

Snippets R: Setting up a package

R - Start a new project

Setup via usethis

```
install.packages("testthat")

library(usethis)
#usethis::create_package(".")
usethis::create_package("myPackageName")
usethis::use_description(
  fields = list(Package = "myPackageName"),
  check_name = TRUE,
  roxygen = TRUE
)

use_pipe(export = TRUE) #Exports the pipe operator

usethis::use_package("magrittr", min_version = "2.0.3")
usethis::use_package("testthat", min_version = "3.1.6")
usethis::use_package("covr", min_version = "3.6.1", "Suggests")
```

Setup manually

```
path <- file.path(tempdir(), "mypkg")
create_package(path)
proj_activate(path)
```

Further information

```
usethis::use_mit_license("My Name")
usethis::use_readme_md()
usethis::use_news_md()
```

Use tests

Example script fahrenheit_to_celsius.R

```
## Converts temperature in Fahrenheit to Celsius
## @param temp_F Temperature in Fahrenheit
## @return An integer
## @importFrom magrittr %>%
## @export
## @examples
## fahrenheit_to_celsius(32)
fahrenheit_to_celsius <- function(temp_F) {
  temp_C <- (temp_F - 32) * 5 / 9
  return(temp_C)
}
```

```
}
```

Generating test file

```
usethis::use_test("fahrenheit_to_celsius.R") # creates tests/testthat/test-fahrenheit_to_celsius.R
```

Editing the test file with test_that()

```
test_that("conversion works", {  
  expect_equal(fahrenheit_to_celsius(32), 0)  
})
```

```
test_that("a thing exists", {  
  athing <- "a thing"  
  expect_true(exists(athing))  
})
```

Show test coverage

```
library(covr)  
devtools::load_all(".")  
covr <- file_coverage("R/fahrenheit_to_celsius.R", "tests/testthat/test-fahrenheit_to_celsius.R")  
covr  
report(covr)
```

Add documentation

```
document() #Rebuilds docs and NAMESPACE  
usethis::use_vignette("fahrenheit_to_celsius")  
use_readme_md()  
use_news_md()
```

GithubActions

<https://github.com/r-lib/actions/tree/v2/examples>

```
use_git()  
usethis::use_github_action("check-release")  
usethis::use_github_action("test-coverage")
```