



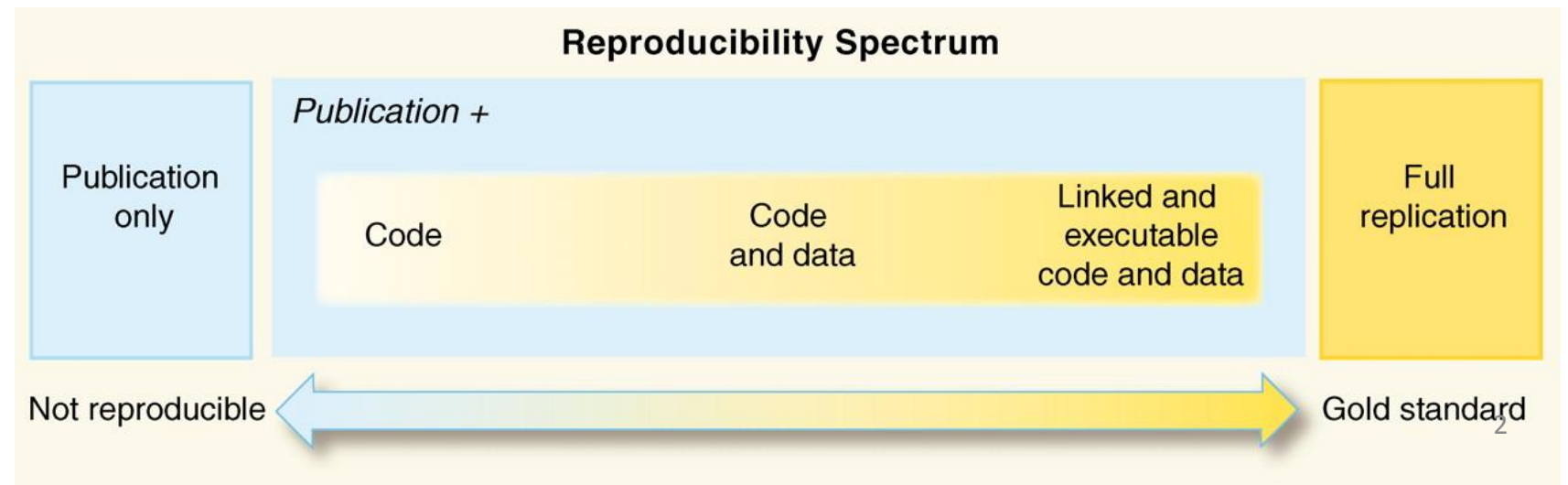
# Module 6: Reproducible Research

# Reproducible Research

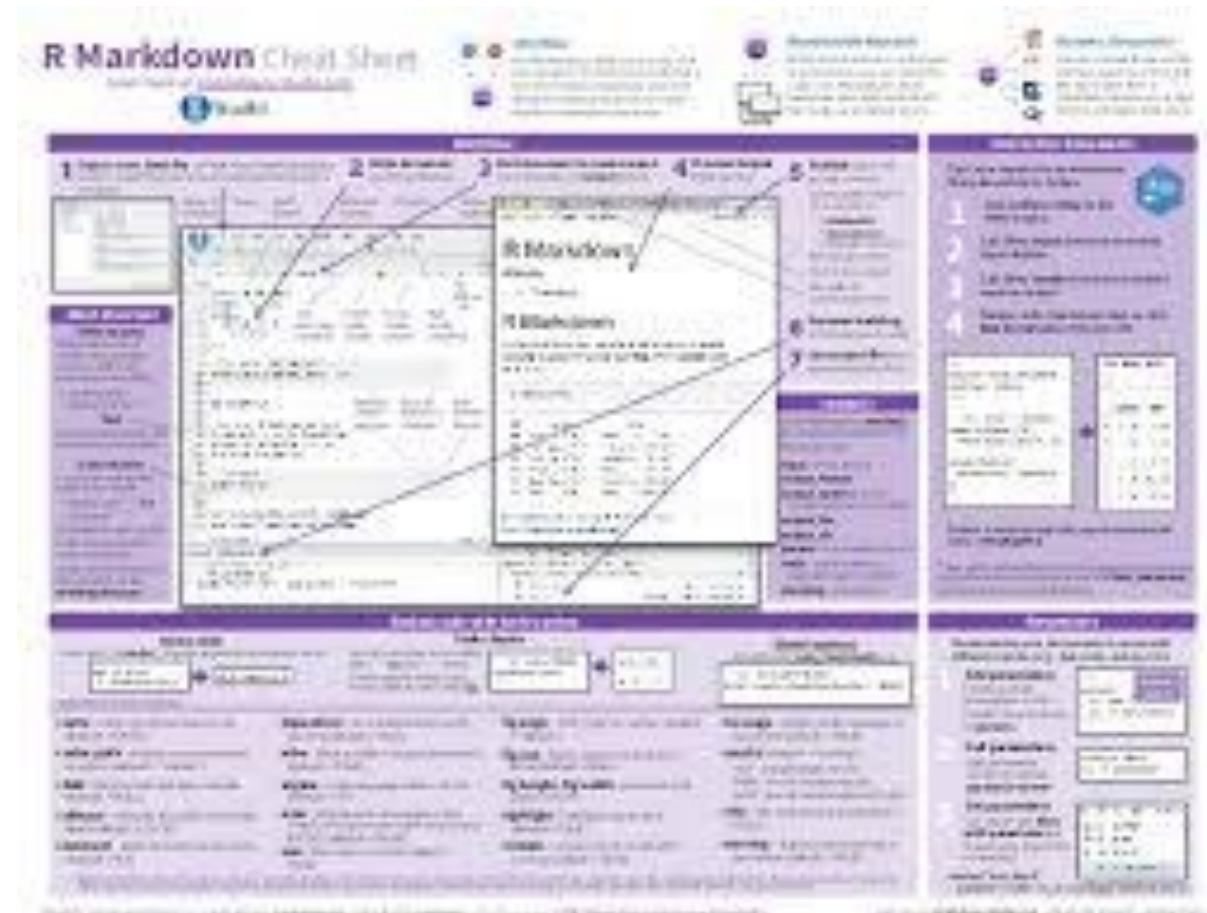
<http://applied-r.com/project-reporting-template/>

