

### Basic Expressions

```

{{ "Hello World" }}      Outputs Hello World
{{ foo }}                Outputs value of 'foo'
                           variable
{{ 2 + 3 }}              Outputs number 5
{{ 5 > 10 }}             Outputs "False"
    
```

### If Statement

```

{% if hour > 5 and hour < 12 %}
    Good Morning!
{% elif number >= 12 and hour < 17 %}
    Good Afternoon!
{% elif number >= 17 %}
    Good Evening!
{% endif %}
    
```

### For Loop

```

{% for number in 10 %}
    {{ number }}
{% endfor %}
    
```

### For loop with conditions

```

{% for item in states if item.attributes.emulated_hue_name|length > 0-%}
    {%- if loop.first %}{% elif loop.last %}, and
    {% else %}, {% endif -%}
    {{item.attributes.emulated_hue_name|title}}
    {%- endfor -%}.
    
```

When iterating through a loop, sometimes we would like to add additional logic based on the loop counter. This is an example.

### String Manipulations

```

{{ "Hello" ~ "World" }}  Outputs "Hello World"
                           (String Concatenation)
{{ "Hello World" | lower }}
                           Outputs "hello world"
{{ "hello world" | title }}
                           Outputs "Hello World"
{{ "hello world" | upper }}
                           Outputs "HELLO WORLD"
    
```

### String Manipulations (cont)

```

{{ "hello world".split(' ')|0 }}
                           Splits by delimiter ' ' and
                           outputs "hello"
{{ "hello" | replace("he", "she") }}
                           Replaces "he" with "she",
                           and outputs "shello"
{{ "hello" | length }}
                           Outputs number of characters,
                           which is 5
{{ "hello" == "hello" }}
                           Compares strings, if equal,
                           returns True
{{ "Hello world"[:4] }}
                           Get Substring - Returns "-
                           Hell", the first 4 characters
{{ "HELLO" [2:4] }}
                           Get Substring - Returns "-
                           LL"
{{ "HELLO"[:-3] }}
                           Get Substring - Removes
                           last three characters,
                           Returns "HE"
    
```

### Date and Time

```

{{ now() }}                Prints current date and time value
{{ now().strftime("%m-%d-%Y") }}
                           Outputs "07-26-2017"
                           by converting datetime value to the
                           specified format
{{ as_timestamp(now()) | timestamp_custom("%m-%d-%Y", true) }}
                           Outputs "07-26-2017"
                           by converting datetime value to the
                           specified format
{{ now().strftime("%m-%m") }}
                           Outputs Month value.
                           For ex: 07
    
```

For additional date and time related formats, please visit <http://strftime.org/>

### Number Conversions

```

{{ 10.5 }}                Prints the number as is
{{ 10.500482737 | int }}
                           Converts float to decimal
{{ 10.6 | round }}        Rounds to nearest decimal number
{{ 10.4 | round }}        Rounds to nearest decimal number
{{ 10 | float }}          Converts Decimal to float
{{ '%0x' % 255 }}         Changes Decimal to Hex Value
{{ "%0x" | format(some_numeric_value | int) }}
                           Converts numeric value to Hex Value
{{ '%0.2f' % 24.12345 }}
                           Only displays two digits after decimal
                           point
{{ "${:.2f}".format(15.45) }}
                           Formats currency
    
```

### Basic Macros

```

{% macro sayHello() -%}
    Hello!
{%- endmacro %}
Call the macro using {{ sayHello() }}
    
```

### Random

```

{{["hello", "hi there!", "howdy!", "hey there!"]|random}}
    
```

### Troubleshooting

1. Always convert to proper data type prior to using any filters.  
For example,  
{{ set value = "123" }}  
{{ value > 100 }} given the value is of "string" type, make sure you convert to decimal first.  
{{ (value | int) > 123 }}

