \]

vernal pools AND fairy shrimp AND California

\[ \text{VP} \cap \text{FS} \cap \text{C} \]

(vernal pools AND fairy shrimp) NOT California

\[ \text{VP} \cap \text{FS} \setminus \text{C} \]