

Ruby master - Feature #6552

Enumerator::Generator::select should return another Enumerator::Generator

06/07/2012 06:47 AM - eike.rb (Eike Dierks)

Status:	Rejected
Priority:	Normal
Assignee:	
Target version:	1.9.3
Description	
<p>The current implementation of Enumerator::select fails when applied to an open ended Enumerator::Generator, resulting in an endless loop.</p> <p>In the current implementation, :select seems to collect all values from the enumerator before applying the selection. If that Enumeration is not bound, this results in an endless loop.</p> <p>Instead, applying :select to a Generator should be applied to each object in turn and should itself return a Enumerator::Generator.</p> <p>For example to select the first 5 even numbers starting at 123 should work as: (123..Float::INFINITY).select{ n n.even?}.take(5) but this currently results in an endless loop.</p> <p>The same problem applies for :map and some other operators on Enumerations</p> <p>However changing :select and :map to make them work with open ended Enumerations might also change the api contract as they are currently defined to return an array.</p> <p>We might want to have a look at the SICSP on streams, http://mitpress.mit.edu/sicp/full-text/sicp/book/node69.html</p> <p>I came up with this prototype:</p> <pre>class Enumerator # return a generator for all elements from enumeration where block returns true def select &block Enumerator.new do y self.each do obj if block.call(obj) y<<obj end end end end end</pre> <p>Let's wrap an open ended Range in a Generator: e=Enumerator.new{ y (123..Float::INFINITY).each{ n y< [124, 126, 128, 130, 132]</p> <p>voilà!</p>	

History

#1 - 06/08/2012 02:27 PM - gregolsen (Innokenty Mikhailov)

You might be interested in Enumerator::Lazy that effectively solves you problem.
(123..Float::INFINITY).lazy.select{|n|n.even?}.take(5).force
It's in trunk already and will be available in ruby 2.0

#2 - 07/14/2012 06:44 PM - shyouhei (Shyouhei Urabe)

- Status changed from Open to Feedback

#3 - 11/24/2012 02:19 PM - mame (Yusuke Endoh)

- Status changed from Feedback to Rejected

I agree with gregolsen. No feedback. Closing.

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Files

Enumerator_Generator_select.rb	806 Bytes	06/07/2012	eike.rb (Eike Dierks)
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