Ruby - Bug #18767

IO.foreach hangs up when passes limit=0

05/10/2022 09:41 AM - andrykonchin (Andrew Konchin)

Status:	Closed		
Priority:	Normal		
Assignee:			
Target version:			
ruby -v:	3.0.3	**Backport:**	2.7: UNKNOWN, 3.0: UNKNOWN, 3.1: UNKNOWN

Description

IO.foreach behaves in an unexpected way in a corner case when passes 0 as a limit parameter. It never stops and hangs up.

```
IO.foreach('file.txt', 0) { |s| p s }
""
""
""
""
""
""
""
""
""
""
```

Expected behavior - to raise ArgumentError "invalid limit: 0" like it does the IO.readlines method.

I observe this behavior on 2.6, 2.7, and 3.0. Didn't check on 3.1 and master though.

Related issues:

Related to Ruby - Bug #4024: IO#readlines(0) never return	**Closed**	**11/04/2010**

Associated revisions

Revision 21cac42385e1a116d287e155e461453b830640d2 - 08/25/2022 08:36 PM - jeremyevans (Jeremy Evans)

Raise ArgumentError for IO.foreach with limit of 0

Makes behavior consistent with IO.readlines.

Fixes [Bug #18767]

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History

#1 - 05/26/2022 07:38 PM - jeremyevans0 (Jeremy Evans)

I've submitted a pull request to fix this: https://github.com/ruby/ruby/pull/5954

#2 - 06/09/2022 09:48 AM - mame (Yusuke Endoh)

- Status changed from Open to Rejected

I believe this is not a bug. I don't think the current behavior is very useful, but I don't think it is so problematic either. Considering the following example, the behavior is consistent in a sense.

```
irb(main):001:0> File.write("foo.txt", [*?A..?Z].join)
=> 26
irb(main):002:0> File.foreach("foo.txt", 4).take(4)
=> ["ABCD", "EFGH", "IJKL", "MNOP"]
irb(main):003:0> File.foreach("foo.txt", 3).take(4)
=> ["ABC", "DEF", "GHI", "JKL"]
irb(main):004:0> File.foreach("foo.txt", 2).take(4)
=> ["AB", "CD", "EF", "GH"]
irb(main):005:0> File.foreach("foo.txt", 1).take(4)
=> ["A", "B", "C", "D"]
irb(main):006:0> File.foreach("foo.txt", 0).take(4)
=> ["", "", "", ""]
```

@andrykonchin If you really want to change this behavior, please open a feature request with an explanation of a real-world use case.

#3 - 06/11/2022 11:17 AM - andrykonchin (Andrew Konchin)

I agree that the current behaviour completely makes sense.

The point is that there are other IO methods (that read multiple lines) which don't accept 0 as a limit. So it's more a consistency issue.

For instance IO.readlines and IO#each_line:

```
File.open('Rakefile').each_line(0).to_a
# (irb):8:in `each_line': invalid limit: 0 for each_line (ArgumentError)

IO.readlines('Rakefile', 0)
# (irb):11:in `readlines': invalid limit: 0 for readlines (ArgumentError)
```

#4 - 06/17/2022 04:40 PM - andrykonchin (Andrew Konchin)

@mame (Yusuke Endoh)

I still believe that it's a compatibility issue and not a feature request or so. Could the ticket be reopened?

cc @jeremyevans0 (Jeremy Evans)

#5 - 06/18/2022 02:56 AM - mame (Yusuke Endoh)

- Status changed from Rejected to Open

Okay reopened. Sorry, I overlooked the fact that IO#each_line(0) raises an error.

IMHO, it is reasonable for IO#readlines(0) to raise an exception. If not, it just gets stuck until the memory is exhausted. I'm unsure about IO#each_line(0).

#6 - 06/18/2022 02:56 AM - mame (Yusuke Endoh)

- Related to Bug #4024: IO#readlines(0) never return added

#7 - 08/06/2022 11:58 AM - andrykonchin (Andrew Konchin)

Hi, just a kind reminder.

Looks like the issue is accepted but the PR was closed and the fix isn't merged.

cc @jeremyevans0 (Jeremy Evans), @mame (Yusuke Endoh)

#8 - 08/06/2022 02:50 PM - mame (Yusuke Endoh)

I reopened this issue because there is reasonable doubt about the current situation, but I would like @matz (Yukihiro Matsumoto) 's judgment on whether and how it should actually be fixed.

#9 - 08/25/2022 09:53 AM - matz (Yukihiro Matsumoto)

OK, let's make it raise exceptions for zero length.

Matz.

#10 - 08/25/2022 08:36 PM - jeremyevans (Jeremy Evans)

- Status changed from Open to Closed

Applied in changeset git|21cac42385e1a116d287e155e461453b830640d2.

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