Filling your notebook with code and text

Create your first R Notebook: Steps

1. Create a new R Notebook
2. **Create Content**
   - Add text elements as Markdown syntax
   - Add code elements in any supported program language
   - Use LaTeX in your R Notebook

Elements of an R Notebook

There are three types of content in an R Notebook:

- **YAML header (basic information)**

```
1  ---
2  title: "R Notebook"
3  output: html_notebook
4  ---
```

1. The YAML ("Yet another Markup Language") header is optional and surrounded by ---

- **Inline text**

```
11
12 ## R Markdown
13
14 This is an R Markdown document. Markdown is a simple formatting syntax
   for authoring HTML, PDF, and MS Word documents. For more details on using
   R Markdown see <http://rmarkdown.rstudio.com>.
15
```

2. Inline text helps you structuring your document

- **R code chunks**

```
18 ```{r cars}
19 summary(cars)
20 ```
```

3. Code chunks include your R calculations and are surrounded by ```

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Use Markdown syntax to format the report: Basics (1/2)

Basic Font Styles

```
**bold** and __bold__

*italics* and _italics_

~~scratched text~~

suberscript^2^

[link](www.google.com)

>This is a quote.
>
>[Author]
```

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> This is a quote.
>
> [Author]

Use > to create quotes (1)

Lines

```
--

---

...
```

–

…

Escape

```
\*

\\

\_
```

*

\

_

Use \ to escape special signs (2)

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Use Markdown syntax to format the report: Basics (2/2)

Headers

```
# Header 1

## Header 2

### Header 3

#### Header 4

##### Header 5
```

Header 1

Header 2

Header 3

Header 4

Header 5

Lists

Space required (1)

```
* list item
* list item
    + list sub item
    + list sub item
```

Use **two** tabs (2)

```
1. num list item
2. num list item
3. num list item
```

Images

```
![Caption](Rlogo.png)
```

Caption

Use Markdown syntax to format the report: Basics (2/2)

Headers

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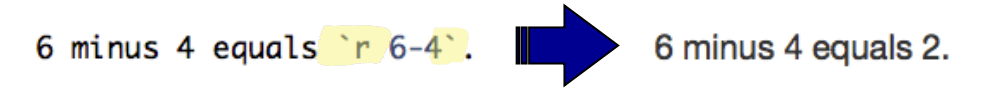
Images

```
![Caption](Rlogo.png)
```

Caption

Embed code into your R Notebook: Inline R Code

Print your R results inline with other text:

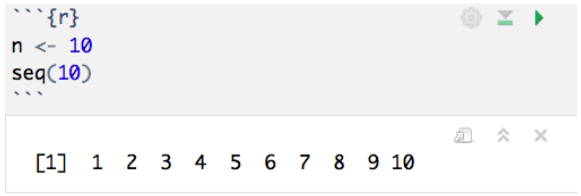


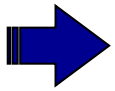
any text `` `r `` + r code here + `` ` `` any text

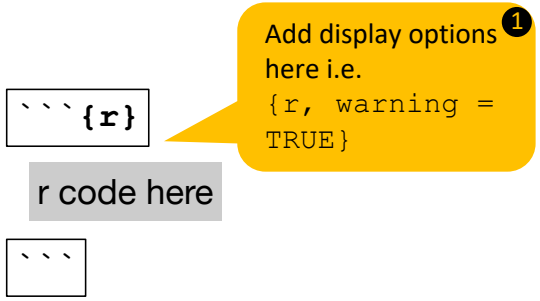
"back-tick + r + code + back-tick"

Embed code into your R Notebook: R code chunks (1/2)

Insert R code as chunks:







Add display options here i.e. `{r, warning = TRUE}` ❶

"3 back-ticks + {r}
code
3 back-ticks"

option	default	effect
eval	TRUE	Whether to evaluate the code and include its results
echo	TRUE	Whether to display code along with its results
warning	TRUE	Whether to display warnings
error	FALSE	Whether to display errors
message	TRUE	Whether to display messages
tidy	FALSE	Whether to reformat code in a tidy way when displaying it
results	"markup"	"markup", "asis", "hold", or "hide"
cache	FALSE	Whether to cache results for future renders
comment	"##"	Comment character to preface results with
fig.width	7	Width in inches for plots created in chunk
fig.height	7	Height in inches for plots created in chunk

Use display options to show how R Code chunks are "treated" ❷

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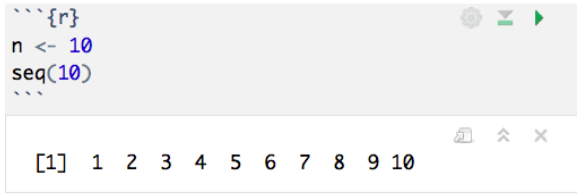

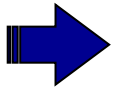

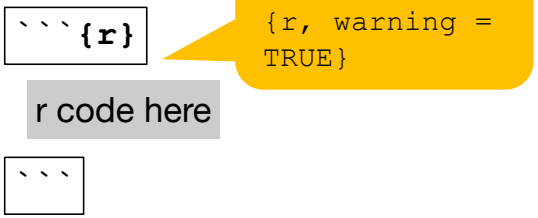

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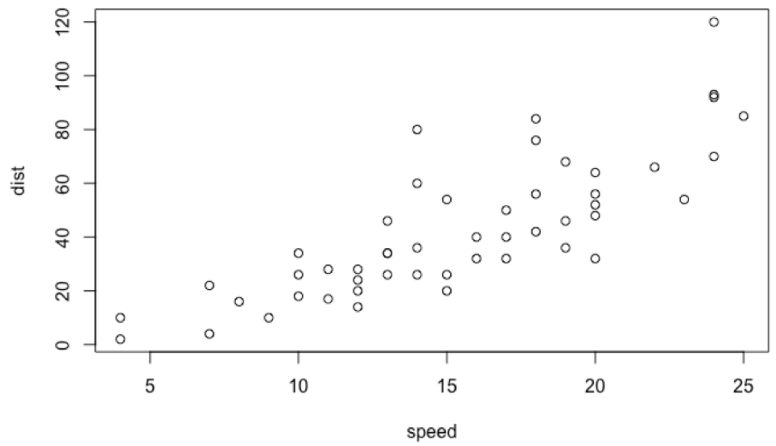
Embed code into your R Notebook: R code chunks (2/2)

Code chunks may also include **plots** and **tables**:

1 Put any plotting function here

```
```{r}
plot(cars)
```
```



2 Variable containing an object like a `data.table` or `data.frame`

```
```{r}
cars
```
```

speed <dbl>	dist <dbl>
4	2
4	10
7	4
7	22
8	16
9	10
10	18
10	26
10	34
11	17

1-10 of 50 rows Previous 1 2 3 4 5 Next

Use LaTeX syntax to format the report

- LaTeX is a typeset system for scientific documentation. LaTeX enables the simple construction of mathematical and statistical formulas.
- With R Notebooks, it is easy to include LaTeX documentation in your report:

```
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Block equation:
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