## Description

I think `unpack1(template)` is faster than `unpack(template)[0]`. Attached patch for `lib/erb.rb`.

### Associated revisions

**Revision 5723d9fd - 09/29/2017 11:00 AM - kazu**

Use `unpack1` instead of `unpack` and `[0]`

[Feature #13943][ruby-core:83027]

```plaintext
git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@60061 b2dd03c8-39d4-4d8f-98ff-823fe69b080e
```

**Revision 60061 - 09/29/2017 11:00 AM - znz (Kazuhiro NISHIYAMA)**

Use `unpack1` instead of `unpack` and `[0]`

[Feature #13943][ruby-core:83027]

**Revision 60061 - 09/29/2017 11:00 AM - kazu**

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[Feature #13943][ruby-core:83027]

**Revision 60061 - 09/29/2017 11:00 AM - znz (Kazuhiro NISHIYAMA)**

Use `unpack1` instead of `unpack` and `[0]`

[Feature #13943][ruby-core:83027]

### History

**#1 - 09/27/2017 01:49 PM - k0kubun (Takashi Kokubun)**

Could you put benchmark result?

**#2 - 09/27/2017 10:25 PM - wyhaines (Kirk Haines)**

It should implicitly be faster, as it avoids the array creation, insertion, and dereferencing that occurs with:

```ruby
m.unpack("C")[0]
```

However, a benchmark to quantify the difference would be nice to have.

**#3 - 09/28/2017 01:37 AM - shevegen (Robert A. Heiler)**

I think a benchmark would be great. There are some ruby hackers/devs that almost always add benchmarks to their changes, which I think is nice.

**#4 - 09/28/2017 02:19 PM - znz (Kazuhiro NISHIYAMA)**

Using `benchmark_driver` gem, `unpack1(template)` is about 1.07x faster than `unpack(template)[0]`.

```plaintext
% cat url_encode.yml
prelude: |
  require 'erb'
  str = "Programming Ruby: The Pragmatic Programmer's Guide"
benchmark: ERB::Util.url_encode(str)
% benchmark_driver url_encode.yml -e ruby-base::$(rbenv root)/versions/git/bin/ruby -e ruby-unpack1::$(rbenv root)/versions/git2/bin/ruby
```
### Benchmark Results

**Execution time (sec)**

<table>
<thead>
<tr>
<th>name</th>
<th>ruby-base</th>
<th>ruby-unpack1</th>
</tr>
</thead>
<tbody>
<tr>
<td>url_encode</td>
<td>1.793</td>
<td>1.665</td>
</tr>
</tbody>
</table>

**Speedup ratio: compare with the result of ‘ruby-base’ (greater is better)**

<table>
<thead>
<tr>
<th>name</th>
<th>ruby-unpack1</th>
</tr>
</thead>
<tbody>
<tr>
<td>url_encode</td>
<td>1.077</td>
</tr>
</tbody>
</table>

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**#5 - 09/28/2017 03:50 PM - k0kubun (Takashi Kokubun)**

- Assignee changed from k0kubun (Takashi Kokubun) to znz (Kazuhiro NISHIYAMA)

Thank you for showing benchmark result. While the impact is not so large with that benchmark, this would be expected usage of `unpack1` and it's good for maintainability too. So I think "not being slower in benchmark" is enough for adding this change. I'm +1 for committing this.

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**#6 - 09/29/2017 11:00 AM - Anonymous**

- Status changed from Assigned to Closed

Applied in changeset `trunk|r60061`.

Use `unpack1` instead of `unpack` and `[0]`

[Feature #13943][ruby-core:83027]

**Files**

<table>
<thead>
<tr>
<th>File</th>
<th>Size</th>
<th>Date</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>erb-unpack1.diff</td>
<td>355 Bytes</td>
<td>09/27/2017</td>
<td>znz (Kazuhiro NISHIYAMA)</td>
</tr>
</tbody>
</table>