Ruby master - Bug #14611

Exotic method parameters bug

03/16/2018 01:27 PM - bogdan (Bogdan Gusiev)

Status: Closed
Priority: Normal
Assignee:
Target version:
ruby -v: 2.4.2
Backport: 2.3: REQUIRED, 2.4: REQUIRED, 2.5: REQUIRED

Description
Consider the following code:

def test(_, x, *_)  
x  
end

test(1,2,3) # => nil

By some reason second parameter is nil when the rest of parameters declared as not used.

Related issues:
Related to Ruby master - Bug #15457: Weird behaviour when having multiple arg...

Closed

Associated revisions
Revision 62832 - 03/19/2018 03:16 AM - nobu (Nobuyoshi Nakada)
parse.y: fix duplicate kwrest

- parse.y (_kwrest): add the variable name as an argument, as well as an internal variable.
- parse.y (new_args_tail): now keyword rest argument variable is always placed between keyword arguments and block argument, so just reorder required and optional keyword arguments. no longer kwrest duplicates.

Revision 9720136d - 03/19/2018 04:08 AM - nobu (Nobuyoshi Nakada)
compile.c: arg var index

- compile.c (iseq_set_arguments): determine argument variable indexes by the order, not by just IDs. arguments begin with _ can be duplicate, so by-ID index may result in a wrong value. [ruby-core:86159] [Bug #14611]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@62833 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

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History

#1 - 03/16/2018 03:11 PM - phluid61 (Matthew Kerwin)
bogdan (Bogdan Gusiev) wrote:
By some reason second parameter is nil when the rest of parameters declared as not used.

Underscore as "not used" here is a convention of Rubocop; your code is no different from:

```ruby
def test(a, x, *a)
  x
end
```

I would say the bug is that it didn't reject the def in the first place, because of the repeated parameter name.

#2 - 03/16/2018 03:34 PM - Hanmac (Hans Mackowiak)

phluid61 (Matthew Kerwin) not so fast, ruby allows duplicate "_" as parameters so you can say that you don't want them and ruby should just ignore them so you don't get a SyntaxError about duplicated argument name like your change did

That has nothing to do with rubocop

#3 - 03/17/2018 12:22 AM - phluid61 (Matthew Kerwin)

Hanmac (Hans Mackowiak) wrote:

phluid61 (Matthew Kerwin) not so fast, ruby allows duplicate "_" as parameters so you can say that you don't want them and ruby should just ignore them so you don't get a SyntaxError about duplicated argument name like your change did

That has nothing to do with rubocop

... really? When did that happen? I had a look in syntax.rdoc and other places but didn't see any mention of it.

(edit: turns out this is something I completely missed in the 1.9.3 era)

#4 - 03/17/2018 04:08 AM - shevegen (Robert A. Heiler)

I did not know that either.

I guess the problem was that bogdan was using variables with a leading ".

With this:

```ruby
def x(a, a, b)
  puts 'HI'
end
```

I get in IRB:

```
SyntaxError ((irb):1: duplicated argument name
```

With that, however had:

```ruby
def x(_, a, _, b)
  puts 'hi'
end
```

```
x(1, 2, 3)
# => hi
```

I get no error and the method call works.

I have no idea if this is a bug or a feature but to me, just from looking at the above, I would have assumed that ".a is equal to _.a just as a was (considered) equal to a above, in "def x(a, a, b)".

Perhaps it is because leading underscores are always assumed to be special. But ideally this should be documented somewhere nonetheless.

#5 - 03/19/2018 12:12 AM - nobu (Nobuyoshi Nakada)

- Backport changed from 2.3: UNKNOWN, 2.4: UNKNOWN, 2.5: UNKNOWN to 2.3: REQUIRED, 2.4: REQUIRED, 2.5: REQUIRED

#6 - 03/19/2018 04:08 AM - nobu (Nobuyoshi Nakada)
- Status changed from Open to Closed

Applied in changeset trunk:r62833.

compile.c: arg var index

- compile.c (iseq_set_arguments): determine argument variable indexes by the order, not by just IDs. arguments begin with _ can be duplicate, so by-ID index may result in a wrong value. [ruby-core:86159] [Bug #14611]

#7 - 12/24/2018 09:04 AM - mame (Yusuke Endoh)
- Related to Bug #15457: Weird behaviour when having multiple arguments of same name and splat operator added