



12: Advanced {% for %} Loops





For

```
1 <ul>
2   {% for campus in Campuses %}
3     <li>
4       <a href="{{ campus.Url }}">{{ campus.Name }} Campus</a>
5     </li>
6   {% endfor %}
7 </ul>
```

- [Avondale Campus](#)
- [Black Canyon Campus](#)
- [Carefree Campus](#)



Pre-filtering your Array

Changing the list of items before the for loop





For

```
1 {% assign sortedCampuses = Campuses | OrderBy:'CreatedDateTime' %}  
2 <ul>  
3   {% for campus in sortedCampuses %}  
4     <li>  
5       <a href="{{ campus.Url }}">{{ campus.Name }} Campus</a>  
6       opened in {{ campus.CreatedDateTime | Date:'yyyy' }}.  
7     </li>  
8   {% endfor %}  
9 </ul>
```

- [Carefree Campus](#) opened in 2007.
- [Avondale Campus](#) opened in 2016.
- [Black Canyon Campus](#) opened in 2020.



For

```
1 {% assign children = CurrentPerson | Children | SortByAttribute:'BaptismDate' %}  
2 <ul>  
3   {% for child in children %}  
4     <li>  
5       {{ child.FullName }}: {{ child | Attribute:'BaptismDate' }}  
6     </li>  
7   {% endfor %}  
8 </ul>
```

- Noah Decker: 7/3/2023
- Alex Decker: 8/4/2024



For

```
1  {% assign children = CurrentPerson | Children | SortByAttribute:'BaptismDate','desc' %}  
2  <ul>  
3    {% for child in children %}  
4      <li>  
5        {{ child.FullName }}: {{ child | Attribute:'BaptismDate' }}  
6      </li>  
7    {% endfor %}  
8  </ul>
```

- Alex Decker: 8/4/2024
- Noah Decker: 7/3/2023



For

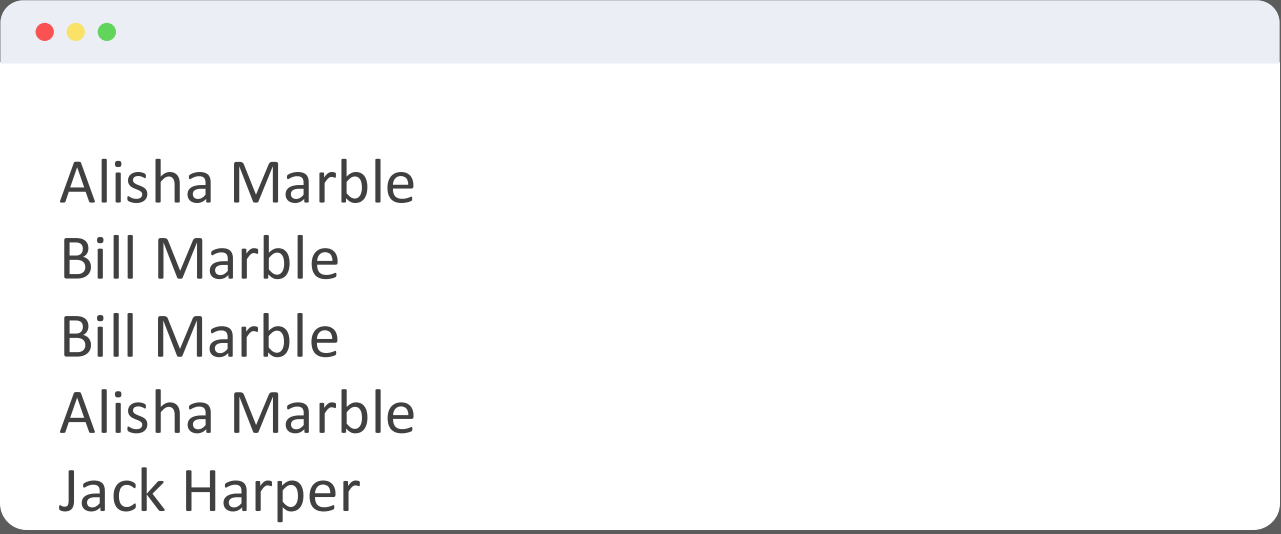
```
1 {% assign randomizedCampuses = Campuses | Shuffle %}
2 <ul>
3   {% for campus in randomizedCampuses %}
4     <li>
5       <a href="{{ campus.Url }}">{{ campus.Name }} Campus</a>
6     </li>
7   {% endfor %}
8 </ul>
```

