

Beyond the Basics: Mastering Advanced Template Layouts in EE

Practical solutions you can apply today



Jelle Dijkstra, Gavin Lawrie - ee-websites.eu

Hello



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<https://www.burodeng.nl/>



<https://www.ee-websites.eu/>

Hello

Not only but also ... an apology:
prosopagnosia



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Topics for today

template layouts and layout variables

- **Template Layouts** - concepts and terminology
- Using layouts to build up page content
- Introducing **Layout Variables**
- **Layout Variable Arrays**
- Using layouts to simplify template debugging
- Replacing embeds and stash elements



Template Layouts: concepts and terminology

Template Layouts

concepts



- A way to structure EE templates to allow for progressive construction
 - Turns single templates linked collections of templates that are evaluated by ExpressionEngine sequentially allow a page to be built up in stages
- Can simplify template content by removing complex elements to their own templates
- Helps with DRY (e.g. get all templates to use same base HTML layout)
- Efficient since you only need one EE instance to do a lot of rendering

Template Layouts

terminology



- **'Template Stack'** - any collection of linked templates that work together to generate a rendered page
- **'Layout Tag'** - the entry used to indicate that another template should be added to the evaluation before output of the rendering to the browser
 - Must be the first tag in the template
 - Cannot contain conditionals
- **'Contents Variable'** - a special variable that holds the entire evaluated output of the calling template
- **'Layout Variable'** - a re-usable single value saved during evaluation of a template stack
- **'Layout Variable Array'** - a re-usable list of values saved during evaluation of a template stack



Using layouts to build up page content

How do template layouts work?

Traditional EE practice



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {exp:channel:entries entry_id='1' limit='1'}
    <div class="container">
      <div class="head">
        <h1>Image Testing</h1>
      </div>
      <div class="body">
        <div class="body-left">
          <div>
            <h2>Legacy v1.4.16.2</h2>
            <div>
              {exp:jcogs_img:image
                src='{images}'
                width='350'
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                preload='yes'
                filename="Cats are Evil Things"
              }
            </div>
          </div>
        </div>
        <div class="body-right">
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image_testing.html



https://domain.com/image_testing

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10



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main.com/image testing

Image Testing

Pro v2.0.0-beta10



How do template layouts work?

Traditional EE practice



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image_testing.html



https://domain.com/image_testing

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10





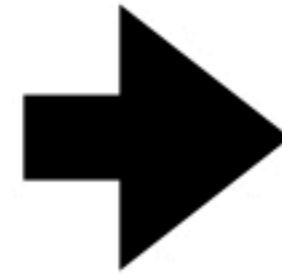
How do template layouts work?

using template layouts

`{layout='home/_html'}`

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  </head>
  <body>
    {layout:contents}
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_html.html

Note: the url remains the same!

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Image Testing

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Pro v2.0.0-beta10



Note: the layout tag needs to be the first tag in the template - so cannot appear within another construct



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image_testing.html

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Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10





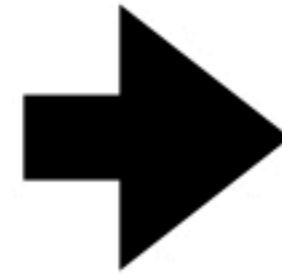
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Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10



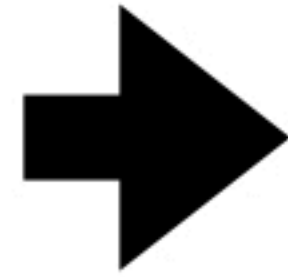
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How do template layouts work?

stacking multiple template layouts

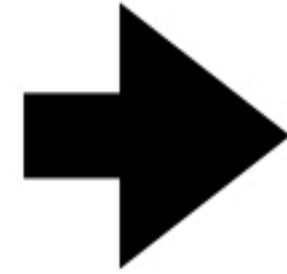
- you can stack multiple templates with the `{layout=' '}` tag
 - **template 1:** `{layout='home/_template_2'}`
 - **template 2:** `{layout='home/_template_3'}`
 - **template 3:** `{layout='home/_html'}`
- Note - your visible url still does not change



How do template layouts work?

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```
{layout='home/_image_testing'}
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<div class="body-left">
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</div>
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image_testing.html
```

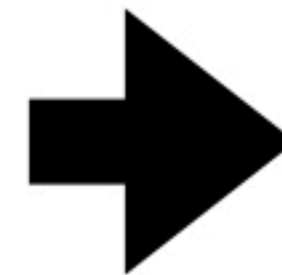


```
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_image_testing.html
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Note: the content of layout:contents changes after each evaluation



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https://domain.com/image_testing

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Pro v2.0.0-beta10





How do template layouts work?