Why use R Markdown:

- Turn work in R into more accessible formats
- Incorporate R code and R plots into documents
- Documents are reproducible – the source code gets rerun every time a document is generated, so if data changes or source code changes, the output in the document will change with it.
- Collaboration and communication is greatly enhanced within teams and across teams

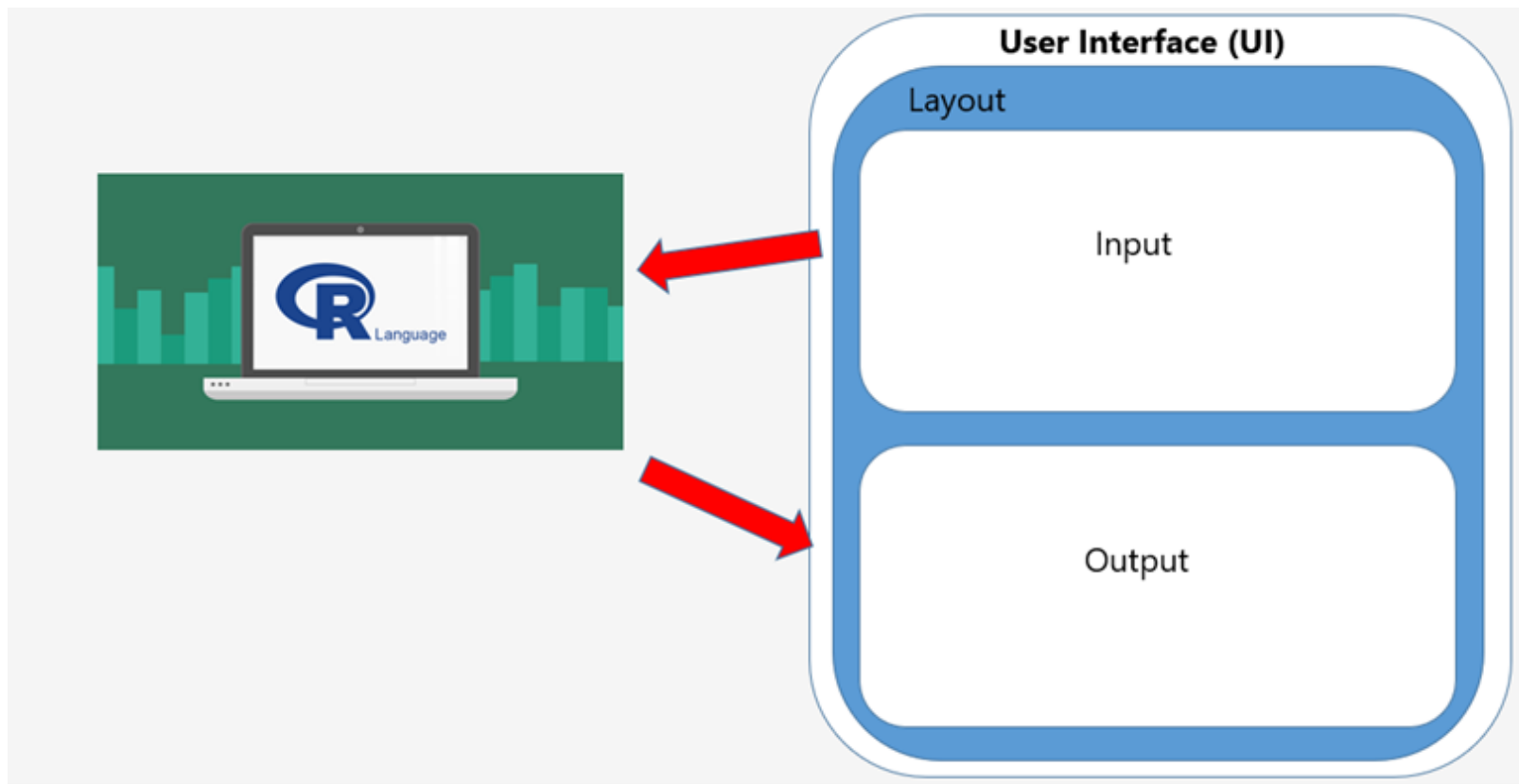


- Before we begin, let's open a notebook! We will look at ways to reproduce our work in a “neat” manner.
- With R Notebook, files can run chunks separately as one wishes, as opposed to knitting them in a linear way. This is like running a script line by line instead of running it completely.