- [Black Canyon Campus](#)
- [Carefree Campus](#)
- [Avondale Campus](#)



For

```
1 {% groupmember where:'GroupId == "{{ CurrentPerson.PrimaryFamilyId }}" %}  
2     {% assign familyMembers = groupmemberItems %}  
3 {% endgroupmember %}  
4  
5 {% assign smallGroupMembers = Context.Group.Members %}  
6  
7 {% assign importantPeople = familyMembers | Concat:smallGroupMembers %}  
8 {% for member in importantPeople %}  
9     {{ member.Person.FullName }}<br>  
10 {% endfor %}
```

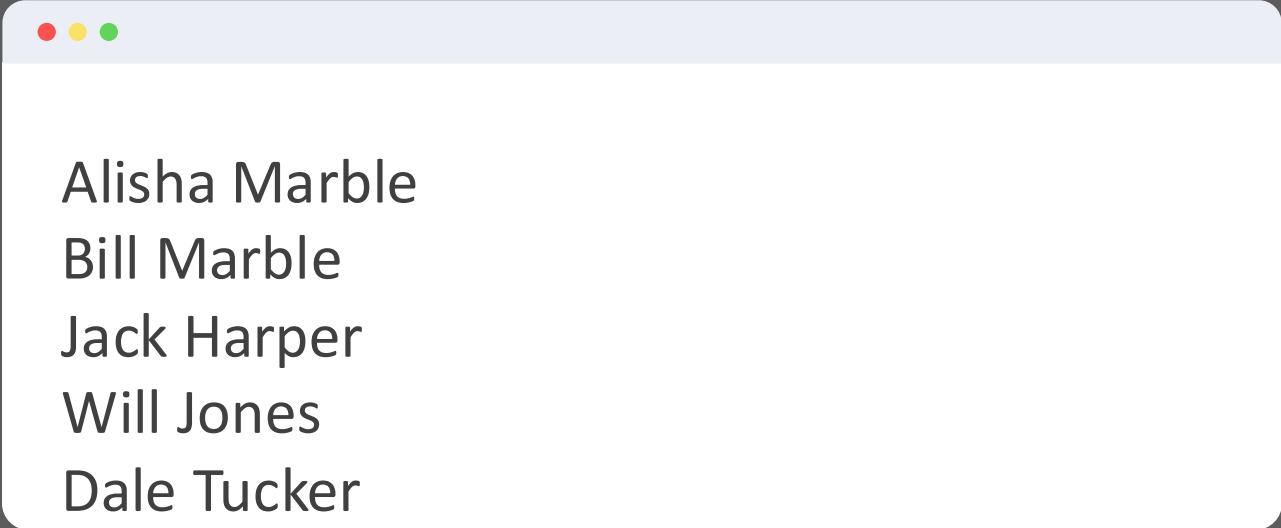


Alisha Marble
Bill Marble
Bill Marble
Alisha Marble
Jack Harper



For

```
1  {% groupmember where:'GroupId == "{{ CurrentPerson.PrimaryFamilyId }}"' %}  
2      {% assign familyMembers = groupmemberItems %}  
3  {% endgroupmember %}  
4  
5  {% assign smallGroupMembers = Context.Group.Members %}  
6  
7  {% assign importantPeople = familyMembers | Concat:smallGroupMembers | Distinct:'PersonId' %}  
8  {% for member in importantPeople %}  
9      {{ member.Person.FullName }}<br>  
10 {% endfor %}
```



Alisha Marble
Bill Marble
Jack Harper
Will Jones
Dale Tucker



The big idea:

Your `{% for %}` loops are almost always iterating over an array.



Know your tools

Get to know what Array filters are available, so you can pre-filter or manipulate the records for your loop, before it even starts.



Loops without an Array

Inventing your own source





Alternate “For” Loop

Taking full control of your loops

Syntax

```
1  {% for var in (start..end) %}  
2  
3  {% endfor %}
```

var = the variable you name

start = a number as a variable or literal to start at

end = a number as a variable or literal to end at



Hint:

If you're used to languages with a “While” loop, this is similar.