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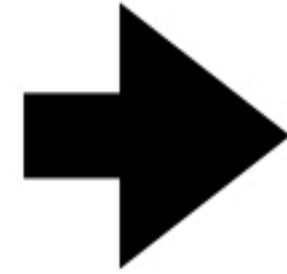
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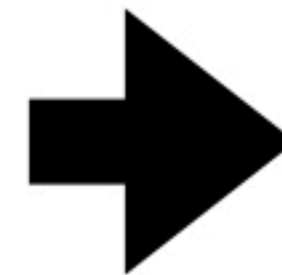


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</html>
```

Note: the url remains the same!

https://domain.com/image_testing

Image Testing

1.4.16.2

Pro v2.0.0-beta10

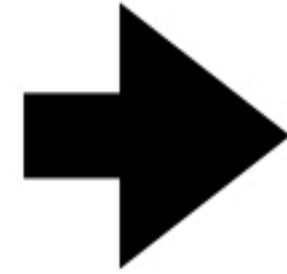




How do template layouts work?

stacking multiple template layouts

```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="body-left">
  <div>
    <h2>Legacy v1.4.16.2</h2>
    <div>
      {exp:jcogs_img:image
        src='{images}'
        width='350'
        cache='500'
        preload='yes'
      }
    </div>
  </div>
</div>
{/exp:channel:entries}
image_testing.html
```

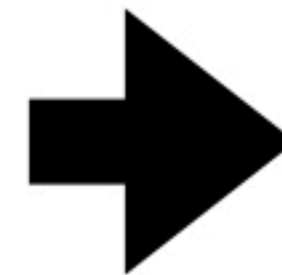


```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:contents}
    <div class="body-right">
      <div>
        <h2>Pro v2.0.0-beta10</h2>
        <div>
          {exp:jcogs_img_pro:image
            src='{images}'
            width='350'
            cache='500'
            preload='yes'
          }
        </div>
      </div>
    </div>
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```

Note: the content of layout:contents changes after each evaluation



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



Note: the url remains the same!

https://domain.com/image_testing

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10

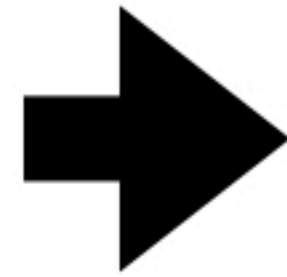




How do template layouts work?

stacking multiple template layouts

```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
    </div>
    {exp:jcogs_img:image
      src='{images}'
      width='350'
      cache='500'
      preload='yes'
    }
  </div>
</div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
  <div class="container">
    <div class="head">
      <h1>Image Testing</h1>
    </div>
    <div class="body">
      {layout:contents}
      <div class="body-right">
        <div>
          <h2>Pro v2.0.0-beta10</h2>
        </div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</div>
```

Note: the url remains the same!

Note: the content of the page changes after each

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
```

_html.html

https://domain.com/image_testing

Testing

Pro v2.0.0-beta10

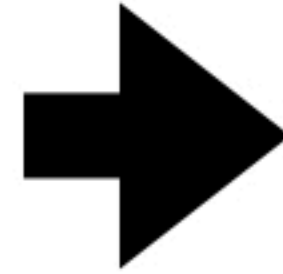




How do template layouts work?

stacking multiple template layouts

```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
    </div>
    <div>
      {exp:jcogs_img:image
        src='{images}'
        width='350'
        cache='500'
        preload='yes'
      }
    </div>
  </div>
</exp:channel:entries>
image_testing.html
```

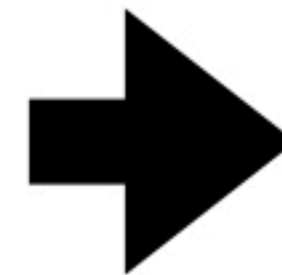


```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:contents}
    <div class="body-right">
      <div>
        <h2>Pro v2.0.0-beta10</h2>
      </div>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</div>
</exp:channel:entries>
_image_testing.html
```

Note: the content of layout:contents changes after each evaluation



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



Note: the url remains the same!

https://domain.com/image_testing

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10





Introducing Layout Variables

Layout Variables

introduction



- A generalisation of the `{layout:contents}` special variable
- Use to store arbitrary string values
- Another approach to specifying substitution variables
 - More flexible than CE variables / Pro variables
 - Can be combined with variable modifiers
 - Can be used within conditionals
- Enables conditional template layout flow patterns

Layout Variables

how to specify



- Three options to set:
 1. In the **layout tag** itself - `{layout='home/_html' my_variable='cats'}`
Useful for constant values; some other variables can be used but only those that can be evaluated directly by EE
 2. In a stand-alone **layout:set** tag - `{layout:set name='my_variable' value='cats'}`
Useful for simple variable value assignments
 3. In a tag-pair **layout:set** tag - `{layout:set name='my_variable'}cats{/layout:set}`
Useful for assigning complex output to a variable



Layout Variables

how to retrieve

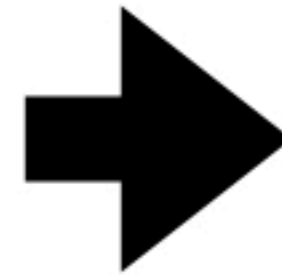
- One option to retrieve: `{layout:my_variable}`
 - Only available from the **following** template in stack
 - Once set they are available throughout the remainder of the stack
 - Can be overwritten in templates later in the stack
 - Can be combined into a new layout variable
 - Can have variable modifiers applied - e.g.
`{layout:my_variable:limit characters='50'}`

Layout Variables

simple example



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



https://domain.com/image_testing

Image Testing

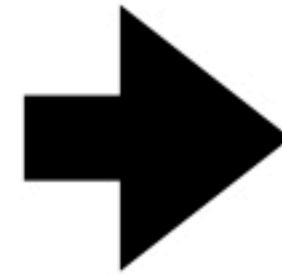
Legacy v1.4.16.2



Pro v2.0.0-beta10



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



Layout Variables



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/layout:set}
{/exp:channel:entries}
```

