# Authors Style Guide

This page presents design and layout guidelines for Angular documentation pages. These guidelines should be followed by all guide page authors. Deviations must be approved by the documentation editor.

Most guide pages should have accompanying sample code with special markup for the code snippets on the page. Code samples should adhere to the style guide for Angular applications because readers expect consistency.

For clarity and precision, every guideline on *this* page is illustrated with a working example, followed by the page markup for that example ... as shown here.

```
  followed by the page markup for that example ... as shown here.
```

## Doc generation and tooling

To make changes to the documentation pages and sample code, clone the Angular github repository and go to the `aio/` folder.

The aio/README.md explains how to install and use the tools to edit and test your changes.

Here are a few essential commands for guide page authors.

1. `yarn setup` — installs packages; builds docs, plunkers, and zips.
2. `yarn docs-watch --watch-only` — watches for saved content changes and refreshes the browser. The (optional) `--watch-only` flag skips the initial docs rebuild.
3. `yarn start` — starts the doc viewer application so you can see your local changes in the browser.
4. http://localhost:4200/ — browse to the app running locally.

## Guide pages

All but a few guide pages are markdown files with an `.md` extension.

Every guide page file is stored in the `content/guide` directory. Although the side navigation panel displays as a hierarchy, the directory is flat with no sub-folders. The flat folder approach allows us to shuffle the apparent navigation structure without moving page files or redirecting old page URLs.

The doc generation process consumes the markdown files in the `content/guide` directory and produces JSON files in the `src/generated/docs/guide` directory, which is also flat. Those JSON files contain a combination of document metadata and HTML content.

The reader requests a page by its Page URL. The doc viewer fetches the corresponding JSON file, interprets it, and renders it as fully-formed HTML page.

Page URLs mirror the `content` file structure. The URL for the page of a guide is in the form `guide/{page-name}`. The page for *this* "Authors Style Guide" is located at `content/guide/docs-style-guide.md` and its URL is `guide/docs-style-guide`.

_Tutorial_ pages are exactly like guide pages. The only difference is that they reside in `content/tutorial` instead of `content/guide` and have URLs like `tutorial/{page-name}`. _API_ pages are generated from Angular source code into the `src/generated/docs/api` directory. The doc viewer translates URLs that begin `api/` into requests for document JSON files in that directory. This style guide does not discuss creation or maintenance of API pages. _Marketing_ pages are similar to guide pages. They're located in the `content/marketing` directory. While they can be markdown files, they may be static HTML pages or dynamic HTML pages that render with JSON data. Only a few people are authorized to write marketing pages. This style guide does not discuss creation or maintenance of marketing pages.

## Markdown and HTML

While documentation guide pages ultimately render as HTML, almost all of them are written in markdown.

Markdown is easier to read and to edit than HTML. Many editors (including Visual Studio Code) can render markdown as you type it.

From time to time you'll have to step away from markdown and write a portion of the document in HTML. Markdown allows you to mix HTML and markdown in the same document.

Standard markdown processors don't allow you to put markdown *within* HTML tags. But the Angular documentation markdown processor **supports markdown within HTML**, as long as you follow one rule:

**Always** follow every opening and closing HTML tag with _a blank line_.

```
<div class="alert is-critical">

  **Always** follow every opening and closing HTML tag with _a blank line_.

</div>
```

It is customary but not required to _precede_ the _closing HTML_ tag with a blank line as well.

# Title

Every guide document must have a title.

The title should appear at the top of the physical page. Begin the title with the markdown `#` character. Alternatively, you can write the equivalent `<h1>`.

```
  # Authors Style Guide
```

**Only one title ( `<h1>` ) per document!**

Title text should be in "Title Case", which means that you use capital letters to start the first words and all *principal* words. Use lower case letters for _secondary words such as "in", "of", and "the".

```
  # The Meat of the Matter
```

**Always follow the title with at least one blank line.**

# Sections

A typical document is divided into sections.

