Ruby master - Feature #15198
Array#intersect?

10/03/2018 08:07 PM - c4am95 (Travis Hunter)

Status: Closed
Priority: Normal
Assignee: matz (Yukihiro Matsumoto)
Target version:

Description
I frequently find myself needing to determine if two arrays intersect but not actually caring about the intersection, so I write code like:

```ruby
(a1 & a2).any?
```

It would be nice to have an `intersect?` convenience method on `Array` to perform this query.

ruby#1972: Add Array#intersect?

Related issues:
Related to Ruby master - Feature #16928: Array#include_all? & Array#include_any?
Has duplicate Ruby master - Feature #15976: Add Array#overlap? for whether th...

Associated revisions
Revision b6bb4623 - 04/16/2021 07:12 AM - nobu (Nobuyoshi Nakada)
NEWS for [Feature #15198] [ci skip]

History
#1 - 10/04/2018 02:28 AM - shyouhei (Shyouhei Urabe)

- Interesting. Can you share a bit more detail about your "if two arrays intersect but not actually caring about the intersection" use case? For instance if you have open sourced such code, a URL for it helps us a lot.
- If you have zero interest to the intersection itself I think you can avoid creating the temporary array.

#2 - 10/05/2018 02:01 PM - c4am95 (Travis Hunter)
The most recent example I encountered was authorizing a user in a Rails endpoint. Each user has a list of abilities, and each endpoint has a list of abilities that is authorized to perform the action. We just need to check if there is an intersection between the two lists.

I updated the PR to avoid creating the intermediate array.

#3 - 10/06/2018 05:30 PM - shevegen (Robert A. Heiler)
Demonstrated use cases helps the core team & matz assess on the usefulness of a proposed change, which can help in accepting issue requests ultimately in the long run (if the use case is considered sufficiently useful). ;)

#4 - 10/07/2018 11:19 PM - c4am95 (Travis Hunter)
I threw together an example in a gist which is very similar to the use case I described. I have also run into numerous other situations where this functionality would have been useful.

I added some comments in the gist but I'll cross-post them here for reference:

The current behavior creates an intermediate array for both intersection tests when the resulting array is clearly not needed. With the desired behavior, we could avoid creating the intermediate array and produce a faster best case runtime.

#5 - 10/08/2018 05:10 PM - c4am95 (Travis Hunter)
It also seems like it comes up fairly commonly on stackoverflow/blogs:
#6 - 09/02/2019 07:04 AM - matz (Yukihiro Matsumoto)
- Has duplicate Feature #15976: Add Array#overlap? for whether the intersection of 2 arrays is non empty? added

#7 - 09/04/2019 02:18 PM - Dan0042 (Daniel DeLorme)
It might make sense to use ary1.to_set.intersect?(ary2). That way it makes explicit the fact that ary1 must be converted to a set. But Set#intersect? would have to support any Enumerable.

#8 - 10/23/2019 05:58 PM - c4am95 (Travis Hunter)
I tried setting that up here: https://github.com/ruby/ruby/pull/2598
I ignored infinite ranges for now

#9 - 06/01/2020 04:46 PM - marcandre (Marc-Andre Lafoutine)
- Related to Feature #16928: Array#include_all? & Array#include_any? added

#10 - 04/07/2021 07:17 PM - c4am95 (Travis Hunter)
Matz/Marc-Andre: anything I can do to help here as far as documentation or providing more use cases? I/my colleagues would love to see this make it into Ruby.

#11 - 04/08/2021 12:32 PM - marcandre (Marc-Andre Lafoutine)
- Assignee set to matz (Yukihiro Matsumoto)
I believe we just need a final "yay" from Matz. I'll add it to the next meeting's agenda.

#12 - 04/16/2021 06:56 AM - matz (Yukihiro Matsumoto)
Accepted.
Matz.

#13 - 04/16/2021 07:03 AM - knu (Akinori MUSHA)
We discussed this in today's developer meeting. Here are some remarks:
- It takes one argument for now.
- It means ![(a & b).empty?] instead of (a & b).any? so [nil].intersect?([nil]) evaluates to true.
- The implementation will internally use a hash to match the behavior of Array&.

#14 - 04/16/2021 07:13 AM - nobu (Nobuyoshi Nakada)
- Status changed from Open to Closed

Applied in changeset git|b6bb4623ef01335cf0a81d279cde24a9a97bcce.

NEWS for [Feature #15198] [ci skip]