image_testing.html

```
testing_2'}
entry_id='1' limit='1'}
="body_right">
-right">
v2.0.0-beta10</h2>
:jcogs_img_pro:image
src='{images}'
width='350'
cache='500'
preload='yes'
s}
_image_testing.html
```

```
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="canonical" href="{current_url}">
<meta name="description" content="Test Build">
<title>Single - {site_label}</title>
</head>
<body>
  {layout:contents}
</body>
</html>
```

_html.html



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
```

_image_testing.html



https://domain.com/image_testing

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10

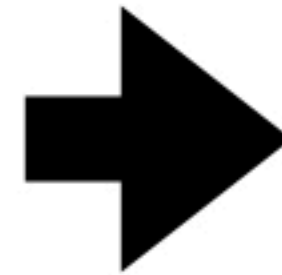


Layout Variables

simple example



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



https://domain.com/image_testing

Image Testing

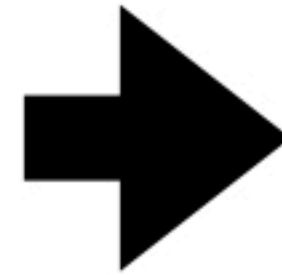
Legacy v1.4.16.2



Pro v2.0.0-beta10



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```





Layout Variables

simple example

```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



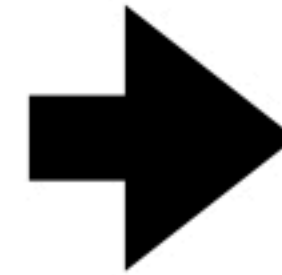
```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/layout:set}
{/exp:channel:entries}
```

```
entry_id='1' limit='1'}
ing</h1>
ft}
ight}
_image_testing.html
```

https://domain.com/image_testing

Image Testing

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



_image_testing.html 16.2



Pro v2.0.0-beta10

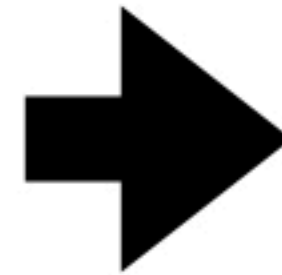


Layout Variables

simple example



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



https://domain.com/image_testing

Image Testing

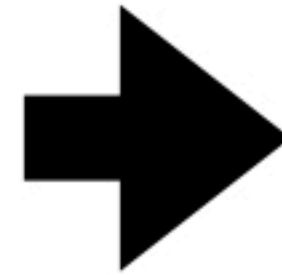
Legacy v1.4.16.2



Pro v2.0.0-beta10



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



Layout Variables

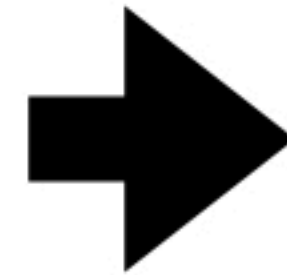
simple example



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



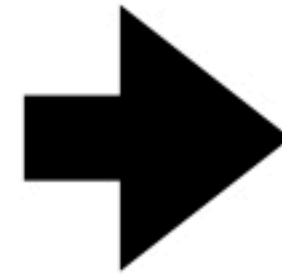
```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing_2.html
```



