

COLLECTIONS IN RUBY

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WHAT IS COLLECTION?



what's collection in programming language



In programming, a collection is a group of data items that are organized together. These data items can be of different types, including other collections. Collections are often used to store, retrieve, and manipulate data in a program. Different programming languages have different ways of implementing collections, but they all serve the same purpose of grouping data together. Some common examples of collections in programming include arrays, lists, sets, and maps. These data structures allow you to store and access data in an efficient and organized way.





tell me about collection in Ruby



In Ruby, a collection is a grouping of objects. This can be a simple array of objects, such as strings or integers, or it can be a more complex data structure like a hash or a set. Collections are a fundamental part of the Ruby programming language, and they are used to store, organize, and manipulate data in a variety of ways.





你知道紅寶石的集合是什麼嗎？



紅寶石是一種程式語言，而集合是一種資料結構。在紅寶石中，集合是用來將物件分組的方法。這可以是一個簡單的物件陣列，例如字串或整數，或者可以是一個更複雜的資料結構，如哈希表或集合。集合是紅寶石程式語言的基本部分，它們被用於存儲、組織和操作資料的各種方式。



{ } HASH / [] ARRAY
STRUCT / OPENSTRUCT
***RANGE / *SET**



USE CASE - SHOPPING CART

DEMO

- Item
- Shopping Cart

ENUMERABLE MODULE

[Enumerable - Ruby Docs](#)

Q&A

STRUCT VS. OPENSTRUCT (?)

SCENARIOS



PERFORMANCE

```
0.357788 seconds elapsed for Class.new (Ruby 2.5.5)
0.764953 seconds elapsed for Struct (Ruby 2.5.5)
0.842782 seconds elapsed for Hash (Ruby 2.5.5)
2.211959 seconds elapsed for OpenStruct (Ruby 2.5.5)

0.213175 seconds elapsed for Class.new (Ruby 2.6.3)
0.335341 seconds elapsed for Struct (Ruby 2.6.3)
0.836996 seconds elapsed for Hash (Ruby 2.6.3)
2.070901 seconds elapsed for OpenStruct (Ruby 2.6.3)

0.936016 seconds elapsed for Class.new (Ruby 2.7.2)
0.453067 seconds elapsed for Struct (Ruby 2.7.2)
1.016676 seconds elapsed for Hash (Ruby 2.7.2)
1.482318 seconds elapsed for OpenStruct (Ruby 2.7.2)

0.421272 seconds elapsed for Class.new (Ruby 3.0.0)
0.322617 seconds elapsed for Struct (Ruby 3.0.0)
0.719928 seconds elapsed for Hash (Ruby 3.0.0)
35.130777 seconds elapsed for OpenStruct (Ruby 3.0.0) (oops!)

0.443975 seconds elapsed for Class.new (Ruby 3.0.1)
0.348031 seconds elapsed for Struct (Ruby 3.0.1)
0.737662 seconds elapsed for Hash (Ruby 3.0.1)
16.264204 seconds elapsed for SmartHash (Ruby 3.0.1) (meh)
53.396924 seconds elapsed for OpenStruct (Ruby 3.0.1) (oops!)
```

<https://stackoverflow.com/questions/1177594/when-should-i-use-struct-vs-openstruct>



STYLE

Overview

Flags uses of `OpenStruct`, as it is now officially discouraged to be used for performance, version compatibility, and potential security issues.

Examples:

```
# bad
point = OpenStruct.new(x: 0, y: 1)

# good
Point = Struct.new(:x, :y)
point = Point.new(0, 1)

# also good
point = { x: 0, y: 1 }

# bad
test_double = OpenStruct.new(a: 'b')

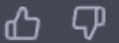
# good (assumes test using rspec-mocks)
test_double = double
allow(test_double).to receive(:a).and_return('b')
```



你知道紅寶石的集合是什麼嗎？



我知道紅寶石是一種珍貴的寶石。紅寶石的集合可能指的是由多個紅寶石組成的一組寶石，也可能指的是由紅寶石和其他寶石組成的一組首飾。但我不能確定，因為我只是一個訓練有素的大型語言模型，而不是一個專家。



RESOURCE / REFERENCE

- [Enumerable - Ruby Docs](#)
- [Solve Ruby | HackerRank](#)
- [How to Use Struct & OpenStruct in Ruby \(Complete Tutorial\)](#)

HAPPY HACKING 🎉