Ruby - Feature #12333

`String#concat`, `Array#concat`, `String#prepend` to take multiple arguments

04/30/2016 12:25 PM - sawa (Tsuyoshi Sawada)

Status:	Closed	
Priority:	Normal	
Assignee:		
Target version:		

Description
I would like String#concat, Array#concat, String#prepend to take multiple arguments

```
s = ""
s.concat("a", "b", "c")
a.prepend("A", "B", "C")
s # => "ABCabc"

a = []
a.concat(["a"], ["b", "c"])
a # => ["a", "b", "c"]
```

Related issues:	
Related to Ruby - Feature #12247: accept multiple arguments at Array#delete	**Open**
Related to Ruby - Bug #13268: [DOC] Restore docs for String#<<	**Closed**

Associated revisions

Revision 9387ff7315b498a6e7c8ab2a4b1582fd6c717524 - 08/27/2016 01:26 AM - nobu (Nobuyoshi Nakada)

multiple arguments

- array.c (rb_ary_concat_multi): take multiple arguments. based
  on the patch by Satoru Horie. [Feature #12333]
- string.c (rb_str_concat_multi, rb_str_prepend_multi): ditto.

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@56021 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

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History

#1 - 05/02/2016 01:45 AM - duerst (Martin Dürst)

I think this can occasionally be helpful, and shouldn't be too difficult to implement. Can you provide a patch?

#2 - 05/02/2016 03:25 AM - spinute (Satoru Horie)

I will try to write a patch for it!

#3 - 05/03/2016 07:15 AM - spinute (Satoru Horie)

- File multi_concat_prepend.patch added

I have written a patch.

And, there are some points to ask

- What is the appropriate behavior when calling concat/prepend without argument?

- The code attached now returns just self

- What should happen when writing ar.concat(ar, ar)?

- ar = [1]; ar.concat(ar, ar) #=> [1,1,1]? or [1,1,1,1]?

- ar << ar << ar returns [1,1,1,1], of course because this is just a sequence of binary operations

- However, I feel "ar.concat(ar, ar)" saying "append present content of the array twice to the array", meaning [1,1,1]

- The code attached returns [1,1,1,1], for now, just for the simplicity of implementation

#4 - 05/03/2016 08:08 AM - spinute (Satoru Horie)

- File fixed_multi_concat_prepend.patch added

I wrote another patch refined for a problem stated in a previous post.

It behaves like below

```
ar = [1]
ar.concat(ar, ar) #=> [1,1,1]

str = "ab"
str.concat(str, str) #=> "ababab"
```

#5 - 05/03/2016 08:23 AM - sawa (Tsuyoshi Sawada)

Satoru, thank you for the patch.

And you are making good points with the questions you raised.

- What is the appropriate behavior when calling concat/prepend without argument?
- The code attached now returns just self

I agree with this behavior. I think this would be the most natural.

- What should happen when writing ar.concat(ar, ar)?

- ar = [1]; ar.concat(ar, ar) #=> [1,1,1]? or [1,1,1,1]?
- ar << ar << ar returns [1,1,1,1], of course because this is just a sequence of binary operations

This is more logical (in some sense), but counter-intuitive.

- However, I feel "ar.concat(ar, ar)" saying "append present content of the array twice to the array", meaning [1,1,1]

This is more intuitive, but may be less logical.

I have preference with the second option, but am not completely sure. Maybe other people might have different opinions.

#6 - 05/28/2016 04:40 AM - hsbt (Hiroshi SHIBATA)

- Related to Feature #12247: accept multiple arguments at Array#delete added

#7 - 06/13/2016 06:46 AM - matz (Yukihiro Matsumoto)

Approved. I want to

```
ar = [1]
ar.concat(ar, ar)
```

to result [1,1,1].

Matz.

#8 - 06/20/2016 03:32 PM - spinute (Satoru Horie)

- File multi_concat_prepend.patch added

I added some test cases for Array#concat, String#concat and String#prepend and refined error handling.

Also, I fixed my code to conform to convention.
Any feedback is welcome!

#9 - 08/27/2016 01:26 AM - nobu (Nobuyoshi Nakada)

- Status changed from Open to Closed

Applied in changeset r56021.

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multiple arguments

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- string.c (rb_str_concat_multi, rb_str_prepend_multi): ditto.

#10 - 03/02/2017 10:23 AM - stomar (Marcus Stollsteimer)

- Related to Bug #13268: [DOC] Restore docs for String#<< added

Files

multi_concat_prepend.patch	2.94 KB	05/03/2016	spinute (Satoru Horie)
fixed_multi_concat_prepend.patch	3.14 KB	05/03/2016	spinute (Satoru Horie)
multi_concat_prepend.patch	7.19 KB	06/20/2016	spinute (Satoru Horie)