

Ruby trunk - Feature #2447

reduce GC pressure by symbol table without String instance

12/06/2009 11:24 PM - mame (Yusuke Endoh)

Status:	Rejected
Priority:	Normal
Assignee:	mame (Yusuke Endoh)
Target version:	
Description	
<pre>=begin ##### ##### String ##### ##### GC ##### ##### String ##### ALLOC ##### ##### # ##### \$ time ./ruby.org -e '10000.times { GC.start }; p ObjectSpace.count_objects[:T_STRING]' 1778 real 0m3.766s user 0m3.764s sys 0m0.004s # ##### \$ time ./ruby.new -e '10000.times { GC.start }; p ObjectSpace.count_objects[:T_STRING]' 433 real 0m2.880s user 0m2.876s sys 0m0.004s benchmark ##### ##### so_meteor_contest ##### (#####) ##### #####vm3_thread_mutex ##### ##### (3 ##### 30 #), ##### ##### make test-all # ##### 1.89s (2.57%): vm2_eval 73.65->71.76 1.88s (2.44%): so_fannkuch 77.14->75.25 1.86s (8.08%): so_partial_sums 23.04->21.18 1.73s (7.20%): so_mandelbrot 23.98->22.26 1.43s (8.68%): so_spectralnorm 16.43->15.00 1.02s (6.19%): so_nbody 16.49->15.47 0.99s (1.13%): app_pentomino 87.50->86.51 0.82s (6.67%): vm1_block 12.23->11.41 0.76s (5.28%): so_nsieve_bits 14.37->13.61 0.51s (15.68%): vm3_gc 3.25->2.74 0.34s (3.16%): so_fasta 10.69->10.35 0.23s (5.13%): so_exception 4.52->4.29 0.22s (3.01%): loop_for 7.45->7.22 0.19s (9.06%): app_raise 2.10->1.91 0.18s (4.67%): so_object 3.88->3.70 0.12s (1.77%): loop_times 6.54->6.42 0.11s (8.49%): so_random 1.31->1.20 0.09s (2.44%): app_uri 3.88->3.78 0.09s (1.07%): vm1_simplereturn 8.35->8.26</pre>	

```

0.07s (4.13%): app_strconcat 1.64->1.57
0.06s (0.80%): vm2_mutex 7.33->7.27
0.06s (2.94%): app_erb 1.95->1.89
0.05s (0.59%): vm2_method 8.94->8.89
0.04s (1.04%): vm2_array 3.63->3.59
0.04s (0.97%): vm1_rescue 3.80->3.76
0.03s (0.56%): so_nested_loop 5.88->5.85
0.03s (0.75%): loop_generator 3.83->3.80
0.03s (0.51%): so_pidigits 5.38->5.35
0.03s (2.87%): io_file_read 0.95->0.93
0.03s (0.74%): vm2_proc 3.51->3.48
0.02s (0.65%): vm1_ensure 3.82->3.79
0.02s (1.45%): vm2_poly_method_ov 1.64->1.61
0.02s (0.74%): vm2_zsuper 2.88->2.86
0.02s (2.50%): app_mandelbrot 0.83->0.80
0.02s (0.46%): app_tak 4.36->4.34
0.02s (1.34%): vm2_case 1.24->1.23
0.01s (1.04%): io_file_create 1.18->1.17
0.01s (0.43%): so_matrix 2.11->2.10
0.01s (0.18%): so_ackermann 3.62->3.62
0.01s (0.19%): app_fib 3.21->3.21
0.01s (1.47%): so_sieve 0.41->0.40
0.00s (0.06%): vm1_ivar 6.23->6.22
0.00s (0.03%): so_concatenate 1.91->1.91
0.00s (0.05%): app_factorial 0.66->0.66
0.00s (0.00%): vm1_neq 6.22->6.22
-0.00s (-0.03%): vm2_send 2.02->2.02
-0.00s (-0.41%): app_answer 0.24->0.25
-0.00s (-1.53%): so_reverse_complement 0.09->0.09
-0.00s (-1.96%): so_k_nucleotide 0.07->0.07
-0.00s (-0.38%): io_file_write 0.44->0.44
-0.00s (-0.11%): loop_whileloop 3.38->3.39
-0.00s (-0.13%): app_tarai 3.51->3.51
-0.01s (-0.64%): so_count_words 1.09->1.10
-0.01s (-0.68%): so_lists 1.68->1.69
-0.02s (-2.50%): loop_whileloop2 0.67->0.68
-0.02s (-1.04%): vm2_unif1 1.76->1.78
-0.02s (-1.12%): so_binary_trees 1.81->1.83
-0.03s (-1.10%): vm2_super 2.75->2.78
-0.03s (-0.56%): vm1_const 5.80->5.83
-0.05s (-0.70%): vm2_regexp 6.55->6.59
-0.05s (-0.51%): vm3_thread_create_join 10.49->10.55
-0.06s (-1.18%): vm1_swap 5.18->5.24
-0.11s (-2.21%): vm1_not 4.91->5.02
-0.14s (-1.19%): vm2_poly_method 11.83->11.97
-0.14s (-2.11%): vm1_length 6.64->6.78
-0.15s (-2.33%): vm1_ivar_set 6.57->6.72
-0.18s (-2.42%): so_array 7.40->7.58
-0.31s (-2.23%): so_nsieve 13.79->14.10
-2.22s (-8.38%): so_meteor_contest 26.50->28.72
-26.20s (-177.28%): vm3_thread_mutex 14.78->40.99

--
Yusuke Endoh mame@tsg.ne.jp
=end

