

# Basic rmarkdown example

*by a Heidelberg student*

## How to run rmarkdown

The “rmarkdown” package is installed on the CIP pool. In R you can use the commands

### Code block

```
library(rmarkdown)
render("input.Rmd", pdf_document())
render("input.Rmd", html_document())
```

to produce a PDF or HTML document of an input rmarkdown (Rmd) file. See basic example files in Moodle.

## What Markdown can do

This note demonstrates some of what Markdown is capable of doing.

*Note: Feel free to play with this page. Unlike regular notes, this doesn't automatically save itself.*

### Basic formatting

Paragraphs can be written like so. A paragraph is the basic block of Markdown. A paragraph is what text will turn into when there is no reason it should become anything else.

Paragraphs must be separated by a blank line. Basic formatting of *italics* and **bold** is supported. This *can be **nested*** like so.

### Lists

#### Ordered list

1. Item 1
2. A second item
3. Number 3
4. IV

*Note: the fourth item uses the Unicode character for Roman numeral four.*

## Unordered list

- An item
- Another item
- Yet another item
- And there's more...

## Paragraph modifiers

### Code block

Code blocks are very useful for developers and other people who look at code or other things that are written in plain text. As you can see, it uses a fixed-width font.

You can also make inline code to add code into other things.

### Quote

Here is a quote. What this is should be self explanatory. Quotes are automatically indented when they are used.

## Headings

There are six levels of headings. They correspond with the six levels of HTML headings. You've probably noticed them already in the page. Each level down uses one more hash character.

### Headings *can* also contain formatting

#### They can even contain inline code

Of course, demonstrating what headings look like messes up the structure of the page.

I don't recommend using more than three or four levels of headings here, because, when you're smallest heading isn't too small, and you're largest heading isn't too big, and you want each size up to look noticeably larger and more important, there there are only so many sizes that you can use.

## URLs

URLs can be made in a handful of ways:

- A named link to Markdown. The easiest way to do these is to select what you want to make a link and hit **Ctrl+L**.
- Another named link to Markdown
- Sometimes you just want a URL like <http://www.markitdown.net/>.

## Horizontal rule

A horizontal rule is a line that goes across the middle of the page.

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It's sometimes handy for breaking things up.

## LaTeX equations

The equation inside the text like  $\pi = 3.14\dots$ , or as displayed equation shown below.

$$\pi = 3.14\dots$$

## Images

Markdown can also contain images including from the web. However, the control of the image size in rudimentary in markdown. When generating PDF of HTML output you can add raw LaTeX or HTML code so that one can bypass the markdown limitations. Note that the raw LaTeX/HTML code is missing in the HTML/LaTeX document. This works but the disadvantage is that one has to code things twice.



## R code

R code will be evaluated and printed

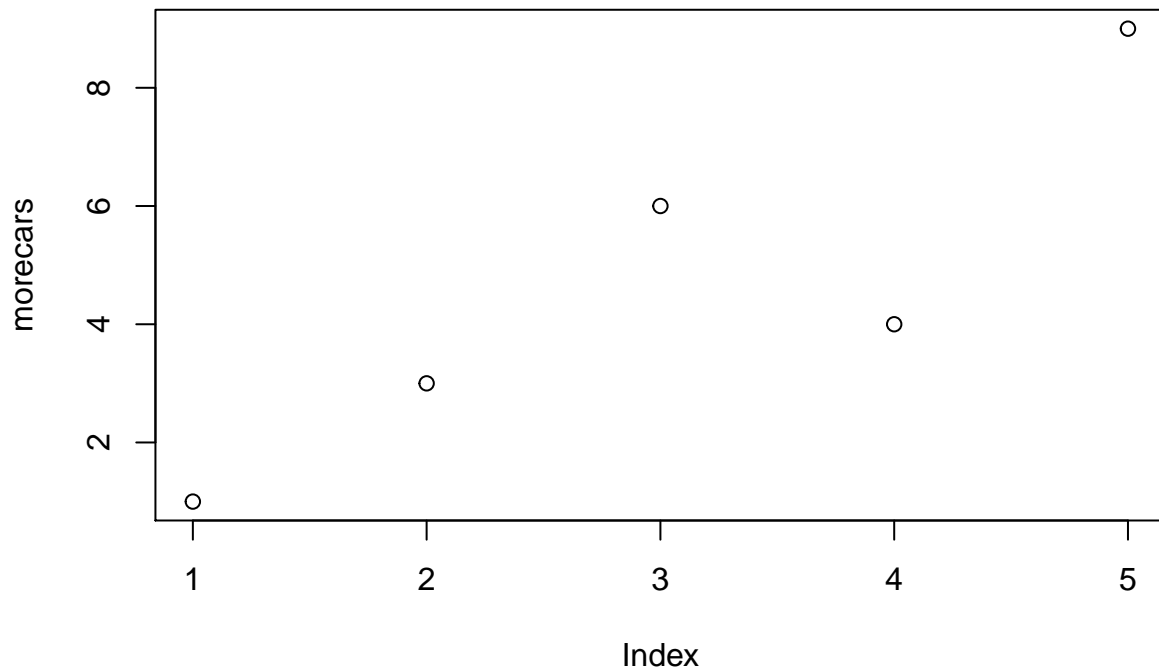
```
summary(cars$dist)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      2.00   26.00   36.00   42.98   56.00   120.00
```

This can be in the text. For instance, here were 50 cars studied

The R plots are also automatically included in the document.

```
morecars <- c(1, 3, 6, 4, 9)
plot(morecars)
```



## Finally

There's actually a lot more to Markdown than this. See the official introduction and syntax for more information. However, be aware that this is not using the official implementation, and this might work subtly differently in some of the little things.