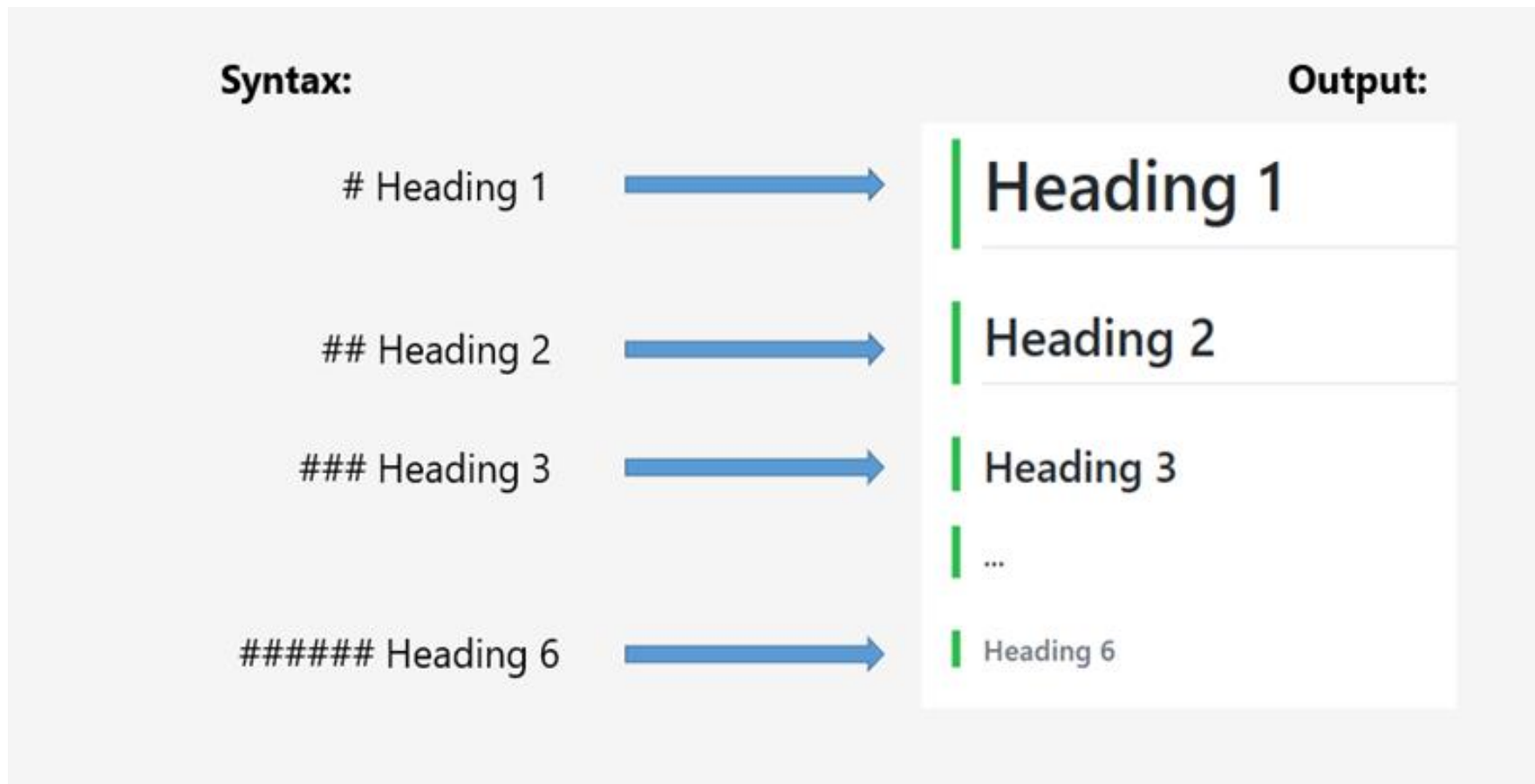
# Shiny

Shiny is an R package that makes it easy to build interactive web applications (apps) straight from R.



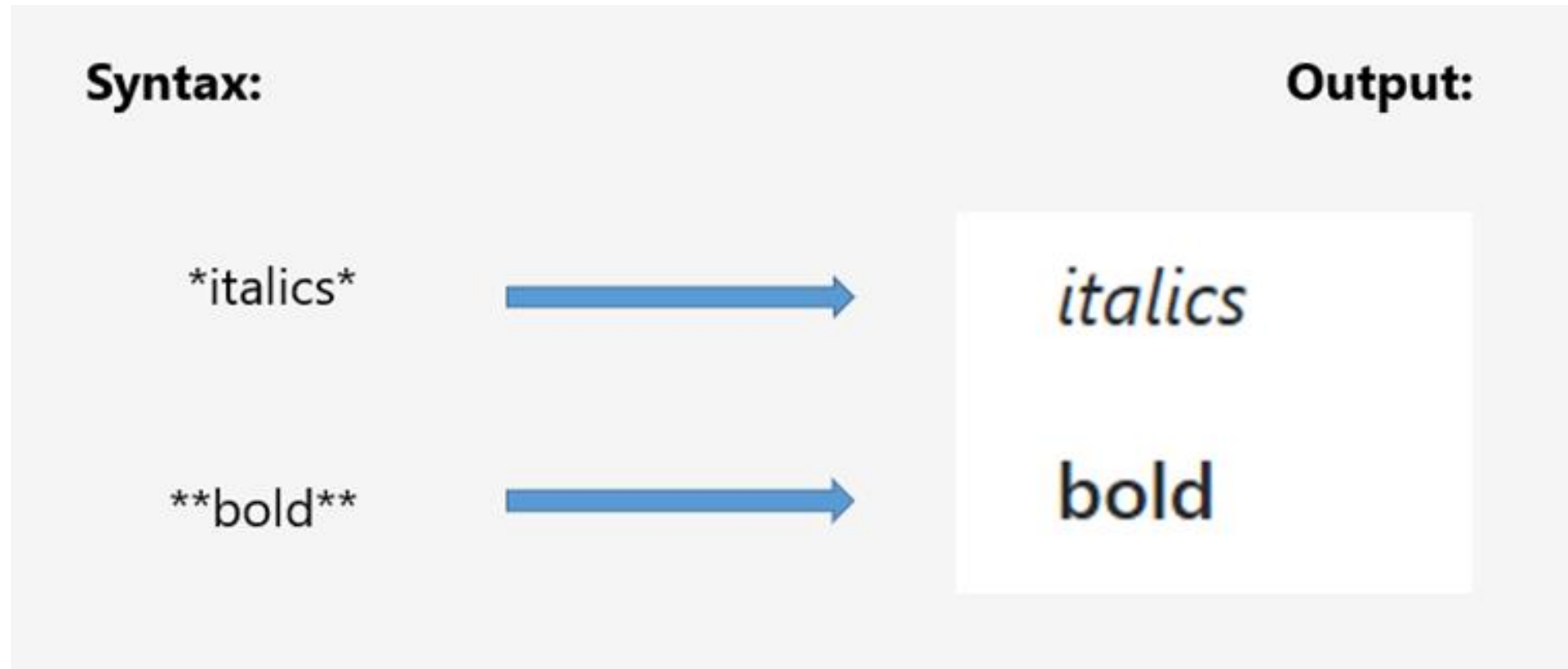
# Headings

Below, you see the syntax to differentiate between headings and plain text. As you add the hash symbols, the sizing of the heading decreases.