All section heading text should be in "Sentence case", which means the first word is capitalized and all other words are lower case.

**Always follow the section heading with at least one blank line.**

# Main section heading

There are usually one or more main sections that may be further divided into secondary sections.

Begin a main section heading with the markdown `##` characters. Alternatively, you can write the equivalent `<h2>` HTML tag.

The main section heading should be followed by a blank line and then the content for that heading.

```
  ## Sections

  A typical document is divided into sections.
```

## Secondary section heading

A secondary section heading is related to a main heading and *falls textually within* the bounds of that main heading.

Begin a secondary heading with the markdown `###` characters. Alternatively, you can write the equivalent `<h3>` HTML tag.

The secondary heading should be followed by a blank line and then the content for that heading.

```
  ### Secondary section heading

  A secondary section ...
```

### Additional section headings

Try to minimize the heading depth, preferably only two. But more headings, such as this one, are permitted if they make sense.

**N.B.**: The Table-of-contents generator only considers main ( `<h2>` ) and secondary ( `<h3>` ) headings.

```
  #### Additional section headings

  Try to minimize ...
```

## Subsections

Subsections typically present extra detail and references to other pages.

Use subsections for commentary that *enriches* the reader's understanding of the text that precedes it.

A subsection *must not* contain anything *essential* to that understanding. Don't put a critical instruction or a tutorial step in a subsection.

A subsection is content within a `<div>` that has the `l-sub-section` CSS class. You should write the subsection content in markdown.

Here is an example of a subsection `<div>` surrounding the subsection content written in markdown.

You'll learn about styles for live examples in the [section below](guide/docs-style-guide#live-examples "Live examples").

```
<div class="l-sub-section">

You'll learn about styles for live examples in the [section below](guide/docs-style-guide#live-examples "Live examples").

</div>
```

Note that at least one blank line must follow the opening `<div>`. A blank line before the closing `</div>` is customary but not required.

## Table of contents

Most pages display a table of contents (TOC). The TOC appears in the right panel when the viewport is wide. When narrow, the TOC appears in an expandable/collapsible region near the top of the page.

You should not create your own TOC by hand. The TOC is generated automatically from the page's main and secondary section headers.

To exclude a heading from the TOC, create the heading as an `<h2>` or `<h3>` element with a class called 'no-toc'. You can't do this with markdown.

```
<h3 class="no-toc">
This heading is not displayed in the TOC
</h3>
```

You can turn off TOC generation for the *entire* page by writing the title with an `<h1>` tag and the `no-toc` class.

```
<h1 class="no-toc">
A guide without a TOC
</h1>
```

## Navigation

The navigation links at the top, left, and bottom of the screen are generated from the JSON configuration file, `content/navigation.json`.

The authority to change the `navigation.json` file is limited to a few core team members. But for a new guide page, you should suggest a navigation title and position in the left-side navigation panel called the "side nav".

Look for the `SideNav` node in `navigation.json`. The `SideNav` node is an array of navigation nodes. Each node is either an *item* node for a single document or a *header* node with child nodes.

Find the header for your page. For example, a guide page that describes an Angular feature is probably a child of the `Fundamentals` header.

```
{
  "title": "Fundamentals",
  "tooltip": "The fundamentals of Angular",
  "children": [ ... ]
}
```

A *header* node child can be an *item* node or another *header* node. If your guide page belongs under a sub-header, find that sub-header in the JSON.

Add an *item* node for your guide page as a child of the appropriate *header* node. It probably looks something like this one.

```
{
  "url": "guide/architecture",
  "title": "Architecture",
  "tooltip": "The basic building blocks of Angular applications."
}
```

A navigation node has the following properties:

- `url` - the URL of the guide page (*item node only*).
- `title` - the text displayed in the side nav.
- `tooltip` - text that appears when the reader hovers over the navigation link.
- `children` - an array of child nodes (*header node only*).
- `hidden` - defined and set true if this is a guide page that should *not* be displayed in the navigation panel. Rarely needed, it is a way to hide the page from navigation while making it available to readers who should know about it. *This* "Authors Style Guide" is a hidden page.

