

Ruby - Feature #17398

SyntaxError in endless method

12/16/2020 07:52 PM - zverok (Victor Shepelev)

Status:	Closed	
Priority:	Normal	
Assignee:		
Target version:		
Description		
This works:		
<pre>def foo() = puts("bar")</pre>		
This does not:		
<pre>def foo() = puts "bar" # ^ syntax error, unexpected string literal, expecting `do' or '{' or '('</pre>		
Is this intentional or accidental? Not sure how it is reasoned.		

Associated revisions

Revision 31794d2e733e081e4e221f27aff6380393981681 - 05/12/2021 03:14 PM - mame (Yusuke Endoh)

parse.y: Allow "command" syntax in endless method definition

This change allows `def hello = puts "Hello"` without parentheses.

Note that private `def hello = puts "Hello"` does not parse for technical reason.

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Revision 1da1d7473076aa1865d1fb31a1b03e72c7127d01 - 12/13/2021 05:01 AM - mame (Yusuke Endoh)

NEWS.md: `def foo = puts "Hello"` is now allowed [Feature #17398]

Revision 1da1d7473076aa1865d1fb31a1b03e72c7127d01 - 12/13/2021 05:01 AM - mame (Yusuke Endoh)

NEWS.md: `def foo = puts "Hello"` is now allowed [Feature #17398]

Revision 1da1d747 - 12/13/2021 05:01 AM - mame (Yusuke Endoh)

NEWS.md: `def foo = puts "Hello"` is now allowed [Feature #17398]

Revision f2dbc4ec - 09/12/2025 07:00 PM - Earlopain (Earlopain _)

[ruby/prism] [Bug #17398] Allow private def hello = puts "Hello"

This was a limitation of parse.y that prism intentionally replicated.

<https://github.com/ruby/prism/commit/8fd12d594c>

Revision a8c829e7 - 09/13/2025 02:58 AM - yui-knk (Kaneko Yuichiro)

[Bug #17398] Allow private def hello = puts "Hello"

History

#1 - 12/17/2020 12:49 AM - mame (Yusuke Endoh)

The body of an endless method must be an expression (called "arg" in the syntax rules of parse.y). puts("bar") is an expression, but puts "bar" is a statement (called "command" in the syntax rules).

I think it could be a bit confusing, but I have no idea whether we can/should allow a statement as a body of an endless method.

#2 - 12/17/2020 09:39 AM - zverok (Victor Shepelev)

@mame (Yusuke Endoh) Hmm, haven't thought about it from this perspective... Can you please explain a bit? As far as I can see, in, say, assignment context it behaves like an expression:

```
result = puts 'foo'
# prints "foo", result = nil
```

I am just trying to describe the behavior in full for the next installment of my [changelog](#) and this aspect is quite confusing for me... Though, it is not endless-method specific, as far as I can see:

```
y = sin x # OK
y = 1 + sin x
#           ^ unexpected local variable or method, expecting `do' or '{' or '('
```

What's the "rule of thumb" to understand this better?

#3 - 12/17/2020 01:52 PM - Eregon (Benoit Daloze)

Conceptually, according to the typical definition in computer science, both puts("bar") and puts "bar" are expressions (i.e., they return a value, and if it was some other method than puts it would also not always be nil).

It might be slightly less clear for e.g. a = 42 (it's still an expression, it still returns a value), but I think puts "bar" is clear that it should be the same as puts("bar"), except for precedence.

So it's probably going to be very difficult to explain the actual condition, other than showing specific examples.

#4 - 12/17/2020 04:16 PM - austin (Austin Ziegler)

Eregon (Benoit Daloze) wrote in [#note-3](#):

So it's probably going to be very difficult to explain the actual condition, other than showing specific examples.

Endless methods definitions don't support poetry mode?

#5 - 12/18/2020 01:58 AM - mame (Yusuke Endoh)

The following patch allows def foo() = puts "bar". It brings no parser conflict.

<https://gist.github.com/mame/0773bf3938e046e2b608de5fb2a826c8>

However, it is not perfect. private def foo() = puts "foo" does not parse. private var = puts "bar" is not allowed neither, so I have no idea how to allow this.

#6 - 04/16/2021 04:30 AM - matz (Yukihiro Matsumoto)

- Tracker changed from Bug to Feature

- Backport deleted (2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: UNKNOWN)

Pros

- More intuitive / consistent / natural

Cons

- Duplicated syntax rules

- Even more complex syntax

If I were young, I would add @mame's patch. I did similar decisions many times in the past. But Ruby has been mature and complex, I now feel reluctant. Let us consider this idea for a while.

