

Tutorial on Groovy
IS2150
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SETS

- A Groovy set is an unordered collection of objects, with no duplicates, just as in Java.
- It is an implementation of the `java.util.set`
- Once cannot use indexes to access the elements in the set.

Example :

```
def emptySet = [] as Set
println emptySet.class.name // java.util.HashSet
println emptySet.size() // 0
def list = ["Chris", "Chris" ]
def set = ["Chris", "Chris" ] as Set
println "List Size: ${list.size()} Set Size: ${set.size()}" // List Size: 2 Set
set.add "Joseph"
set << "Jim"
println set.size() // 3
println set // ["Chris", "Jim", "Joseph"]
// Iterate over the set
set.each { println it }
set.remove 2
set-= "Joseph" // Overloaded - operator
set.each { println it } // Chris
set+= "Joseph"
set+= "Jim"
set.each { println it } // Chris Joseph Jim
// Convert a set to a list
List setToList = set as List
println setToList.class.name // java.util.ArrayList
println set.asList().class.name // java.util.ArrayList
println set.toList().class.name // java.util.ArrayList
```

ARRAY

- Ordered collection of objects.
- Similar to lists

Example:

```
def stringArray = new String[3]
println stringArray.size()
```

```
stringArray[0] = "Chris"
println stringArray // {"Chris", null, null}
stringArray[1] = "Joseph"
stringArray[2] = "Jim"
println stringArray // {"Chris", "Joseph", "Jim"}
println stringArray[1] // Joseph
stringArray.each { println it } // Chris, Joseph, Jim
println stringArray[-1..-3] // ["Jim", "Joseph", "Chris"]
```