```

History

#1 - 12/07/2009 07:13 AM - matz (Yukihiko Matsumoto)

```
=begin
□□□□ □□□□□□
```

In message "Re: [ruby-dev:39846] [Bug #2447] reduce GC pressure by symbol table without String instance" on Sun, 6 Dec 2009 23:24:59 +0900, Yusuke Endoh redmine@ruby-lang.org writes:

```

|□□□□□□□□□□□□□□□□□□□□ String □□□□□□□□
|□□□□□□□□□□□□□□□□□□□□ GC □□□□□□□□

```

```
|
|String ALLOC
|
```

```
Symbol GC
Symbol GC
```

=end

#2 - 12/08/2009 06:37 PM - wanabe (_ wanabe)

```
=begin
```

09/12/06 Yusuke Endoh redmine@ruby-lang.org:

```
String
GC
```

```
String ALLOC
make test-all
```

- app_pentomino : 185 - 187 => 182 - 183

so_fannkuch : 194 - 195 => 191 - 192

so_mandelbrot : 56.1 - 56.3 => 48.2 - 48.3

so_nbody : 39.2 - 39.5 => 34.4 - 35.0

so_partial_sums : 54.3 - 54.5 => 47.0 - 47.0

so_spectralnorm : 39.4 - 39.6 => 35.4 - 35.5

vm1_block* : 28.5 - 29.5 => 22.5 - 22.8

vm1_const* : 6.4 - 6.6 => 5.5 - 5.5

vm1_not* : 5.6 - 5.8 => 4.1 - 4.2

vm3_gc : 10.4 - 10.5 => 9.0 - 9.0
- loop_whileloop2 : 17.0 - 17.5 => 18.0 - 18.5

so_ackermann : 8.6 - 8.7 => 8.7 - 8.9

so_exception : 11.8 - 12.2 => 12.8 - 13.4

so_meteor_contest : 46.4 - 48.8 => 50.4 - 51.2

so_reverse_complement : 388 - 389 => 391 - 392

vm2_eval* : 195 - 198 => 206 - 207
- app_tak : 10.5 - 11.2

io_file_read : 39 - 42

loop_generator : 5.6 - 6.2

loop_times : 14.1 - 14.5

so_count_words : 2 - 5

so_array : 13 - 19

so_sieve : 1.3 - 4.2

benchmark results:

```
name ruby 1.9.2dev (2009-12-06 trunk 26029) [i386-mingw32] ruby
1.9.2dev (2009-12-06 trunk 26029) [i386-mingw32]
app_answer 0.766 0.797
app_erb 4.484 4.422
app_factorial 2.500 2.641
app_fib 7.797 7.984
app_mandelbrot 2.125 2.172
```

```
app_pentomino 187.578 183.078
app_raise 5.422 5.438
app_strconcat 3.313 3.172
app_tak 10.547 11.141
app_tarai 9.203 9.313
app_uri 8.828 8.391
io_file_create 33.641 32.641
io_file_read 39.219 42.203
io_file_write 28.719 28.578
loop_for 15.875 15.875
loop_generator 5.719 6.125
loop_times 13.984 14.328
loop_whileloop 8.125 8.156
loop_whileloop2 1.734 1.844
so_ackermann 8.672 8.781
so_array 19.031 13.938
so_binary_trees 3.906 4.016
so_concatenate 3.719 3.813
so_count_words 5.734 6.844
so_exception 12.047 13.203
so_fannkuch 195.047 191.688
so_fasta 25.000 24.891
so_k_nucleotide 16.469 16.797
so_lists 3.453 3.406
so_mandelbrot 56.344 48.313
so_matrix 4.172 4.266
so_meteor_contest 46.438 50.484
so_nbody 39.297 34.922
so_nested_loop 11.859 12.031
so_nsieve 28.922 29.125
so_nsieve_bits 27.938 27.281
so_object 9.063 9.656
so_partial_sums 54.563 47.047
so_pidigits 17.578 17.594
so_random 3.609 3.328
so_reverse_complement 387.969 392.344
so_sieve 2.234 1.531
so_spectralnorm 39.375 35.422
vm1_block* 29.516 22.875
vm1_const* 6.438 5.547
vm1_ensure* 2.344 2.250
vm1_ivar* 7.844 7.547
vm1_ivar_set* 7.031 7.000
vm1_length* 8.797 8.594
vm1_neq* 6.547 6.922
vm1_not* 5.688 4.172
vm1_rescue* 2.328 2.250
vm1_simplereturn* 13.078 12.797
vm1_swap* 4.375 4.328
vm2_array* 15.063 15.016
vm2_case* 1.844 1.656
vm2_eval* 195.141 206.078
vm2_method* 19.266 19.016
vm2_mutex* 12.469 12.422
vm2_poly_method* 24.109 24.188
vm2_poly_method_ov* 2.344 2.328
vm2_proc* 5.859 5.844
vm2_regexp* 9.953 9.438
vm2_send* 3.156 2.891
vm2_super* 4.781 4.641
vm2_unif1* 2.813 2.625
vm2_zsuper* 5.500 5.406
vm3_gc 10.531 9.031
vm3_thread_create_join 27.234 27.828
vm3_thread_mutex 3.000 3.188
```

```
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[] []
```

```
=end
```

```
#3 - 12/11/2009 02:21 AM - mame (Yusuke Endoh)
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```
=begin
[] [] [] []
```

