

## Ruby trunk - Feature #12447

### Integer#digits for extracting digits of place-value notation in any base

05/31/2016 02:37 PM - mrkn (Kenta Murata)

<b>Status:</b>	Closed	
<b>Priority:</b>	Normal	
<b>Assignee:</b>	matz (Yukihiro Matsumoto)	
<b>Target version:</b>		
<b>Description</b>		
I sometimes want to extract digits of place-value notation of integer numbers.		
For example:		
<pre>12345.digits      #=&gt; [5, 4, 3, 2, 1] 12345.digits(100) #=&gt; [45, 23, 1]</pre>		
One typical use case is calculating checksum digit.		
I found some code extracting digits by the way like <code>int.to_s.chars.map(&amp;:to_i)</code> .		
<ul style="list-style-type: none"><li><a href="https://github.com/joeljunstrom/ruby_luhn/blob/master/lib/luhn.rb#L43">https://github.com/joeljunstrom/ruby_luhn/blob/master/lib/luhn.rb#L43</a></li><li><a href="https://github.com/elitwin/check_digit/blob/master/lib/check_digit/damm.rb#L28">https://github.com/elitwin/check_digit/blob/master/lib/check_digit/damm.rb#L28</a></li><li><a href="https://github.com/elitwin/check_digit/blob/master/lib/check_digit/luhn.rb#L14">https://github.com/elitwin/check_digit/blob/master/lib/check_digit/luhn.rb#L14</a></li><li><a href="https://github.com/elitwin/check_digit/blob/master/lib/check_digit/verhoeff.rb#L42">https://github.com/elitwin/check_digit/blob/master/lib/check_digit/verhoeff.rb#L42</a></li></ul>		
Introducing Integer#digits can reduce needless string allocation in such cases.		
The patch was pushed into the repository in github. <a href="https://github.com/mrkn/ruby/commit/5dce32d">https://github.com/mrkn/ruby/commit/5dce32d</a>		
<b>Related issues:</b>		
Related to Ruby trunk - Feature #4787: Integer#each_modulo(n)		<b>Closed</b>
Related to Ruby trunk - Feature #12116: `Fixnum#divmod`, `Bignum#divmod` with...		<b>Open</b>

#### Associated revisions

##### Revision 9042cf21 - 06/13/2016 11:43 AM - mrkn (Kenta Murata)

numeric.c: Add Integer#digits [Feature #12447] [ruby-core:75799]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@55395 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

##### Revision 55395 - 06/13/2016 11:43 AM - mrkn (Kenta Murata)

numeric.c: Add Integer#digits [Feature #12447] [ruby-core:75799]

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#### History

##### #1 - 05/31/2016 02:37 PM - mrkn (Kenta Murata)

- Related to Feature #4787: Integer#each\_modulo(n) added

##### #2 - 05/31/2016 02:37 PM - mrkn (Kenta Murata)

- Related to Feature #12116: `Fixnum#divmod`, `Bignum#divmod` with multiple arguments added

**#3 - 05/31/2016 03:10 PM - mrkn (Kenta Murata)**

- Description updated

**#4 - 06/13/2016 07:37 AM - mrkn (Kenta Murata)**

- Description updated

**#5 - 06/13/2016 08:01 AM - matz (Yukihiko Matsumoto)**

Approved.

Matz.

**#6 - 06/13/2016 08:05 AM - akr (Akira Tanaka)**

I wanted such method to encode integer in some binary format.  
(I cannot remember concrete example.)  
For example, `pack("w")` can be implemented using `Integer#digits`.

**#7 - 06/13/2016 09:08 AM - mrkn (Kenta Murata)**

Summary of decision in today's Developer meeting:

- The results endian is little endian.
- Raise `Math::DomainError` for negative receiver.
- Return `[0]` for 0.

**#8 - 06/13/2016 11:44 AM - mrkn (Kenta Murata)**

- Status changed from Open to Closed

Applied in changeset [r55395](#).

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numeric.c: Add `Integer#digits` [Feature [#12447](#)] [ruby-core:75799]