

## Ruby master - Bug #15599

### Mixing autoload and require causes deadlock and incomplete definition.

02/12/2019 01:40 PM - akr (Akira Tanaka)

<b>Status:</b> Open	
<b>Priority:</b> Normal	
<b>Assignee:</b>	
<b>Target version:</b>	
<b>ruby -v:</b> ruby 2.7.0dev (2019-02-11 trunk 67049) [x86_64-linux]	<b>Backport:</b> 2.4: UNKNOWN, 2.5: UNKNOWN, 2.6: UNKNOWN

#### Description

I found that mixing autoload and require causes deadlock and incomplete definition.

```
% cat a.rb
class A
  def a1() end
end
% cat base.rb
autoload :A, './a'

t1 = Thread.new { p A.instance_methods(false) }
t2 = Thread.new { require './a' }

t1.join
t2.join
% ruby base.rb
Traceback (most recent call last):
  1: from base.rb:6:in `'
base.rb:6:in `join': No live threads left. Deadlock? (fatal)
3 threads, 3 sleeps current:0x000055cc6943fde0 main thread:0x000055cc6935f4b0
* #<Thread:0x000055cc6938f190 sleep_forever>
  rb_thread_t:0x000055cc6935f4b0 native:0x00007f58d256eb40 int:0
  base.rb:6:in `join'
  base.rb:6:in `'
* #<Thread:0x000055cc6968cfc8@base.rb:3 sleep_forever>
  rb_thread_t:0x000055cc69736180 native:0x00007f58ce7b3700 int:0 mutex:0x000055cc6943fde0 cond:1
  depended by: tb_thread_id:0x000055cc6935f4b0
  /home/akr/ruby/o0/lib/ruby/2.7.0/rubygems/core_ext/kernel_require.rb:54:in `require'
  /home/akr/ruby/o0/lib/ruby/2.7.0/rubygems/core_ext/kernel_require.rb:54:in `require'
  base.rb:3:in `block in <main>'
* #<Thread:0x000055cc6968ccd0@base.rb:4 sleep_forever>
  rb_thread_t:0x000055cc6943fde0 native:0x00007f58ce5b1700 int:0
  /tmp/a/a.rb:1:in `'
  /home/akr/ruby/o0/lib/ruby/2.7.0/rubygems/core_ext/kernel_require.rb:54:in `require'
  /home/akr/ruby/o0/lib/ruby/2.7.0/rubygems/core_ext/kernel_require.rb:54:in `require'
  base.rb:4:in `block in <main>'
% ruby base.rb
[:a1]
% ruby base.rb
[]
```

The last run which prints [] means incomplete definition of A which a1 method is not defined.

#### Related issues:

Related to Ruby master - Bug #15598: Deadlock on mutual reference of autoload...

[Open](#)

#### History

#1 - 03/20/2019 10:59 AM - akr (Akira Tanaka)

- Related to Bug #15598: Deadlock on mutual reference of autoloaded constants added