Do not create a node that is both a _header_ and an _item_ node. That is, do not specify the `url` property of a _header_ node.
The current guidelines allow for a three-level navigation structure with two header levels. Don't add a third header level.

# Code snippets

Guides are rich in examples of working Angular code. Example code can be commands entered in a terminal window, a fragment of TypeScript or HTML, or an entire code file.

Whatever the source, the doc viewer renders them as "code snippets", either individually with the *code-example* component or as a tabbed collection with the *code-tabs* component.

{@a code-example}

## Code example

You can display a simple, inline code snippet with the markdown backtick syntax. We generally prefer to display a code snippet with the Angular documentation *code-example* component represented by the `<code-example>` tag.

## Inline code-snippets

You should source code snippets from working sample code when possible. But there are times when an inline snippet is the better choice.

For terminal input and output, put the content between `<code-example>` tags, set the CSS class to `code-shell`, and set the language attribute to `sh` as in this example.

npm start

```
<code-example language="sh" class="code-shell">
  npm start
</code-example>
```

Inline, hand-coded snippets like this one are *not* testable and, therefore, are intrinsically unreliable. This example belongs to the small set of pre-approved, inline snippets that includes user input in a command shell or the *output* of some process.

**Do not write inline code snippets** unless you have a good reason and the editor's permission to do so. In all other cases, code snippets should be generated automatically from tested code samples.

{@a from-code-samples}

## Code snippets and code samples

One of the documentation design goals is that guide page code snippets should be examples of real, working code.

We meet this goal by displaying code snippets that are derived directly from standalone code samples, written specifically for these guide pages.

The author of a guide page is responsible for the code sample that supports that page. The author must also write end-to-end tests for the sample.

Code samples are located in sub-folders of the `content/examples` directory of the `angular/angular` repository. An example folder name should be the same as the guide page it supports.

A guide page might not have its own sample code. It might refer instead to a sample belonging to another page.

The Angular CI process runs all end-to-end tests for every Angular PR. Angular re-tests the samples after every new version of a sample and every new version of Angular itself.

When possible, every snippet of code on a guide page should be derived from a code sample file. You tell the Angular documentation engine which code file - or fragment of a code file - to display by configuring `<code-example>` attributes.

### Code snippet from a file

*This* "Authors Doc Style Guide" has its own sample application, located in the `content/examples/docs-style-guide` folder.

The following *code-example* displays the sample's `app.module.ts` .

Here's the brief markup that produced that lengthy snippet:

```
<code-example
  path="docs-style-guide/src/app/app.module.ts"
  title="src/app/app.module.ts">
</code-example>
```

You identified the snippet's source file by setting the `path` attribute to sample folder's location *within* `content/examples` . In this example, that path is `docs-style-guide/src/app/app.module.ts` .

You added a header to tell the reader where to find the file by setting the `title` attribute. Following convention, you set the `title` attribute to the file's location within the sample's root folder.

Unless otherwise noted, all code snippets in this page are derived from sample source code located in the `content/examples/docs-style-guide` directory.
The doc tooling reports an error if the file identified in the path does not exist **or is _git_-ignored**. Most `.js` files are _git_-ignored. If you want to include an ignored code file in your project and display it in a guide you must _un-ignore_ it. The preferred way to un-ignore a file is to update the `content/examples/.gitignore` like this: # my-guide !my-guide/src/something.js !my-guide/more-javascript*.js

### Code-example attributes

You control the *code-example* output by setting one or more of its attributes:

- `path` - the path to the file in the `content/examples` folder.
- `title` - the header of the code listing.
- `region` - displays the source file fragment with that region name; regions are identified by *docregion* markup in the source file, as explained below.
- `linenums` - value may be `true` , `false` , or a `number` . When not specified, line numbers are automatically displayed when there are greater than 10 lines of code. The rarely used `number` option starts line numbering at the given value. `linenums=4` sets the starting line number to 4.
- `class` - code snippets can be styled with the CSS classes `no-box` , `code-shell` , and `avoid` .
- `hideCopy` - hides the copy button
- `language` - the source code language such as `javascript` , `html` , `css` , `typescript` , `json` , or `sh` . This attribute only works for inline examples.