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



Legacy v1.4.16.2



Pro v2.0.0-beta10



Layout Variables

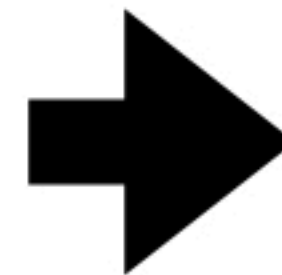
simple example



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



https://domain.com/image_testing

Image Testing

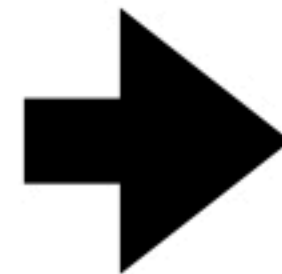
Legacy v1.4.16.2



Pro v2.0.0-beta10



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```

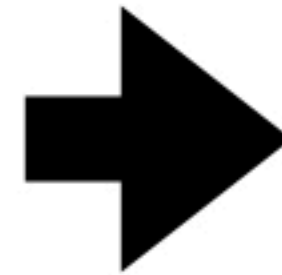




Layout Variables

simple example

```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



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```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```

Testing

Pro v2.0.0-beta10



Layout Variables

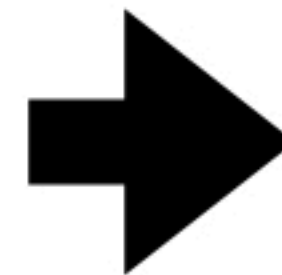
simple example



```
{layout='home/_image_testing'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
image_testing.html
```



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



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Image Testing

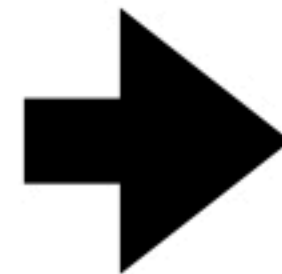
Legacy v1.4.16.2



Pro v2.0.0-beta10



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```





Layout Variables

conditional template layout patterns

Template Tags:

*"Must be the first tag in the template
Cannot contain conditionals"*

but

They can contain a **named layout variable**, so we can use this:

```
{layout='{layout:switch}'}
```

Where the layout variable contains a template path - e.g. `home/_html`

This quirk enables **conditional template layout patterns**

Layout Variables

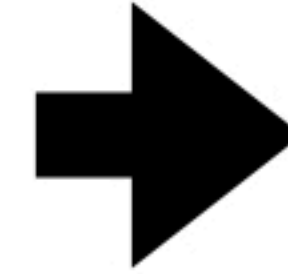
conditional pattern - simple example



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
_image_testing.html
```



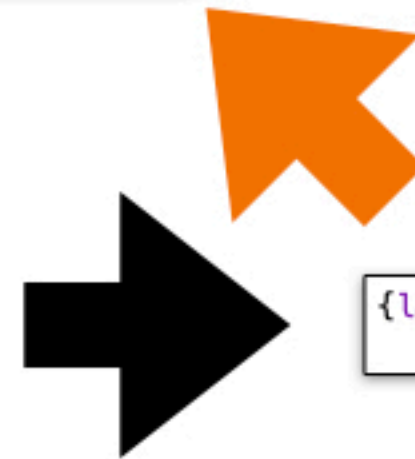
```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



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```
{layout='{layout:switch}'}
switch.html
```



Login Screen

```
{layout='home/switch'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
{layout:set name="switch" value="home/login"}
{if logged_in}
  {layout:set name="switch" value="home/_image_testing"}
{/if}
image_testing.html
```

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10





Layout Variables

conditional pattern - simple example

```

{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
    {layout:set name="body_right"}
    <div class="body-right">
        <div>
            <h2>Legacy v1.4.16.2</h2>
            <div>
                {exp:jcogs_img:image
                    src='{images}'
                    width='350'
                    cache='500'
                    preload='yes'
                }
            </div>
        </div>
    </div>
</div>
{exp:channel:entries}
{layout:set name="switch" value="home/login"}
{if logged_in}
    {layout:set name="switch" value="home/_image_testing_2"}
{/if}

```

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
```

_html.html

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Image Testing

Legacy v1.4.16.2

Pro v2.0.0-beta10

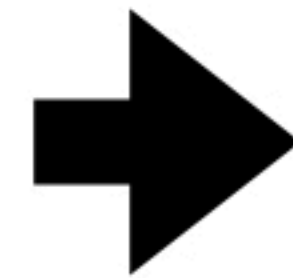


Layout Variables

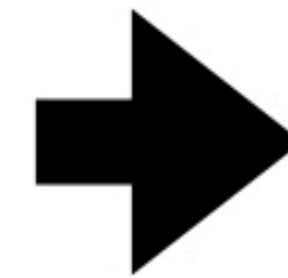
conditional pattern - simple example



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
_image_testing.html
```



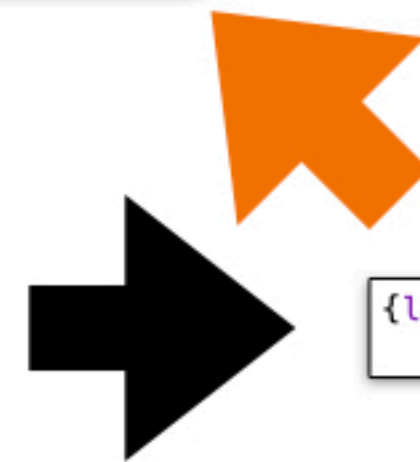
```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



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```
{layout='{layout:switch}'}
switch.html
```