Matz.

#7 - 04/19/2021 05:06 AM - mame (Yusuke Endoh)

- *File allow-command-style-endless-method-def.patch added*

I'm attaching an updated patch with a test.

#8 - 05/12/2021 08:32 AM - matz (Yukihiro Matsumoto)

I have considered this issue for a while and concluded it should be merged to be consistent with the assignment statement.

Matz.

#9 - 05/12/2021 03:17 PM - mame (Yusuke Endoh)

- *Status changed from Open to Closed*

Applied in changeset [git|31794d2e733e081e4e221f27aff6380393981681](https://github.com/ruby/ruby/commit/31794d2e733e081e4e221f27aff6380393981681).

parse.y: Allow "command" syntax in endless method definition

This change allows `def hello = puts "Hello"` without parentheses.

Note that `private def hello = puts "Hello"` does not parse for technical reason.

[Feature [#17398](#)]

#10 - 09/01/2025 03:50 AM - yui-knk (Kaneko Yuichiro)

Note that `private def hello = puts "Hello"` does not parse for technical reason.

It's possible.

Patch is https://github.com/yui-knk/ruby/tree/bug_17398.

This change allows single endless method definition with command body as an argument of the method.

Some cases you might be aware are

- `private :m, def hello = puts "Hello"`
 - This is `SyntaxError` because only single argument case is allowed.
 - This is same with one command is passed to argument. `obj.m 0, cmd 1, 2` is `SyntaxError`.
- `private def hello = puts "Hello", "World"`
 - This is interpreted as `private def hello = puts("Hello", "World")` not `private (def hello = puts "Hello"), "World"`.
 - This is same with one command is passed to argument. `obj.m cmd 1, 2` is interpreted as `obj.m cmd(1, 2)` not `obj.m (cmd 1), 2`.
- `private def hello = puts "Hello" do expr end`
 - This is interpreted as `private (def hello = puts "Hello") do expr end` not `private (def hello = puts "Hello" do expr end)`
 - This is same with one command is passed to argument. `obj.m cmd 1, 2 do expr end` is interpreted as `obj.m (cmd 1, 2) do expr end` not `obj.m (cmd 1, 2 do expr end)`

#11 - 09/01/2025 03:56 AM - mame (Yusuke Endoh)

- *Status changed from Closed to Open*

Thanks, it looks good. [@matz \(Yukihiro Matsumoto\)](#) what do you think?

#12 - 09/02/2025 03:13 AM - matz (Yukihiro Matsumoto)

Sounds reasonable, considering existing grammar.

Matz.

#13 - 09/02/2025 03:22 AM - mame (Yusuke Endoh)

- *Status changed from Open to Assigned*

- Assignee set to prism

Ok, then we need a patch for prism

#14 - 09/02/2025 11:34 AM - Earlopain (Earlopain _)

It is easy for prism to accept this as well: <https://github.com/ruby/prism/pull/3632>

I checked the above examples and prism seems to interpret them in the same way.

#15 - 09/12/2025 07:00 PM - Earlopain (Earlopain _)

- Status changed from Assigned to Closed

Applied in changeset [git|f2dbc4ec82a0e103ac1e3f64f5983540cdc75fd3](https://github.com/ruby/prism/commit/8fd12d594c).

[ruby/prism] [Bug #17398] Allow private def hello = puts "Hello"

This was a limitation of parse.y that prism intentionally replicated.

<https://github.com/ruby/prism/commit/8fd12d594c>

#16 - 09/12/2025 07:03 PM - kddnewton (Kevin Newton)

- Status changed from Closed to Open

- Assignee deleted (prism)

This is now fixed in prism, will need a fix for parse.y.

#17 - 09/13/2025 02:58 AM - yui-knk (Kaneko Yuichiro)

- Status changed from Open to Closed

Applied in changeset [git|a8c829e7f0dc20c3213d23fb9722fab74fe1a9d](https://github.com/ruby/prism/commit/a8c829e7f0dc20c3213d23fb9722fab74fe1a9d).

[Bug #17398] Allow private def hello = puts "Hello"

Files

allow-command-style-endless-method-def.patch	3.44 KB	04/19/2021	name (Yusuke Endoh)
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