{@a region}

### Displaying a code fragment

Often you want to focus on a fragment of code within a sample code file. In this example, you focus on the `AppModule` class and its `NgModule` metadata.

First you surround that fragment in the source file with a named *docregion* as described below. Then you reference that *docregion* in the `region` attribute of the `<code-example>` like this

```
<code-example
  path="docs-style-guide/src/app/app.module.ts"
  region="class">
</code-example>
```

A couple of observations:

1. The `region` value, `"class"` , is the name of the `#docregion` in the source file. Confirm that by looking at `content/examples/docs-style-guide/src/app/app.module.ts`
2. Omitting the `title` is fine when the source of the fragment is obvious. We just said that this is a fragment of the `app.module.ts` file which was displayed immediately above, in full, with a header. There's no need to repeat the header.
3. The line numbers disappeared. By default, the doc viewer omits line numbers when there are fewer than 10 lines of code; it adds line numbers after that. You can turn line numbers

on or off explicitly by setting the `linenums` attribute.

### Example of bad code

Sometimes you want to display an example of bad code or bad design.

You should be careful. Readers don't always read carefully and are likely to copy and paste your example of bad code in their own applications. So don't display bad code often.

When you do, set the `class` to `avoid`. The code snippet will be framed in bright red to grab the reader's attention.

Here's the markup for an "avoid" example in the *Angular Style Guide*.

```
<code-example
  path="styleguide/src/05-03/app/heroes/shared/hero-button/hero-button.component.avoid.ts"
  region="example"
  title="app/heroes/hero-button/hero-button.component.ts">
</code-example>
```

{@a code-tabs}

## Code Tabs

Code tabs display code much like *code examples* do. The added advantage is that they can display multiple code samples within a tabbed interface. Each tab is displayed using *code pane*.

### Code-tabs attributes

- `linenums` : The value can be `true`, `false` or a number indicating the starting line number. If not specified, line numbers are enabled only when code for a tab pane has greater than 10 lines of code.

### Code-pane attributes

- `path` - a file in the content/examples folder
- `title` - seen in the header of a tab
- `linenums` - overrides the `linenums` property at the `code-tabs` level for this particular pane. The value can be `true`, `false` or a number indicating the starting line number. If not specified, line numbers are enabled only when the number of lines of code are greater than 10.

The next example displays multiple code tabs, each with its own title. It demonstrates control over display of line numbers at both the `<code-tabs>` and `<code-pane>` levels.

Here's the markup for that example.

Note how the `linenums` attribute in the `<code-tabs>` explicitly disables numbering for all panes. The `linenums` attribute in the second pane restores line numbering for *itself only*.

```
<code-tabs linenums="false">
  <code-pane
    title="app.component.html"
    path="docs-style-guide/src/app/app.component.html">
  </code-pane>
  <code-pane
    title="app.component.ts"
    path="docs-style-guide/src/app/app.component.ts"
    linenums="true">
  </code-pane>
  <code-pane
    title="app.component.css (heroes)"
    path="docs-style-guide/src/app/app.component.css"
    region="heroes">
  </code-pane>
  <code-pane
    title="package.json (scripts)"
    path="docs-style-guide/package.1.json">
  </code-pane>
</code-tabs>
```

{@a source-code-markup}

# Source code markup

You must add special code snippet markup to sample source code files before they can be displayed by `<code-example>` and `<code-tabs>` components.

The sample source code for this page, located in `context/examples/docs-style-guide`, contains examples of every code snippet markup described in this section.

