

Ruby master - Bug #13700

Enumerable#sum may not work for Ranges subclasses due to optimization

06/30/2017 09:05 AM - sos4nt (Stefan Schüßler)

Status: Closed	
Priority: Normal	
Assignee:	
Target version:	
ruby -v: ruby 2.4.1p111 (2017-03-22 revision 58053) [x86_64-darwin15]	Backport: 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: UNKNOWN
Description Enumerable#sum is optimized for integer ranges. Unfortunately, this can break subclasses: <pre>class StepTwoRange < Range def each(&block) step(2, &block) end end r = StepTwoRange.new(0, 10) r.to_a #=> [0, 2, 4, 6, 8, 10] r.to_a.sum #=> 30 r.sum #=> 55</pre> <p>The optimization should therefore only be triggered for instances of Range and not for instances of subclasses. (or more specifically, not for subclasses overriding each)</p> <p>If this behavior is intentional, it should at least be documented.</p>	

Associated revisions

Revision e496e965 - 08/25/2019 07:50 PM - jeremyevans (Jeremy Evans)

Document that Enumerable#sum may not respect redefinition of Range#each

It already documented that it may not respect redefinition of Integer#+.

Fixes [Bug #13700]

History

#1 - 06/30/2017 09:13 AM - sos4nt (Stefan Schüßler)

- Description updated

#2 - 06/30/2017 09:29 AM - sos4nt (Stefan Schüßler)

- Description updated

#3 - 06/30/2017 11:30 AM - shevegen (Robert A. Heiler)

Reminds me a bit of what hanmac wrote elsewhere; I can't find it right now and forgot it mostly already but I think he also mentioned some unexpected behaviour when ... subclassing I think? Or some custom class that he wrote...

#4 - 06/30/2017 11:39 AM - Hanmac (Hans Mackowiak)

shevegen (Robert A. Heiler) wrote:

Reminds me a bit of what hanmac wrote elsewhere; I can't find it right now and forgot it mostly already but I think he also mentioned some unexpected behaviour when ... subclassing I think? Or some custom class that he wrote...

my comment was for <https://bugs.ruby-lang.org/issues/13663> with String#upto you can't overwrite the internal String#<=>

#5 - 06/30/2017 11:45 AM - sos4nt (Stefan Schüßler)

Side note: in my opinion, Enumerable should not check the receiver's class to provide specific optimizations. Instead, Range should override sum and handle the optimization itself. Range#sum would also be a better place to document this behavior. (it still doesn't solve the subclassing issue, though)

#6 - 08/25/2019 08:02 PM - jeremyevans (Jeremy Evans)

- Status changed from Open to Closed

Applied in changeset [gitle496e96547b64c3a2fa6f285c3bc9bd21a245ac6](https://github.com/ruby/ruby/commit/e496e96547b64c3a2fa6f285c3bc9bd21a245ac6).

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It already documented that it may not respect redefinition of Integer#+.

Fixes [Bug [#13700](#)]