2009年12月8日18:37 wanabe s.wanabe@gmail.com:

make test-all

test results summary

test results summary

test results summary

- app_pentomino : 185 - 187 => 182 - 183 so_fannkuch : 194 - 195 => 191 - 192 so_mandelbrot : 56.1 - 56.3 => 48.2 - 48.3 so_nbody : 39.2 - 39.5 => 34.4 - 35.0 so_partial_sums : 54.3 - 54.5 => 47.0 - 47.0 so_spectralnorm : 39.4 - 39.6 => 35.4 - 35.5 vm1_block* : 28.5 - 29.5 => 22.5 - 22.8 vm1_const* : 6.4 - 6.6 => 5.5 - 5.5 vm1_not* : 5.6 - 5.8 => 4.1 - 4.2 vm3_gc : 10.4 - 10.5 => 9.0 - 9.0

2% 2% 14% 12% 14% 10% 21% 15% 27% 13%

- loop_whileloop2 : 17.0 - 17.5 => 18.0 - 18.5 so_ackermann : 8.6 - 8.7 => 8.7 - 8.9 so_exception : 11.8 - 12.2 => 12.8 - 13.4 so_meteor_contest : 46.4 - 48.8 => 50.4 - 51.2 so_reverse_complement : 388 - 389 => 391 - 392 vm2_eval* : 195 - 198 => 206 - 207

-6% -2% -9% -7% -1% -5%

feature request

Yusuke ENDOH mame@tsg.ne.jp

=end

#4 - 04/22/2010 11:16 PM - mame (Yusuke Endoh)

=begin

feature request

Yusuke Endoh mame@tsg.ne.jp
=end

#5 - 09/14/2010 04:10 PM - shyouhei (Shyouhei Urabe)

- Status changed from Open to Assigned

=begin

=end

#6 - 06/26/2012 04:08 AM - ko1 (Koichi Sasada)

- Description updated

big feature

#7 - 07/01/2012 10:01 AM - mame (Yusuke Endoh)

feature request

bug

feature request deadline

code freeze branch

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Yusuke Endoh mame@tsg.ne.jp

#8 - 10/27/2012 05:09 AM - ko1 (Koichi Sasada)

- Assignee changed from ko1 (Koichi Sasada) to mame (Yusuke Endoh)

#9 - 10/27/2012 10:17 AM - mame (Yusuke Endoh)

- Priority changed from Normal to 3

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Yusuke Endoh mame@tsg.ne.jp

#10 - 11/20/2012 02:45 AM - mame (Yusuke Endoh)

- Target version changed from 2.0.0 to 2.6

next minor

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Yusuke Endoh mame@tsg.ne.jp

#11 - 12/25/2017 05:59 PM - naruse (Yui NARUSE)

- Status changed from Assigned to Rejected

obsolete

#12 - 12/25/2017 11:36 PM - mame (Yusuke Endoh)

- Status changed from Rejected to Assigned

#13 - 12/10/2018 06:59 AM - naruse (Yui NARUSE)

- Target version deleted (2.6)

#14 - 01/21/2019 07:35 AM - mame (Yusuke Endoh)

- Status changed from Assigned to Rejected

- GC
- Symbol GC

Files

symbol_table_without_string.patch	8.03 KB	12/06/2009	mame (Yusuke Endoh)
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