Code snippet markup is always in the form of a comment. Here's the default *docregion* markup for a TypeScript or JavaScript file:

```
// #docregion
... some code ...
// #enddocregion
```

Different file types have different comment syntax so adjust accordingly.

```
<!-- #docregion -->
... some HTML ...
<!-- #enddocregion -->
```

```
/* #docregion */
... some CSS ...
/* #enddocregion */
```

The doc generation process erases these comments before displaying them in the doc viewer. It also strips them from plunkers and sample code downloads.

Code snippet markup is not supported in JSON files because comments are forbidden in JSON files. See [below](#json-files) for details and workarounds.

### *#docregion*

The *#docregion* is the most important kind of code snippet markup.

The `<code-example>` and `<code-tabs>` components won't display a source code file unless it has a *#docregion*.

The *#docregion* comment begins a code snippet region. Every line of code *after* that comment belongs in the region *until* the code fragment processor encounters the end of the file or a closing *#enddocregion*.

The `src/main.ts` is a simple example of a file with a single _#docregion_ at the top of the file.

### Named *#docregions*

You'll often display multiple snippets from different fragments within the same file. You distinguish among them by giving each fragment its own *#docregion name* as follows.

```
// #docregion region-name
... some code ...
// #enddocregion region-name
```

Remember to refer to this region by name in the `region` attribute of the `<code-example>` or `<code-pane>` as you did in an example above like this:

```
<code-example
  path="docs-style-guide/src/app/app.module.ts"
  region="class"></code-example>
```

The *#docregion* with no name is the *default region*. Do *not* set the `region` attribute when referring to the default *#docregion*.

### Nested *#docregions*

You can nest *#docregions* within *#docregions*
`// #docregion ... some code ... // #docregion inner-region ... more code ... // #enddocregion inner-region ... yet more code ... /// #enddoc`

The `src/app/app.module.ts` file has a good example of a nested region.

### Combining fragments

You can combine several fragments from the same file into a single code snippet by defining multiple *#docregions* with the *same region name*.

Examine the `src/app/app.component.ts` file which defines two nested *#docregions*.

The inner, `class-skeleton` region appears twice, once to capture the code that opens the class definition and once to capture the code that closes the class definition.

// #docplaster ... // #docregion class, class-skeleton export class AppComponent { // #enddocregion class-skeleton title = 'Authors Style Guide Sample'; heroes = HEROES; selectedHero: Hero;

onSelect(hero: Hero): void { this.selectedHero = hero; } // #docregion class-skeleton } // #enddocregion class, class-skeleton

Here's are the two corresponding code snippets displayed side-by-side.

Some observations:

- The `#docplaster` at the top is another bit of code snippet markup. It tells the processor how to join the fragments into a single snippet.

  In this example, we tell the processor to put the fragments together without anything in between - without any "plaster". Most sample files define this *empty plaster*.

  If we neglected to add, `#docplaster`, the processor would insert the *default* plaster - an ellipsis comment - between the fragments. Try removing the `#docplaster` comment yourself to see the effect.

- One `#docregion` comment mentions ***two*** region names as does an `#enddocregion` comment. This is a convenient way to start (or stop) multiple regions on the same code line. You could have put these comments on separate lines and many authors prefer to do so.

#### JSON files

Code snippet markup is not supported for JSON files because comments are forbidden in JSON files.

You can display an entire JSON file by referring to it in the `src` attribute. But you can't display JSON fragments because you can't add `#docregion` tags to the file.

If the JSON file is too big, you could copy the nodes-of-interest into markdown backticks.

Unfortunately, it's easy to mistakenly create invalid JSON that way. The preferred way is to create a JSON partial file with the fragment you want to display.

You can't test this partial file and you'll never use it in the application. But at least your IDE can confirm that it is syntactically correct.

Here's an example that excerpts certain scripts from `package.json` into a partial file named `package.1.json`.

```
<code-example
  path="docs-style-guide/package.1.json"
  title="package.json (selected scripts)"></code-example>
```

#### Partial file naming

Many guides tell a story. In that story, the app evolves incrementally, often with simplistic or incomplete code along the way.

