## [Tutorial] Install and use RSpec

Question: What is RSpec and what does it do?

**Answer:** RSpec is a testing tool for Ruby, created for behavior-driven development (BDD). It is the most frequently used testing library for Ruby in production applications. [Read more]

**My disclaimer:** the content below is based on the assumption that you have completed (not necessarily followed) everything in Tutorial 1 without error.

## **RSpec Installation:**

1. Every time you start or restart your project on Cloud9, make sure you use the right Ruby version: 2.4.0.

```
$ rvm use 2.4.0
```

And the Ruby version can be tested in the command line by

```
$ ruby --version
```

2. Install RSpec. Easiest way to do this is to just use the Gemfile and bundle install. If you notice the gemfile there is an entry for rspec with version 3.8.0.

Go to the directory hw-ruby-intro/ and run

```
$ bundle install
```

I prefer this way to avoid version mismatch issues.

[OPTIONAL] The other way I have found to safely install RSpec is

```
$ rvmsudo gem install 'rspec:3.8.0' 'rspec-rails:3.8.0' 'rspec-rails-matchers'
```

but you might run into the issue that zietwerk requires ruby>2.4.4 Ignore this error, even without this rspec should run.

## **Check RSpec:**

then run

```
$ gem list
```

to check if rspec (3.8.0) appears on the gem list.

## Use RSpec:

Take Homework 1 as an example:

1. Open /lib/ruby intro.rb, and implement a function:

```
def sum arr
```

# YOUR CODE HERE

```
arr.inject(0, :+)
end
```

2. In the command line window, go to the test file directory

```
ec2-user:~/environment/hw-ruby-intro/spec (master) $
```

3. Execute the test file with RSpec:

This command will test all cases in the file:

```
$ rspec part1_spec.rb
```

If we only want to test the sum function, we can use [1:1] parameter to specify the first sub-block in the first test block.

```
$ rspec part1_spec.rb[1:1]
```

4. Check the output:

```
Run options: include {:ids=>{"./part1_spec.rb"=>["1:1"]}}
...

Finished in 0.00409 seconds (files took 0.08416 seconds to load)
3 examples, 0 failures
```

The implemented function doesn't cause any error. Now RSpec works well, enjoy.

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Feel free to report bugs and I may update this post.