Alternate For Loops

```
1 {% assign currentYear = 'Now' | Date:'yyyy' %}  
2 {% for i in (2021..currentYear) %}  
3     {{ i }}<br>  
4 {% endfor %}
```

2021
2022
2023
2024



Alternate For Loops

```
1 {% assign currentYear = 'Now' | Date:'yyyy' %}  
2 {% assign twoYearsAgo = currentYear | Minus:2 %}  
3 {% for i in (twoYearsAgo..currentYear) %}  
4     {{ i }}<br>  
5 {% endfor %}
```

2022

2023

2024



Indexer

Getting direct access to items in an array

Syntax

```
1 {{ Array[0] }}
```

Array = the array you are accessing

0 = the index (number) of the item you want to get



Remember:

Arrays are 0-indexed, so the first item is [0], and the second is [1]



Indexer

```
1 {% assign colors = 'orange,blue,red,green,pink,gray' | Split:', ' %}  
2 {{ colors[2] }}
```

```
1 [  
2   "orange",  
3   "blue",  
4   "red",  
5   "green",  
6   "pink",  
7   "gray"  
8 ]
```



red



Index Filter

```
1 {% assign colors = 'orange,blue,red,green,pink,gray' | Split:', ' %}  
2 {{ colors[2] }}
```

```
1 {% assign colors = 'orange,blue,red,green,pink,gray' | Split:', ' %}  
2 {{ colors | Index:2 }}
```

red



Indexer

```
1 {% assign colors = 'orange,blue,red,green,pink,gray' | Split:', ' %}
2 {% assign members = Group.Members %}
3 {% assign highestMemberIndex = members | Size | Minus:1 %}
4
5 {% for i in (0..highestMemberIndex) %}
6   <div style="color: {{ colors[i] }}">
7     {{ members[i].Person.FullName }}
8   </div>
9 {% endfor %}
```

```
1 [
2   "orange",
3   "blue",
4   "red",
5   "green",
6   "pink",
7   "gray"
8 ]
```

Paul Smith
Ty McClintock



Showing an Array without a Loops

Is this really an advanced
“For” loop? Well... no 🙄

But the result is the same!





For

```
1  {% assign randomizedCampuses = Campuses | Shuffle %}  
2  <ul>  
3    {% for campus in randomizedCampuses %}  
4      <li>{{ campus.Name }} Campus</li>  
5    {% endfor %}  
6  </ul>
```

- **Black Canyon Campus**
- **Carefree Campus**
- **Avondale Campus**



For

```
1 {% assign randomizedCampuses = Campuses | Shuffle | Map:'Name' %}  
2 <ul>  
3   <li>  
4     {{ randomizedCampuses | Join:'</li><li>' }}  
5   </li>  
6 </ul>
```

- **Black Canyon Campus**
- **Carefree Campus**
- **Avondale Campus**



For

```
1 {% assign randomizedCampuses = Campuses | Shuffle | Map:
2 <ul>
3   <li>
4     {{ randomizedCampuses | Join:'</li><li>' }}
5   </li>
6 </ul>
```

```
1 {% assign randomizedCampuses = Campuses %}
2 <pre>{{ randomizedCampuses | ToJSON }}</pre>
```

```
1 [
2   {
3     "Id": "1",
4     "Name": "Avondale",
5     "ShortCode": "AV",
6     "LocationId": "1",
7     "IsActive": true,
8     [...]
9   },
10  {
11    "Id": "2",
12    "Name": "Black Canyon",
13    "ShortCode": "BC",
14    "LocationId": "2",
15    "IsActive": true,
16    [...]
17  },
18  {
19    "Id": "3",
20    "Name": "Carefree",
21    "ShortCode": "CA",
22    "LocationId": "3",
23    "IsActive": true,
24    [...]
25  }
26 ]
```



For

```
1 {% assign randomizedCampuses = Campuses | Shuffle | Map:
2 <ul>
3   <li>
4     {{ randomizedCampuses | Join:'</li><li>' }}
5   </li>
6 </ul>
```

```
1 {% assign randomizedCampuses = Campuses | Shuffle %}
2 <pre>{{ randomizedCampuses | ToJSON }}</pre>
```

```
1 [
2   {
3     "Id": "1",
4     "Name": "Avondale",
5     "ShortCode": "AV",
6     "LocationId": "1",
7     "IsActive": true,
8     [...]
9   }
10  {
11    "Id": "2",
12    "Name": "Black Canyon",
13    "ShortCode": "BC",
14    "LocationId": "2",
15    "IsActive": true,
16    [...]
17  }
18  {
19    "Id": "3",
20    "Name": "Carefree",
21    "ShortCode": "CA",
22    "LocationId": "3",
23    "IsActive": true,
24    [...]
25  }
26 ]
```



