

# Literate Programming Example

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## 1 Literate Programming

This is a fancy way to make writeups that include text, math, plots, and code. It lets us avoid writing code in one file, evaluating it, and copying the output into LaTeX. The code that we are writing is evaluated in place.

### 1.1 Text with Markdown

We can use standard markdown like **bold** and *italics*

- and
- make
- lists

### 1.2 Code

For example

```
print("hello world")
```

```
hello world
```

Sometimes we'll want to share the code without showing the output Use the standard ; to supress output

```
1+1
```

```
2
```

```
1+1; #; supresses output
```

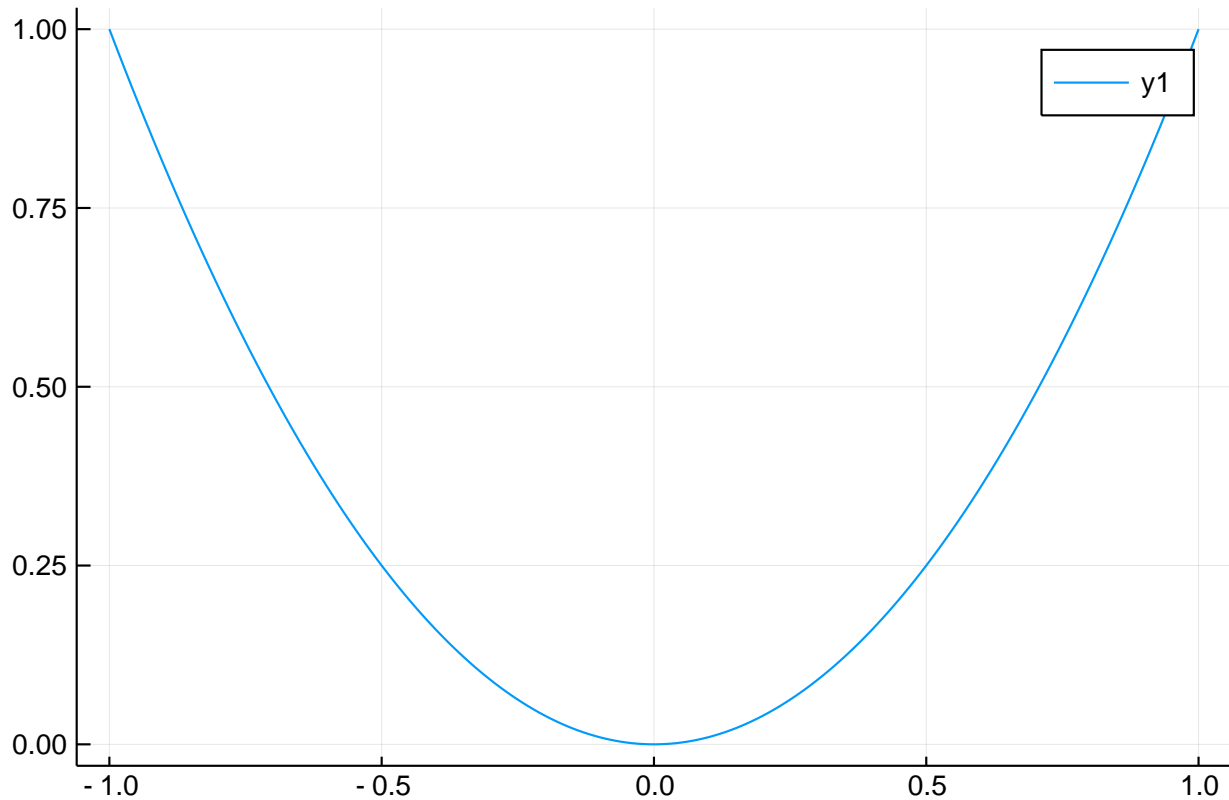


Figure 1: My Figure Caption

### 1.3 Plots

Calling plot commands will output the plot directly in the file!

```
using Plots
plot(-1:0.01:1,x->x^2)
```

We can make the file in Julia by running

### 1.4 LaTeX Math

Get syntax highlighting with Atom `language-latex` package.

You can write inline math  $x^2$  or block math like

$$x^3$$

## 2 Compile the file into a pdf

I recommend evaluating the julia code using **Shift+Enter** as usual. But when you're ready to make your writeup you can run the following code!

```
using Weave
weave("writeup.jmd", doctype = "md2pdf")
```

and opening up writeup.pdf!