To tell that story in code, you'll often need to create partial files or intermediate versions of the final source code file with fragments of code that don't appear in the final app.

Such partial and intermediate files need their own names. Follow the doc sample naming convention. Add a number before the file extension as illustrated here:

```
package.1.json
app.component.1.ts
app.component.2.ts
```

You'll find many such files among the samples in the Angular documentation.

Remember to exclude these files from plunkers by listing them in the `plnkr.json` as illustrated here.

{@a live-examples}

## Live examples

By adding `<live-example>` to the page you generate links that run sample code in the Plunker live coding environment and download that code to the reader's file system.

Live examples (AKA "plunkers") are defined by one or more `plnkr.json` files in the root of a code sample folder. Each sample folder usually has a single unnamed definition file, the default `plnkr.json`.

You can create additional, named definition files in the form `name.plnkr.json`. See `content/examples/testing` for examples. The schema for a `plnkr.json` hasn't been documented yet but looking at the `plnkr.json` files in the example folders should tell you most of what you need to know.

Adding `<live-example></live-example>` to the page generates the two default links.

1. a link to the plunker defined by the default `plnkr.json` file located in the code sample folder with the same name as the guide page.
2. a link that downloads that sample.

Clicking the first link opens the code sample in a new browser tab in the "embedded plunker" style.

You can change the appearance and behavior of the live example with attributes and classes.

### Custom label and tooltip

Give the live example anchor a custom label and tooltip by setting the `title` attribute.

```
<live-example title="Live Example with title"></live-example>
```

You can achieve the same effect by putting the label between the `<live-example>` tags:

Live example with content label

```
<live-example>Live example with content label</live-example>
```

### Live example from another guide

To link to a plunker in a folder whose name is not the same as the current guide page, set the `name` attribute to the name of that folder.

Live Example from the Router guide

```
<live-example name="router">Live Example from the Router guide</live-example>
```

### Live Example for named plunker

To link to a plunker defined by a named `plnkr.json` file, set the `plnkr` attribute. The following example links to the plunker defined by `second.plnkr.json` in the current guide's directory.

```
<live-example plnkr="second"></live-example>
```

### Live Example without download

To skip the download link, add the `noDownload` attribute.

Just the plunker

```
<live-example noDownload>Just the plunker</live-example>
```

### Live Example with download-only

To skip the live plunker link and only link to the download, add the `downloadOnly` attribute.

Download only

```
<live-example downloadOnly>Download only</live-example>
```

### Embedded live example

By default, a live example link opens a plunker in a separate browser tab. You can embed the plunker within the guide page itself by adding the `embedded` attribute.

For performance reasons, the plunker does not start right away. The reader sees an image instead. Clicking the image starts the sometimes-slow process of launching the embedded plunker within an iframe on the page.

You usually replace the default plunker image with a custom image that better represents the sample. Store that image in the `content/images` directory in a folder with a name matching the corresponding example folder.

Here's an embedded live example for this guide. It has a custom image created from a snapshot of the running app, overlayed with `content/images/plunker/unused/click-to-run.png`.

```
<live-example embedded img="guide/docs-style-guide/docs-style-guide-plunker.png"></live-example>
```

## Anchors

Every section header tag is also an anchor point. Another guide page could add a link to this section by writing:

See the ["Anchors"](guide/docs-style-guide#anchors "Style Guide - Anchors") section for details.

```
<div class="l-sub-section">

See the ["Anchors"](guide/docs-style-guide#anchors "Style Guide - Anchors") section for details.

</div>
```

When navigating within the page, you can omit the page URL when specifying the link that scrolls up to the beginning of this section.

```
... the link that [scrolls up](#anchors "Anchors") to ...
```

{@a ugly-anchors}

### Ugly, long section header anchors

It is often a good idea to *lock-in* a good anchor name.

