SUBDOMAIN Function

Finds the value a subdomain value from a valid URL. Input values must be of URL or String type.

In this implementation, a subdomain value is the first group of characters in the URL after any protocol identifiers (`http://` or `https://`, for example).

- For more information, see *Structure of a URL*.
- You can also extract domain values by function. See *DOMAIN Function*.

Wrangle vs. SQL: This function is part of Wrangle , a proprietary data transformation language. Wrangle is not SQL. For more information, see *Wrangle Language*.

Basic Usage

URL literal example:

```
subdomain('http://www.example.com')
```

Output: Returns the value: `www`.

```
subdomain('http://www.exampl.e.com')
```

Output: Returns the value: `www.exampl`.

Column reference example:

```
subdomain(myURLs)
```

Output: Returns the subdomain values extracted from the `myURLs` column.

Syntax and Arguments

```
subdomain(column_url)
```

Argument	Required?	Data Type	Description
column_url	Y	string	Name of column or String or URL literal containing the sub-domain value to extract

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

column_url

Name of the column or URL or String literal whose values are used to extract the subdomain value.

- Missing input values generate missing results.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value

Yes	String literal or column reference (URL)	`http://www.example.com`

Examples

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

Example - Domain, Subdomain, Host, and Suffix functions

This examples illustrates how you can extract component parts of a URL using the following functions:

- `DOMAIN` - extracts the domain value from a URL. See *DOMAIN Function*.
- `SUBDOMAIN` - extracts the first group after the protocol identifier and before the domain value. See *SUBDOMAIN Function*.
- `HOST` - returns the complete value of the host from an URL. See *HOST Function*.
- `SUFFIX` - extracts the suffix of a URL. See *SUFFIX Function*.
- `URLPARAMS` - extracts the query parameters and values from a URL. See *URLPARAMS Function*.
- `FILTEROBJECT` - filters an Object value to show only the elements for a specified key. See *FILTEROBJECT Function*.

Source:

Your dataset includes the following values for URLs:

URL
www.example.com
example.com/support
http://www.example.com/products/
http://1.2.3.4
https://www.example.com/free-download
https://www.example.com/about-us/careers
www.app.example.com
www.some.app.example.com
some.app.example.com
some.example.com
example.com
http://www.example.com?q1=broken%20record
http://www.example.com?query=khakis&app=pants
http://www.example.com?q1=broken%20record&q2=broken%20tape&q3=broken%20wrist

Transformation:

When the above data is imported into the application, the column is recognized as a URL. All values are registered as valid, even the IPv4 address.

To extract the domain and subdomain values:

Transformation Name	`New formula`

Parameter: Formula type	`Single row formula`
Parameter: Formula	`DOMAIN(URL)`
Parameter: New column name	`'domain_URL'`

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`SUBDOMAIN(URL)`
Parameter: New column name	`'subdomain_URL'`

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`HOST(URL)`
Parameter: New column name	`'host_URL'`

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`SUFFIX(URL)`
Parameter: New column name	`'suffix_URL'`

You can use the Pattern in the following transformation to extract protocol identifiers, if present, into a new column:

Transformation Name	`Extract text or pattern`
Parameter: Column to extract from	`URL`
Parameter: Option	`Custom text or pattern`
Parameter: Text to extract	`` `{start}%*://` ``

To clean this up, you might want to rename the column to `protocol_URL`.

To extract the path values, you can use the following regular expression:

> **NOTE:** Regular expressions are considered a developer-level method for pattern matching. Please use them with caution. See *Text Matching*.

Transformation Name	`Extract text or pattern`
Parameter: Column to extract from	`URL`

Parameter: Option	`Custom text or pattern`
Parameter: Text to extract	`/[^*:\/\/]\/.*$/`

The above transformation grabs a little too much of the URL. If you rename the column to `path_URL`, you can use the following regular expression to clean it up:

Transformation Name	`Extract text or pattern`
Parameter: Column to extract from	`URL`
Parameter: Option	`Custom text or pattern`
Parameter: Text to extract	`/[!^\/].*$/`

Delete the `path_URL` column and rename the `path_URL1` column to the deleted one. Then:

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`URLPARAMS(URL)`
Parameter: New column name	`'urlParams'`

If you wanted to just see the values for the `q1` parameter, you could add the following:

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`FILTEROBJECT(urlParams,'q1')`
Parameter: New column name	`'urlParam_q1'`

Results:

For display purposes, the results table has been broken down into separate sets of columns.

Column set 1:

URL	host_URL	path_URL
www.example.com	www.example.com	
example.com/support	example.com	/support
http://www.example.com/products/	www.example.com	/products/
http://1.2.3.4	1.2.3.4	
https://www.example.com/free-download	www.example.com	/free-download
https://www.example.com/about-us/careers	www.example.com	/about-us /careers
www.app.example.com	www.app.example.com	

www.some.app.example.com	www.some.app.example.com	
some.app.example.com	some.app.example.com	
some.example.com	some.example.com	
example.com	example.com	
http://www.example.com?q1=broken%20record	www.example.com	
http://www.example.com?query=khakis&app=pants	www.example.com	
http://www.example.com?q1=broken%20record&q2=broken%20tape&q3=broken%20wrist	www.example.com	

Column set 2:

URL	protocol_URL	subdomain_URL	domain_URL	suffix_URL
www.example.com		www	example	com
example.com/support			example	com
http://www.example.com/products/	http://	www	example	com
http://1.2.3.4	http://			
https://www.example.com/free-download	https://	www	example	com
https://www.example.com/about-us/careers	https://	www	example	com
www.app.example.com		www.app	example	com
www.some.app.example.com		www.some.app	example	com
some.app.example.com		some.app	example	com
some.example.com		some	example	com
example.com			example	com
http://www.example.com?q1=broken%20record	http://	www	example	com
http://www.example.com?query=khakis&app=pants	http://	www	example	com
http://www.example.com?q1=broken%20record&q2=broken%20tape&q3=broken%20wrist	http://	www	example	com

Column set 3:

URL	urlParams	urlParam_q1
www.example.com		
example.com/support		
http://www.example.com/products/		
http://1.2.3.4		
https://www.example.com/free-download		
https://www.example.com/about-us/careers		
www.app.example.com		
www.some.app.example.com		
some.app.example.com		
some.example.com		
example.com		

http://www.example.com?q1=broken%20record	{"q1":"broken record"}	{"q1":"broken record"}
http://www.example.com?query=khakis&app=pants	{"query":"khakis","app":"pants"}	
http://www.example.com?q1=broken%20record&q2=broken%20tape&q3=broken%20wrist	{"q1":"broken record", "q2":"broken tape", "q3":"broken wrist"}	{"q1":"broken record"}