

Module Attributes

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Notes

Order Matters

A couple things to keep in mind regarding where module attributes appear in a file:

1. You can only set a module attribute at the top level of a module, not inside of a function definition. However, you can read (access) module attributes from inside functions.
2. When a module attribute is read inside of a function, the value of the attribute is inlined during compilation, *not at runtime*. That means if the same module attribute is set multiple times in a module then the value read by a function is the value of the attribute *at the time the function is defined*.

To illustrate the effect of a module attribute being set multiple times, paste the following contrived module into an `iex` session:

```
defmodule Namer do
  @name "nicole"

  def her_name, do: @name

  @name "mike"

  def his_name, do: @name
end
```

Notice we set the `@name` module attribute twice, first to "nicole" and then to "mike". Both the `her_name` and `his_name` functions read and return the value of the `@name` module attribute.

When the `her_name` function is called, the value of the `@name` attribute is "nicole":

```
iex> Namer.her_name
"nicole"
```

But when the `his_name` function is called, the value of the `@name` attribute is "mike":

```
iex> Namer.his_name
"mike"
```

This demonstrated that the order in which the module attributes and the functions are defined matters. You can envision the compiler inlining the values during compilation, like so:

```
defmodule Namer do
  @name "nicole"

  def her_name, do: "nicole"

  @name "mike"

  def his_name, do: "mike"
end
```

Access Documentation

In the video we used `@moduledoc` and `@doc` to document a module and functions, respectively. Using these well-defined module attributes, Elixir can then access the values to generate documentation. To access the documentation, use the familiar `h` helper in `iex` like so:

```
iex> h Servy.Handler
```

```
iex> h Servy.Handler.handle
```

It's not terribly exciting documentation, but you get the point. Later on we'll learn how to add examples to the documentation which makes it more useful.

Code So Far

The code for this video is in the `module-attributes` directory found within the `video-code` directory of the [code bundle](#).

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