# Query Language Symbols and Operators

## Literals

| | |
|---|---|
| **self** | Refers to the object the expression is being evaluated for |
| **yes** or **true** | Boolean values for TRUE |
| **no** or **false** | Boolean values for FALSE |
| **"***aString***"** or **'***aString***'** | Declares *aString* a string literal |
| *number* | Any legal integer or floating point number |
| *AttributeName* | An attribute reference |

## Transform Operators

| | |
|---|---|
| **quote(***some text***)** | Results in a string value equal to *some text* |
| **regex(***a BSD regular expression***)** | Results in a regular expression |
| **shell(***an expression with shell wildcards***)** | Results in a regular expression |
| **parse(***some text***)** | Parses the text argument into an attribute-value list |

## Projection Operators

| | |
|---|---|
| **project(***AttributeName entity_or_object***)** | Projects the attribute named *AttributeName* from the set of attributes represented by *entity_or_object* |

## Boolean Operators

| | |
|---|---|
| **or(***a b***)** | Results in **true** if either *a* or *b* is **true**, **false** if both are **false** |
| **and(***a b***)** | Results in **true** if both *a* and *b* are **true**, **false** if either is **false** |
| **not(***a b***)** | Equivalent to **and(***a* **not(***b***))** |
| **not(***a***)** | The logical negation of *a* |

## Set Operators

| | |
|---|---|
| **or(***s t***)** | Results in the union of sets *s* and *t* |
| **or(***s***)** | [a]Any one or more of the items in set *s*[o] (for use with search operators only) |
| **and(***s t***)** | Results in the intersection of sets *s* and *t* |
| **and(***s***)** | [a]All of the items in set *s*[o] (for use with search operators only) |
| **not(***s t***)** | Results in a set containing those items in set *s* that aren't in set *t* |

## Relational Operators

| | |
|---|---|
| **gt(***a b***)** | Results in **true** if *a* is greater than *b*, **false** otherwise |
| **ge(***a b***)** | Results in **true** if *a* is greater than or equal to *b*, **false** otherwise |

| | |
|---|---|
| **eq(**_a b_**)** | Results in **true** if _a_ is equal to _b_, **false** otherwise |
| **ne(**_a b_**)** | Results in **true** if _a_ is not equal to _b_, **false** otherwise |
| **lt(**_a b_**)** | Results in **true** if _a_ is less than _b_, **false** otherwise |
| **le(**_a b_**)** | Results in **true** if _a_ is less than or equal _b_, **false** otherwise |

## Arithmetic Operators

| | |
|---|---|
| **add(**_a b_**)** | Results in the sum of _a_ and _b_ |
| **sub(**_a b_**)** | Results in difference of _a_ and _b_ |
| **mul(**_a b_**)** | Results in product of _a_ and _b_ |
| **div(**_a b_**)** | Results in quotient of _a_ and _b_ |
| **neg(**_a_**)** | Results in the arithmetic negative of _a_ |

## Search Operators

| | |
|---|---|
| **whole(**_value_**)** | Searches for _value_ as an exact match in the Default attribute |
| **whole(**_AttributeName value_**)** | Searches for _value_ as an exact match in the attribute named _AttributeName_ |
| **whole(**_entity value_**)** | Searches for _value_ as an exact match in _entity_; results in **true** if value is found, **false** if not |
| **whole(**_string value_**)** | Searches for _value_ as an exact match to _string_; results in **true** if value is found, **false** if not (this is equivalent to **eq(**_string value_**)**) |
| **prefix()** | Searches for a value as a prefix match; arguments may be as for **whole()** |
| **within()** | Searches for a value as a match anywhere within an attribute or string; arguments may be as for **whole()** |

## Pre-defined Attributes

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|---|---|
| Default | The default attribute defined by the query language |
| Content | For a file or file record, the literal text of the file |

## IXFileRecord Attributes

| | |
|---|---|
| FileName | The name of a file relative to the root path of the IXFileFinder that created the IXFileRecord (string). |
| FileType | The file's type (string); for example, ªrtfº. |
| FileDevice | The device number for the device the file is on, as returned by **stat()** (number). |
| FileInode | The inode number of the file (number). |
| FileMode | The file's permissions (number). |
| FileCount | The number of hard links to the file (number). |
| FileOwner | The file's owner (string). |
| FileGroup | The file's group (string). |
| FileSize | The file's size, in bytes (number). |
| AccessTime | The time the file was last accessed, as returned by **stat()** (number). |
| ModifyTime | The time the file's content was last modified, as returned by **stat()** (number). |
| ChangeTime | The time the file's status information was last changed, as |

|          |                                                      |
|----------|------------------------------------------------------|
|          | returned by **stat()** (number).                     |
| UnixType | The inode type for the file, encoded as a number.    |