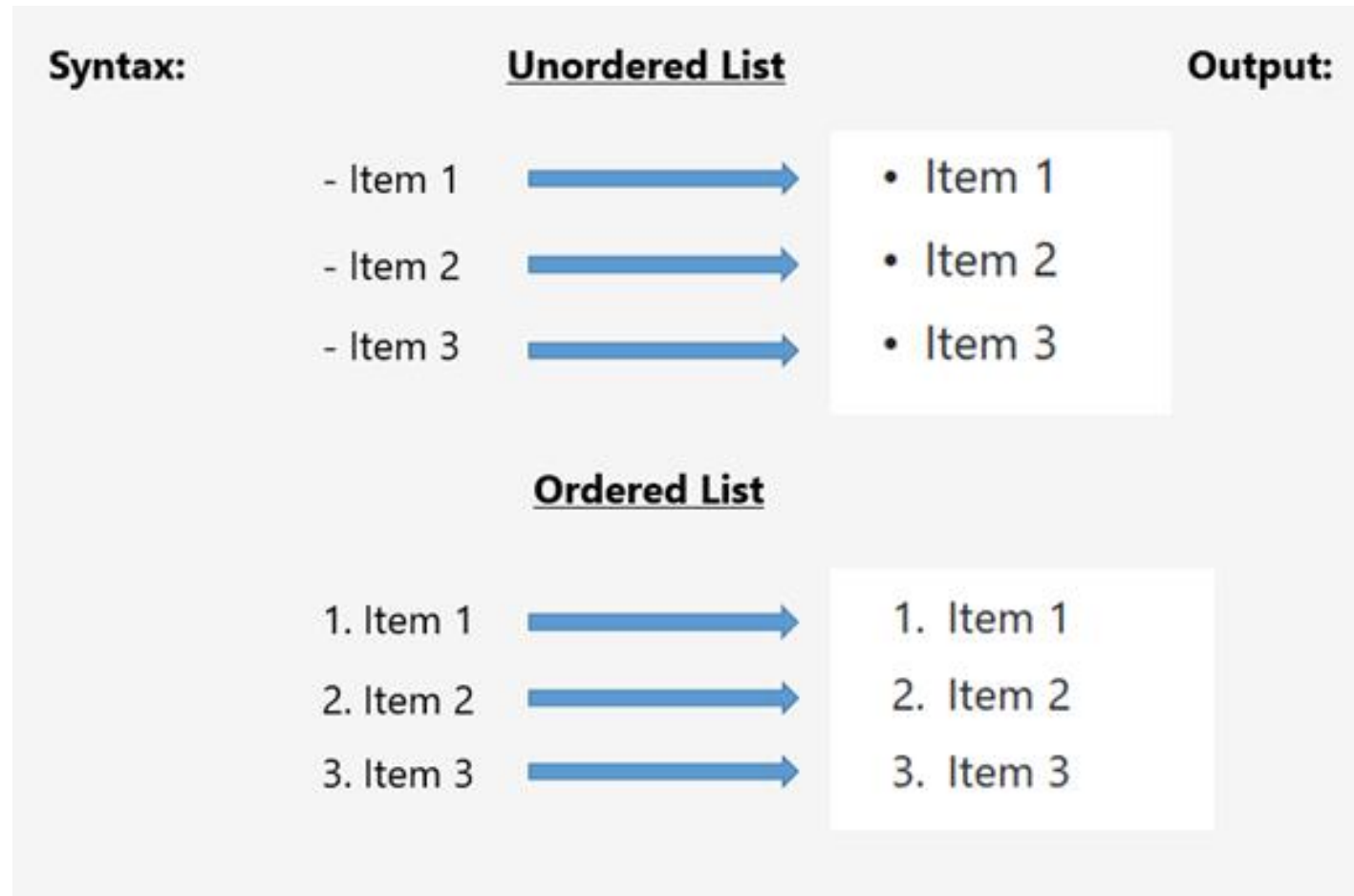
# Emphasis

R Markdown does not allow you to underline, but we are able to utilize italic and bold font.



# Lists

Here are common ways to list items in Markdown. We can create countable and uncountable lists.

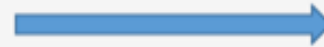


# Links


The syntax to attach Google website to a Markdown document.

**Syntax:**

`['This is the link'](https://www.google.com 'google.com')`



**Output:**

 [This is the link](https://www.google.com)



# The Shiny Package has three components:

1. The User Interface (UI) controls the layout and appearance of the application.
  - Here, we build the interface for our distribution application.
2. Server Function
  - Function contains the instructions that the computer needs to build the application.
3. A call to the *Shiny app* function.
  - Implement the Shiny server to create the output desired from the UI!