Login Screen

```
{layout='home/switch'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
{layout:set name="switch" value="home/login"}
{if logged_in}
  {layout:set name="switch" value="home/_image_testing"}
{/if}
image_testing.html
```

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10



Layout Variables

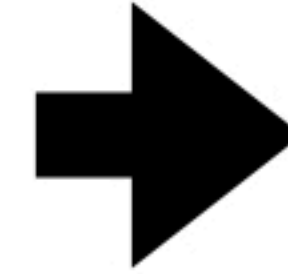
conditional pattern - simple example



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
_image_testing.html
```



```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



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```
{layout='{layout:switch}'}
switch.html
```



Login Screen

```
{layout='home/switch'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
{layout:set name="switch" value="home/login"}
{if logged_in}
  {layout:set name="switch" value="home/_image_testing"}
{/if}
image_testing.html
```

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10

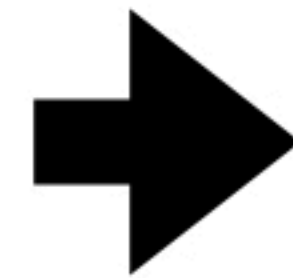


Layout Variables

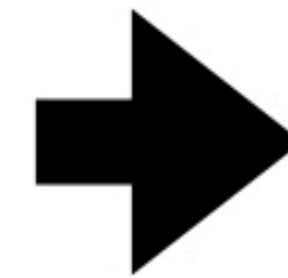
conditional pattern - simple example



```
{layout='home/_image_testing_2'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_right"}
  <div class="body-right">
    <div>
      <h2>Pro v2.0.0-beta10</h2>
      <div>
        {exp:jcogs_img_pro:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
_image_testing.html
```



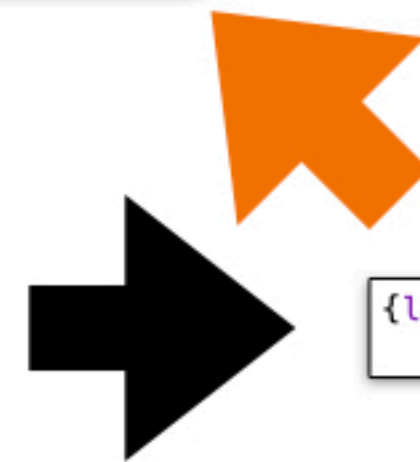
```
{layout='home/_html'}
{exp:channel:entries entry_id='1' limit='1'}
<div class="container">
  <div class="head">
    <h1>Image Testing</h1>
  </div>
  <div class="body">
    {layout:body_left}
    {layout:body_right}
  </div>
</div>
{/exp:channel:entries}
_image_testing.html
```



```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="canonical" href="{current_url}">
    <meta name="description" content="Test Build">
    <title>Single - {site_label}</title>
  </head>
  <body>
    {layout:contents}
  </body>
</html>
_html.html
```



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```
{layout='{layout:switch}'}
switch.html
```



Login Screen

```
{layout='home/switch'}
{exp:channel:entries entry_id='1' limit='1'}
  {layout:set name="body_left"}
  <div class="body-left">
    <div>
      <h2>Legacy v1.4.16.2</h2>
      <div>
        {exp:jcogs_img:image
          src='{images}'
          width='350'
          cache='500'
          preload='yes'
        }
      </div>
    </div>
  </div>
</layout:set>
{/exp:channel:entries}
{layout:set name="switch" value="home/login"}
{if logged_in}
  {layout:set name="switch" value="home/_image_testing"}
{/if}
image_testing.html
```

Image Testing

Legacy v1.4.16.2



Pro v2.0.0-beta10



Layout Variables

live example



pluQ [How it works](#) [Frequently asked questions](#) [Find giftlist](#) [Dashboard](#) [jelle.dijkstra](#) | [Eng](#)

What do you want to create a gift list for?

[Marriage](#) [Childbirth](#) [Party](#)

[View the sample gift list](#)

[Marriage](#) [Childbirth](#) [Party](#) [Find giftlist](#)

pluQ is the ideal gift list tool for your wedding, childbirth or party. And the nicest alternative to the envelope. Create your personalised gift list quickly and easy and ask money in an original way.