Sometimes the section header text makes for an unattractive anchor. This one is pretty bad.

```
[This one](#ugly-long-section-header-anchors) is pretty bad.
```

The greater danger is that **a future rewording of the header text would break** a link to this section.

For these reasons, it is often wise to add a custom anchor explicitly, just above the heading or text to which it applies, using the special `{@ name}` syntax like this.

{@a ugly-anchors}

### Ugly, long section header anchors

Now link to that custom anchor name as you did before.

```
Now [link to that custom anchor name](#ugly-anchors) as you did before.
```

Alternatively, you can use the HTML `` tag. If you do, be sure to set the `id` attribute - not the `name` attribute! The docs generator will not convert the `name` to the proper link URL. ```html ## Anchors ```

# Alerts

Alerts draw attention to important points. Alerts should not be used for multi-line content (use callouts insteads) or stacked on top of each other. Note that the content of an alert is indented to the right by two spaces.

A critical alert.
An important alert.
A helpful, informational alert.

Here is the markup for these alerts. ```html

A critical alert.

An important alert.
A helpful, informational alert.
``` Alerts are meant to grab the user's attention and should be used sparingly. They are not for casual asides or commentary. Use [subsections](#subsections "subsections") for commentary. ## Callouts Callouts (like alerts) are meant to draw attention to important points. Use a callout when you want a riveting header and multi-line content.
A critical point
**Pitchfork hoodie semiotics**, roof party pop-up _paleo_ messenger messenger bag cred Carles tousled Truffaut yr. Semiotics viral freegan VHS, Shoreditch disrupt McSweeney's. Intelligentsia kale chips Vice four dollar toast, Schlitz crucifix
An important point
**Pitchfork hoodie semiotics**, roof party pop-up _paleo_ messenger bag cred Carles tousled Truffaut yr. Semiotics viral freegan VHS, Shoreditch disrupt McSweeney's. Intelligentsia kale chips Vice four dollar toast, Schlitz crucifix
A helpful point
**Pitchfork hoodie semiotics**, roof party pop-up _paleo_ messenger bag cred Carles tousled Truffaut yr. Semiotics viral freegan VHS, Shoreditch disrupt McSweeney's. Intelligentsia kale chips Vice four dollar toast, Schlitz crucifix

Here is the markup for the first of these callouts. ```html

A critical point
```

**Pitchfork hoodie semiotics**, roof party pop-up *paleo* messenger bag cred Carles tousled Truffaut yr. Semiotics viral freegan VHS, Shoreditch disrupt McSweeney's. Intelligentsia kale chips Vice four dollar toast, Schlitz crucifix

```

Notice that * the callout header text is forced to all upper case. * the callout body can be written in markdown. * a blank line separates the `</header>` tag from the markdown content.

Callouts are meant to grab the user's attention. They are not for casual asides. Please use them sparingly.

## Trees

Trees can represent hierarchical data.

sample-dir
src
app
app.component.ts
app.module.ts
styles.css
tsconfig.json
node_modules ...
package.json

Here is the markup for this file tree.

```

        sample-dir

          src

              app

                  app.component.ts

                  app.module.ts

              styles.css

              tsconfig.json

          node_modules ...

          package.json

```

## Tables

Use HTML tables to present tabular data.
```

| Framework | Task | Speed |
| --- | --- | --- |
| `AngularJS` | Routing | Fast |
| `Angular v2` | Routing | *Faster* |
| `Angular v4` | Routing | **Fastest :)** |

Here is the markup for this table.

```
<style>
  td, th {vertical-align: top}
</style>

<table>
  <tr>
    <th>Framework</th>
    <th>Task</th>
    <th>Speed</th>
  </tr>
  <tr>
    <td><code>AngularJS</code></td>
    <td>Routing</td>
    <td>Fast</td>
  </tr>
  <tr>
    <td><code>Angular v2</code></td>
    <td>Routing</td>
    <!-- can use markdown too; remember blank lines -->
    <td>

      *Faster*

    </td>
  </tr>
  <tr>
    <td><code>Angular v4</code></td>
    <td>Routing</td>
    <td>

      **Fastest :)**

    </td>
  </tr>
</table>
```

# Images

## Image location

Store images in the `content/images` directory in a folder with the same URL as the guide page. Images for this "Authors Style Guide" page belong in the `content/images/guide/docs-style-guide` folder.

