

Ruby - Bug #15830

SortedSet's lazy setup causes unpredictable behaviour in subclass's initialize

05/05/2019 08:11 PM - viko (Viko Viko)

Status:	Closed	
Priority:	Normal	
Assignee:	knu (Akinori MUSHYA)	
Target version:		
ruby -v:	ruby 2.6.3p62 (2019-04-16 revision 67580) [x86_64-darwin18]	Backport: 2.4: UNKNOWN, 2.5: UNKNOWN, 2.6: UNKNOWN
Description <pre>require 'set' class SortedSetWithoutLowest < SortedSet def initialize contents=[] puts "initialize, #{contents}" super lowest = to_a[0] puts "lowest from #{contents} is #{lowest}, removing" delete lowest puts "done initializing #{contents} to #{self}" end end 3.times { SortedSetWithoutLowest[1,2,3,4,5] } initialize, [1, 2, 3, 4, 5] initialize, [1, 2, 3, 4, 5] lowest from [1, 2, 3, 4, 5] is 1, removing done initializing [1, 2, 3, 4, 5] to #<SortedSetWithoutLowest: {2, 3, 4, 5}> lowest from [1, 2, 3, 4, 5] is 2, removing done initializing [1, 2, 3, 4, 5] to #<SortedSetWithoutLowest: {3, 4, 5}> initialize, [1, 2, 3, 4, 5] lowest from [1, 2, 3, 4, 5] is 1, removing done initializing [1, 2, 3, 4, 5] to #<SortedSetWithoutLowest: {2, 3, 4, 5}> initialize, [1, 2, 3, 4, 5] lowest from [1, 2, 3, 4, 5] is 1, removing done initializing [1, 2, 3, 4, 5] to #<SortedSetWithoutLowest: {2, 3, 4, 5}></pre> <p>The first such set created ends up with only [3, 4, 5], because SortedSet does some setup and then re-calls initialize (set.rb line 807). All further such sets are fine. All the sets are fine if any SortedSet has been made before, so calling SortedSet.new in the subclass's initialize and discarding the result is a viable workaround.</p>		

Associated revisions

Revision 258843106f343d05732499dd1832958eb1bf64f0 - 09/06/2019 09:20 PM - jeremyevans (Jeremy Evans)

Fix SortedSet subclasses that override initialize

The first time SortedSet#initialize is called, it overwrites itself, then recalls #initialize, which results in calling the subclass's initialize, not the current initialize.

Just inline the default initialize behavior to avoid this issue.

No test for this as it can only be triggered the very first time that SortedSet#initialize is called.

Fixes [Bug #15830]

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Revision 25884310 - 09/06/2019 09:20 PM - jeremyevans (Jeremy Evans)

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Fixes [Bug #15830]

History

#1 - 06/05/2019 02:17 AM - jeremyevans0 (Jeremy Evans)

- File sorted-set-initialize.patch added
- Status changed from Open to Assigned
- Assignee set to knu (Akinori MUSA)

I agree this is a bug and the easiest way to fix it is to inline the SortedSet#initialize implementation defined by SortedSet.setup into the default implementation of SortedSet#initialize. Attached is a patch that implements that.

#2 - 09/06/2019 09:30 PM - jeremyevans (Jeremy Evans)

- Status changed from Assigned to Closed

Applied in changeset [git|258843106f343d05732499dd1832958eb1bf64f0](https://github.com/ruby/ruby/commit/258843106f343d05732499dd1832958eb1bf64f0).

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Fixes [Bug [#15830](#)]

Files

sorted-set-initialize.patch	944 Bytes	06/05/2019	jeremyevans0 (Jeremy Evans)
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