<https://giftlist.ee-websites.eu/en/>



Layout Variable Arrays



Layout Variable Arrays

introduction

- An extension of layout variables
- Use to store **collections** of arbitrary string values
- Fiddly to setup but can be very useful once you get hang of it



Layout Variable Arrays

how to set

- **Setting**

- use **layout:set:append** tag-pair - adds item to end of array

```
{exp:channel:entries channel='news'}  
  {layout:set:append name='titles'},{title}/{layout:set:append}  
{/exp:channel:entries}
```

- use **layout:set:prepend** tag-pair - adds item to start of array

```
{exp:channel:entries channel='news'}  
  {layout:set:prepend name='titles'},{title}/{layout:set:prepend}  
{/exp:channel:entries}
```




Layout Variable Arrays

how to retrieve

- **Retrieving** - use tag-pair form
 - Instance value in the `{value}` variable
 - `{index}` , `{count}`, and `{total_results}` are also available
 - Some of the standard listing options are also available such as `{limit}` , `{orderby}`

```
{layout:titles}
  {if count == 1}
    <ol>
  {/if}

    <li>{value}</li>

  {if count == total_results}
    </ol>
  {/if}
{/layout:titles}
```




Layout Variable Arrays

how to retrieve

- **Retrieving** - use the
- Instance value in
- `{index}` , `{count}`
- Some of the state
such as `{limit}`

```
{layout:titles}  
  {if count == 1}  
    <ol>  
  {/if}  
  
    <li>{value}</li>  
  
  {if count == total_results}  
    </ol>  
  {/if}  
{/layout:titles}
```

```
{layout:titles}  
  {if count == 1}  
    <ol>  
  {/if}  
  
    <li>{value}</li>  
  
  {if count == total_results}  
    </ol>  
  {/if}  
{/layout:titles}
```




Layout Variable Arrays

how to retrieve

- **Retrieving** - use tag-pair form
 - Instance value in the `{value}` variable
 - `{index}` , `{count}`, and `{total_results}` are also available
 - Some of the standard listing options are also available such as `{limit}` , `{orderby}`

```
{layout:titles}  
  {if count == 1}  
    <ol>  
  {/if}  
  
    <li>{value}</li>  
  
  {if count == total_results}  
    </ol>  
  {/if}  
{/layout:titles}
```




Layout Variable Arrays

simple example

```
{layout='cadeaulijst/_results_2'}
{exp:channel:entries channel="gifts" search:giftlist_url_title="{layout:giftlist_url_title}" dynamic="no" status="completed"
limit="999"}
    {order_items orderby="item:entry_id" sort="desc" limit="999"}
        {layout:set:append name="creditcard"}+1{/layout:set:append}
        {layout:set:append name="creditcard_value"}+{item:price_numeric}{/layout:set:append}
    {/order_items}
{/exp:channel:entries}
```

_results.html



```
{layout='cadeaulijst/_results_3'}
{!-- Here we calculate the totals --}
    {layout:set name="creditcard_total_payments"}
        {exp:mx_calc expression="0{layout:creditcard}{value}{/layout:creditcard}"}
    {/layout:set}
    {layout:set name="creditcard_total_value"}
        {exp:mx_calc expression="0{layout:creditcard_value}{value}{/layout:creditcard_value}"}
    {/layout:set}
```

_results_2.html

Layout Variable Arrays

simple example



```
{layout='cadeaulijst/_results_2'}
{exp:channel:entries channel="gifts" search:giftlist_url_title="{layout:giftlist_url_title}"
dynamic="no" status="completed" limit="999"}
  {order_items orderby="item:entry_id" sort="desc" limit="999"}
    {layout:set:append name="creditcard"}+1{/layout:set:append}
    {layout:set:append name="creditcard_value"}+{item:price_numeric}{/layout:set:append}
  {/order_items}
{/exp:channel:entries}
```

_results.html

```
{layout='cadeaulijst/_results_3'}
{!-- Here we calculate the totals --}
  {layout:set name="creditcard_total_payments"}
    {exp:mx_calc expression="0{layout:creditcard}{value}{/layout:creditcard}"}
  {/layout:set}
  {layout:set name="creditcard_total_value"}
    {exp:mx_calc expression="0{layout:creditcard_value}{value}{/layout:creditcard_value}"}
  {/layout:set}
```

_results_2.html



Layout Variable Arrays

simple example

```
{layout='cadeaulijst/_results_2'}
{exp:channel:entries channel="gifts" search:giftlist_url_title="{layout:giftlist_url_title}" dynamic="no" status="completed"
limit="999"}
    {order_items orderby="item:entry_id" sort="desc" limit="999"}
        {layout:set:append name="creditcard"}+1{/layout:set:append}
        {layout:set:append name="creditcard_value"}+{item:price_numeric}{/layout:set:append}
    {/order_items}
{/exp:channel:entries}
```

_results.html



```
{layout='cadeaulijst/_results_3'}
{!-- Here we calculate the totals --}
    {layout:set name="creditcard_total_payments"}
        {exp:mx_calc expression="0{layout:creditcard}{value}{/layout:creditcard}"}
    {/layout:set}
    {layout:set name="creditcard_total_value"}
        {exp:mx_calc expression="0{layout:creditcard_value}{value}{/layout:creditcard_value}"}
    {/layout:set}
```

