

# Hashes and Symbols

## Ruby Symbols

In Ruby, *symbols* are immutable names primarily used as hash keys or for referencing method names.

```
my_bologna = {  
  :first_name => "Oscar",  
  :second_name => "Meyer",  
  :slices => 12  
}
```

```
puts my_bologna[:second_name] # => Meyer
```

#Symbols must be valid Ruby variable names and always start with a colon (:).

## Ruby Hashes, Symbols, & Values

In Ruby hashes, key symbols and their values can be defined in either of two ways, using a `=>` or `:` to separate symbol keys from values.

```
my_progress = {  
  :program => "Codecademy",  
  :language => "Ruby",  
  :enthusiastic? => true  
}
```

#Key symbols and their values can be defined with a `=>`, also known as a hash rocket.

```
my_progress = {  
  program: "Codecademy",  
  language: "Ruby",  
  enthusiastic?: true  
}
```

#Key symbols and their values can also be defined with the colon (`:`) at the end of the symbol followed by its value.

## Ruby .select Method

In Ruby, the `.select` method can be used to grab specific values from a hash that meet a certain criteria.

```
olympic_trials = {  
  Sally: 9.58,  
  John: 9.69,  
  Bob: 14.91  
}
```

```
olympic_trials.select { |name, time| time  
< 10.05 }
```

#The example above returns `{:Sally=>9.58, :John=>9.69}` since Sally and John are the only keys whose values meet the time < 10.05 criteria.

## Ruby .each\_key & .each\_value

In Ruby, the `.each_key` and `.each_value` methods are used to iterate over only the keys or only the values in a hash.

```
eren_jaeger = {  
  age: 15,  
  enemy: "titans",  
  branch: "Survey Corps"  
}
```

```
eren_jaeger.each_key { |key| puts key }
```

#Output:

#age

#enemy

#branch

```
eren_jaeger.each_value { |value| puts  
value }
```

#Output:

#15

#titans

#Survey Corps