Angular doc generation copies these image folders to the *runtime* location, `generated/images`. Set the image `src` attribute to begin in *that* directory.

Here's the `src` attribute for the "flying hero" image belonging to this page.
`src="/Users/nblavoie/Documents/projets/angular/aio/content/images/guide/docs-style-guide/flying-hero.png"`

## Use the HTML *<img>* tag

**Do not use the markdown image syntax, ![...](...).**

Images should be specified in an `<img>` tag.

For accessibility, always set the `alt` attribute with a meaningful description of the image.

You should nest the `<img>` tag within a `<figure>` tag, which styles the image within a drop-shadow frame. You'll need the editor's permission to skip the `<figure>` tag.

Here's a conforming example

```
<figure>
  <img src="/Users/nblavoie/Documents/projets/angular/aio/content/images/guide/docs-style-guide/flying-hero.png"
       alt="flying hero">
</figure>
```

*Note that the HTML image element does not have a closing tag.*

### Image dimensions

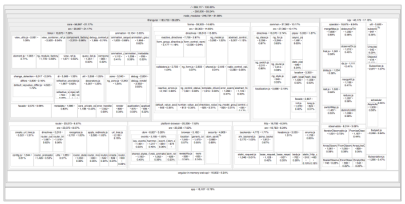
The doc generator reads the image dimensions from the file and adds width and height attributes to the `img` tag automatically. If you want to control the size of the image, supply your own width and height attributes.

Here's the "flying hero" at a more reasonable scale.

```
<figure>
 <img src="/Users/nblavoie/Documents/projets/angular/aio/content/images/guide/docs-style-guide/flying-hero.png"
   alt="flying Angular hero"
   width="200">
</figure>
```

Wide images can be a problem. Most browsers try to rescale the image but wide images may overflow the document in certain viewports.

**Do not set a width greater than 700px**. If you wish to display a larger image, provide a link to the actual image that the user can click on to see the full size image separately as in this example of `source-map-explorer` output from the "Ahead-of-time Compilation" guide:



### Image compression

Large image files can be slow to load, harming the user experience. Always compress the image. Consider using an image compression web site such as tinypng.

### Floating images

You can float the image to the left or right of text by applying the class="left" or class="right" attributes respectively.

This text wraps around to the right of the floating "flying hero" image.

Headings and code-examples automatically clear a floating image. If you need to force a piece of text to clear a floating image, add `<br class="clear">` where the text should break.

The markup for the above example is:

```
<img src="/Users/nblavoie/Documents/projets/angular/aio/content/images/guide/docs-style-guide/flying-hero.png"
   alt="flying Angular hero"
   width="200"
   class="left">

This text wraps around to the right of the floating "flying hero" image.

Headings and code-examples automatically clear a floating image. If you need to force a piece of text to clear a floating image, add `<br class=
"clear">` where the text should break.

<br class="clear">
```

Note that you generally don't wrap a floating image in a `<figure>` element.

#### Floating within a subsection

If you have a floating image inside an alert, callout, or a subsection, it is a good idea to apply the `clear-fix` class to the `div` to ensure that the image doesn't overflow its container. For example:


A subsection with **markdown** formatted text.

```
<div class="l-sub-section clear-fix">

  <img src="/Users/nblavoie/Documents/projets/angular/aio/content/images/guide/docs-style-guide/flying-hero.png"
    alt="flying Angular hero"
    width="100"
    class="right">

  A subsection with **markdown** formatted text.

</div>
```