_results_2.html



Layout Variable Arrays

simple example

```
{layout='cadeaulijst/_results_3'}
{!-- Here we calculate the totals --}
  {layout:set name="creditcard_total_payments"}
    {exp:mx_calc expression="0{layout:creditcard}{value}{/layout:creditcard}"}
  {/layout:set}
  {layout:set name="creditcard_total_value"}
    {exp:mx_calc expression="0{layout:creditcard_value}{value}{/
layout:creditcard_value}"}
  {/layout:set}
```

_results_2.html

```
{layout='cadeaulijst/_results_3'}
{!-- Here we calculate the totals --}
  {layout:set name="creditcard_total_payments"}
    {exp:mx_calc expression="0{layout:creditcard}{value}{/layout:creditcard}"}
  {/layout:set}
  {layout:set name="creditcard_total_value"}
    {exp:mx_calc expression="0{layout:creditcard_value}{value}{/layout:creditcard_value}"}
  {/layout:set}
```

_results_2.html



Layout Variable Arrays

simple example

```
{layout='cadeaulijst/_results_2'}
{exp:channel:entries channel="gifts" search:giftlist_url_title="{layout:giftlist_url_title}" dynamic="no" status="completed"
limit="999"}
    {order_items orderby="item:entry_id" sort="desc" limit="999"}
        {layout:set:append name="creditcard"}+1{/layout:set:append}
        {layout:set:append name="creditcard_value"}+{item:price_numeric}{/layout:set:append}
    {/order_items}
{/exp:channel:entries}
```

_results.html



```
{layout='cadeaulijst/_results_3'}
{!-- Here we calculate the totals --}
    {layout:set name="creditcard_total_payments"}
        {exp:mx_calc expression="0{layout:creditcard}{value}{/layout:creditcard}"}
    {/layout:set}
    {layout:set name="creditcard_total_value"}
        {exp:mx_calc expression="0{layout:creditcard_value}{value}{/layout:creditcard_value}"}
    {/layout:set}
```

_results_2.html



Layout Variable Arrays

using multiple arrays together

- You can reference specific entries within a Layout Variable Array by specifying the index value as a parameter - the first entry has an index value of 0

```
{layout:creditcard index='<value>'}
```

- If you are already looping through another Layout Variable Array, you can use the {index} value of that loop to recall the values of other Layout Variable Arrays concurrently

```
{layout:orders}
```

```
    “– The value of order {value} is {layout:creditcard index='<value>'}
```

```
{/layout:orders}
```




Layout Variable Arrays

using multiple arrays together

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```
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```

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```
{layout:orders}
```

```
    “– The value of order {value} is {layout:creditcard index='<value>'}
```

```
{/layout:orders}
```




Layout Variable Arrays

using multiple arrays together

- By combining `{layout:set:append}` with `{layout:set:prepend}` you can setup offset arrays which can provide some interesting extra functionality
- This example uses an offset array to ensure that a 'what month' header is only displayed at the beginning of each month's entries in a listing panel
- First we capture the data:

```
{exp:channel:entries channel="news_items" dynamic="no" orderby="date" sort="desc" show_expired="no" show_future_entries="no" search:event_date="not IS_EMPTY"}
{if no_results}{layout:set name="no_news_items" value="true"}{/if}
{layout:set:append name="Event_Count">{count}}{/layout:set:append}
{layout:set:append name="Event_UTCime">{event_date}}{/layout:set:append}
{layout:set:append name="Event_Date">{event_date format="%D, %j %M"}}{/layout:set:append}
{layout:set:append name="Event_Title">{title}}{/layout:set:append}
{layout:set:append name="Event_ID">{entry_id}}{/layout:set:append}
{layout:set:append name="Event_Month">{event_date format="%F"}}{/layout:set:append}
{layout:set:append name="Event_Month_prev">{event_date format="%F"}}{/layout:set:append}
{layout:set:append name="Event_Day">{event_date format="%j"}}{/layout:set:append}
{/exp:channel:entries}
{layout:set:prepend name="Event_Month_prev"}12345{/layout:set:prepend}
```




```
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sort="desc" show_expired="no" show_future_entries="no"
search:event_date="not IS_EMPTY"}
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{layout:set:append name="Event_Date">{event_date format="%D, %j %M"}}{/
layout:set:append}
{layout:set:append name="Event_Title">{title}}{/layout:set:append}
{layout:set:append name="Event_ID">{entry_id}}{/layout:set:append}
{layout:set:append name="Event_Month">{event_date format="%F"}}{/
layout:set:append}
{layout:set:append name="Event_Month_prev">{event_date format="%F"}}{/
layout:set:append}
{layout:set:append name="Event_Day">{event_date format="%j"}}{/
layout:set:append}
{/exp:channel:entries}
{layout:set:prepend name="Event_Month_prev"}12345{/layout:set:prepend}
{layout:set:append name="Event_Day">{event_date format="%j"}}{/layout:set:append}
{/exp:channel:entries}
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```

