

# EXACT Function

Returns `true` if the second string evaluates to be an exact match of the first string. Source values can be string literals, column references, or expressions that evaluate to strings.

## Basic Usage

### String literal reference example:

```
derive type:single value:EXACT('a','a') as:'stringExactCompare'
```

**Output:** Generates `true` in the new column `stringExactCompare`, since the values are identical.

### String literal reference example:

```
derive type:single value:EXACT('a','A') as:'stringExactCompare'
```

**Output:** Generates `false` in the new column `stringExactCompare`, since the capitalization is different between the two strings.

### Column reference example:

```
derive type:single value:EXACT(string1,string2) as:'stringExactCompare'
```

**Output:** Generates a new `stringExactCompare` column containing the evaluation of `string1` column values being exact matches with the corresponding `string2` column values.

## Syntax and Arguments

```
derive type:single value:EXACT(string_ref1,string_ref2)
```

| Argument                 | Required? | Data Type | Description   |
|--------------------------|-----------|-----------|---|
| <code>string_ref1</code> | Y         | string    | Name of first column or first string literal to apply to the function   |
| <code>string_ref2</code> | Y         | string    | Name of second column or second string literal to apply to the function |

For more information on syntax standards, see *Language Documentation Syntax Notes*.


### `string_ref1`, `string_ref2`

String literal, column reference, or expression whose elements you want to compare based on this function.

### Usage Notes:

| Required? | Data Type  | Example Value                                   |
|-----------|--|---|
| Yes       | String literal, column reference, or expression evaluating to a string | <code>myString1</code> , <code>myString2</code> |

## Examples

 **Tip:** For additional examples, see *Common Tasks*.

### Example - Simple string comparisons

The following example demonstrates functions that can be used to compare two sets of strings. These functions include the following:

- `STRINGGREATERTHAN` - Evaluates to `true` if the first string is greater than the second string. See *STRINGGREATERTHAN Function*.
- `STRINGGREATERTHANEQUAL` - Evaluates to `true` if the first string is greater than or equal to the second string. See *STRINGGREATERTHANEQUAL Function*.
- `STRINGLESSTHAN` - Evaluates to `true` if the first string is less than the second string. See *STRINGLESSTHAN Function*.
- `STRINGLESSTHANEQUAL` - Evaluates to `true` if the first string is less than or equal to the second string. See *STRINGLESSTHANEQUAL Function*.
- `EXACT` - Evaluates to `true` if the first string is an exact match with the second string. See *EXACT Function*.

#### Source:

The following table contains some example strings to be compared.

| rowId | stringA | stringB |
|-------|---------|---------|
| 1     | a       | a       |
| 2     | a       | A       |
| 3     | a       | b       |
| 4     | a       | 1       |
| 5     | a       | ;       |
| 6     | ;       | 1       |
| 7     | a       | a       |
| 8     | a       | aa      |
| 9     | abc     | x       |

Note that in row #6, `stringB` begins with a space character.

#### Transform:

For each set of strings, the following functions are applied to generate a new column containing the results of the comparison.

```
derive type:single value: STRINGGREATERTHAN(stringA,stringB) as: 'greaterThan'
```

```
derive type:single value: STRINGGREATERTHANEQUAL(stringA,stringB) as: 'greaterThanEqual'
```

```
derive type:single value: STRINGLESSTHAN(stringA,stringB) as: 'lessThan'
```

```
derive type:single value: STRINGLESSTHANEQUAL(stringA,stringB) as: 'lessThanEqual'
```

```
derive type:single value: EXACT(stringA,stringB) as: 'exactEqual'
```

**Results:**

In the following table, the Notes column has been added manually.

| rowId | stringA | stringB | lessThanEqual | lessThan | greaterThanEqual | greaterThan | exactEqual | Notes  |
|-------|---------|---------|---------------|----------|------------------|-------------|------------|--|
| 1     | a       | a       | true          | false    | true             | false       | true       | Evaluation of differences between STRINGLES, STHAN and STRINGGREATERTHAN and greater than versions.  |
| 2     | a       | A       | true          | true     | false            | false       | false      | Comparisons are case-sensitive. Uppercase letters are greater than lowercase letters.  |
| 3     | a       | b       | true          | true     | false            | false       | false      | Letters later in the alphabet (b) are greater than earlier letters (a).  |
| 4     | a       | 1       | false         | false    | true             | true        | false      | Letters (a) are greater than digits (1).   |
| 5     | a       | ;       | false         | false    | true             | true        | false      | Letters (a) are greater than non-alphanumerics (;).  |
| 6     | ;       | 1       | true          | true     | false            | false       | false      | Digits (1) are greater than non-alphanumerics (;). Therefore, the following characters are listed in order of evaluation:<br><br><div style="border: 1px solid black; padding: 2px; width: fit-content; margin-left: 20px;">Aa1;</div> |

|   |     |    |       |       |       |       |       |  |
|---|-----|----|-------|-------|-------|-------|-------|--|
| 7 | a   | a  | false | false | true  | true  | false | Letters (and any non-breaking character) are greater than space values.                                    |
| 8 | a   | aa | true  | true  | false | false | false | The second string is greater, since it contains one additional string at the end.                          |
| 9 | abc | x  | true  | true  | false | false | false | The second string is greater, since its first letter is greater than the first letter of the first string. |