For

```
1 {% assign randomizedCampuses = Campuses | Shuffle | Map:
2 <ul>
3   <li>
4     {{ randomizedCampuses | Join:'</li><li>' }}
5   </li>
6 </ul>
```

```
1 {% assign randomizedCampuses = Campuses | Shuffle %}
2 <pre>{{ randomizedCampuses | ToJSON }}</pre>
```

```
1 [
2   {
3     "Id": "2",
4     "Name": "Black Canyon",
5     "ShortCode": "BC",
6     "LocationId": "2",
7     "IsActive": true,
8     [...]
9   }
10  {
11    "Id": "3",
12    "Name": "Carefree",
13    "ShortCode": "CA",
14    "LocationId": "3",
15    "IsActive": true,
16    [...]
17  }
18  {
19    "Id": "1",
20    "Name": "Avondale",
21    "ShortCode": "AV",
22    "LocationId": "1",
23    "IsActive": true,
24    [...]
25  }
26 ]
```




For

```
1 {% assign randomizedCampuses = Campuses | Shuffle | Map:
2 <ul>
3   <li>
4     {{ randomizedCampuses | Join:'</li><li>' }}
5   </li>
6 </ul>
```

```
1 {% assign randomizedCampuses = Campuses | Shuffle %}
2 <pre>{{ randomizedCampuses | ToJSON }}</pre>
```

```
1 [
2   {
3     "Id": "2",
4     "Name": "Black Canyon",
5     "ShortCode": "BC",
6     "LocationId": "2",
7     "IsActive": true,
8     [...]
9   },
10  {
11    "Id": "3",
12    "Name": "Carefree",
13    "ShortCode": "CA",
14    "LocationId": "3",
15    "IsActive": true,
16    [...]
17  },
18  {
19    "Id": "1",
20    "Name": "Avondale",
21    "ShortCode": "AV",
22    "LocationId": "1",
23    "IsActive": true,
24    [...]
25  }
26 ]
```



For

```
1 {% assign randomizedCampuses = Campuses | Shuffle | Map:'Name' %}
2 <ul>
3   <li>
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```
1 [
2   {
3     "Id": "2",
4     "Name": "Black Canyon",
5     "ShortCode": "BC",
6     "LocationId": "2",
7     "IsActive": true,
8     [...]
9   },
10  {
11    "Id": "3",
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2  <ul>  
3    <li>  
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```

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```
1  [  
2    {  
3      "Id": "2",  
4      "Name": "Black Canyon",  
5      "ShortCode": "BC",  
6      "LocationId": "2",  
7      "IsActive": true,  
8      [...]  
9    },  
10   {  
11     "Id": "3",  
12     "Name": "Carefree",  
13     "ShortCode": "CA",  
14     "LocationId": "3",  
15     "IsActive": true
```



For

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1  {% assign randomizedCampuses = Campuses | Shuffle | Map:'Name' %}  
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```

```
1  [  
2    {  
3  
4      "Name": "Black Canyon",  
5  
6  
7  
8  
9    },  
10   {  
11  
12     "Name": "Carefree",  
13  
14  
15
```



For

```
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2 <ul>  
3   <li>  
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7   },  
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10  }  
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4    },  
5    {  
6      "Name": "Carefree"  
7    },  
8    {  
9      "Name": "Avondale"  
10   }  
11  ]
```

```
1  <ul>  
2    <li>  
3      Black Canyon  
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For

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7    },  
8    {  
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```

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```
1  <ul>
2    <li>
3      Black Canyon
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```



For

```
1  {% assign randomizedCampuses = Campuses | Shuffle | Map:'Name' %}  
2  <pre>{{ randomizedCampuses | Join:', ' }}</pre>
```

```
1  [  
2    {  
3      "Name": "Black Canyon"  
4    },  
5    {  
6      "Name": "Carefree"  
7    },  
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10   }  
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```

Black Canyon, Carefree, Avondale



For

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2 <ul>  
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4     {{ randomizedCampuses | Join:'</li><li>' }}  
5   </li>  
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```

- **Black Canyon Campus**
- **Carefree Campus**
- **Avondale Campus**