PTY"



Layout Variable Arrays

using multiple arrays together

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{layout:set:append name="Event_Title">{title}/{/layout:set:append}
{layout:set:append name="Event_ID">{entry_id}/{/layout:set:append}
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{layout:set:append name="Event_Month_prev">{event_date format="%F"}/{/layout:set:append}
{layout:set:append name="Event_Day">{event_date format="%j"}/{/layout:set:append}
{/exp:channel:entries}
{layout:set:prepend name="Event_Month_prev"}12345{/layout:set:prepend}
```




Layout Variable Arrays

using multiple arrays together

- Then we use the offset array to work out if we have started a new month:

```
{layout:Event_Count}
  {if "{layout:Event_Month index='{index}'}" == "{layout:Event_Month_prev
index='{index}'}"}
    <td class="col-1">{layout:Event_Month index='{index}'}&nbsp;{layout:Event_Day
index='{index}'}</td>
    <td>{layout:Event_Title index='{index}'}</td>
  {if:else}
    <td class="col-1">{layout:Event_Day index='{index}'}</td>
    <td>{layout:Event_Title index='{index}'}</td>
  {/if}
{/layout:Event_Count}
```


Layout Variable Arrays

live example



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Linn
Childbirth on 02 Oct 2020

<https://giftlist.ee-websites.eu/en/cadeaulijst/linn> [View](#)

5
have given a gift

€ 105
worth of gifts

1
reactions on your gift list

[View](#)



Edit your giftlist →



View the results →



Change your data →

<https://giftlist.ee-websites.eu/en/cadeaulijst/linn>



Using layouts to simplify template debugging

Using layouts to simplify template debugging



introduction

- Each step in the layout flow is listed in the template debugging output
- What is more ...
 - the Layout Variables you create are all listed in the template debugging output along with the values assigned after each switch to the next template - this makes it easy to keep track of what is being generated in your template as it happens
 - as you switch from one template to the next, you can see how these values change (if you change them!)
 - ... WNCC example ...

Using layouts to simplify template debugging

Real life example



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Gift List Results

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gdfgdf jelle.dijkstra@gmail.com 31 Dec 2021	beer € 10,	€ 10	▼
rett dijkstra@burodmg.nl 27 Oct 2020	gfgfg € 50,	€ 50	▼
jelle test dijkstra@burodmg.nl 24 Jan 2020	werwerwer rwerer € 25,	€ 25	▼
wererer dijkstra@burodmg.nl 13 Jan 2020	beer € 10,	€ 10	▼
tryt rttryrty dijkstra@burodmg.nl 13 Jan 2020	beer € 10,	€ 10	▼

Total given	€ 109,75
pluQ.nl fee	- € 49,95
Betaalkosten iDeal/Bancontact betalingen (5*€ 0,95)	- € 4,75
.....	
Total paid to you	€ 55,05

We will transfer the money on tuesday after the event to the bank account number you provided



Replacing embeds and stash elements

Replacing embeds and stash elements

understanding the issue ...



A real site ...

Replacing embeds and stash elements



introduction

- There are times where embeds are advantageous - but these situations are quite unusual
- But embeds have disadvantages which works against their use when not absolutely necessary
 - each embed is a unique EE instance
 - getting information in is hard
 - getting information out is harder
- There are some places where embeds (and stash) are used as a 'panic' solution to template design issues (Pro Variables likewise)
- Unsurprisingly, template layouts / layout variables can be used to work around these issues

Replacing embeds and stash elements



Replacing embeds

- Template Layout approach moves the embed to be in the template layout flow
 - Uses same EE instance as rest of template
 - Can incorporate conditional behaviour based on other layout variables without 'passing' the variables to the embed
 - Usually allows a single CE call to be used for multiple purposes
 - Needs some fore-thought to work out where within the layout sequence is the best place to put the CE calls required
- Since an embed is an isolated EE instance, you can use template layout techniques within an embed too, thus potentially eliminating embeds within embeds

Replacing embeds and stash elements

A real life example



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Replacing embeds and stash elements



Replacing Stash

- Most of the functionalities from Stash are available with template layouts
- Stash does have some advanced features that are only sporadically used
- Another addon...

Caching natively or with speedy

A real world example



- Template layouts tend to be a lot faster than complicated pages built with embeds
- Native tag caching works well within the layout stacks
- Template caching does not
- Speedy fragment caching can be applied towards the end of the layout stack



Conclusion

Layout Variables are

- powerful
- easy to use
- efficient
- flexible
- fairly well documented ... ;)