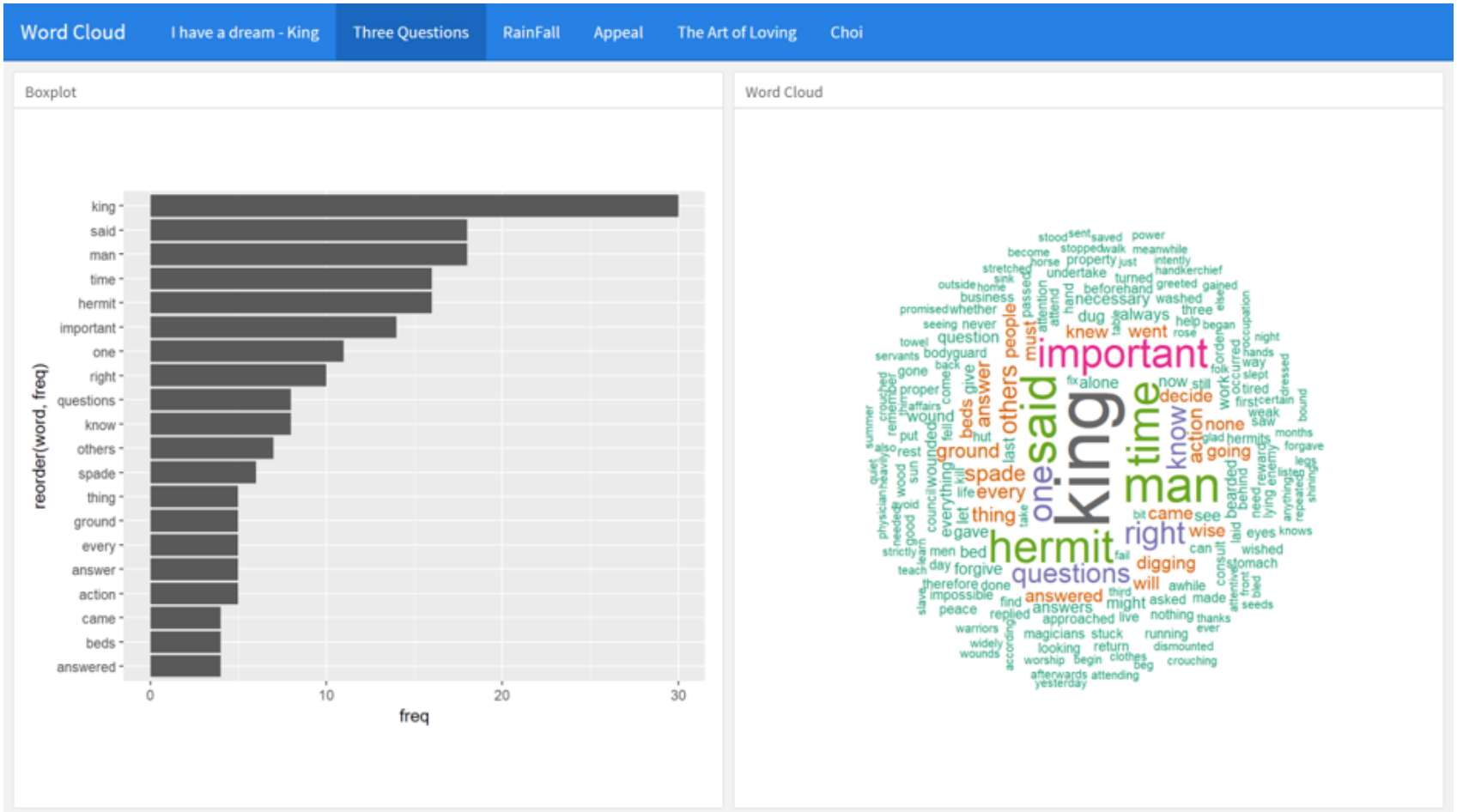
M33 - Shiny

LearningSpoonsR

2018-07-08

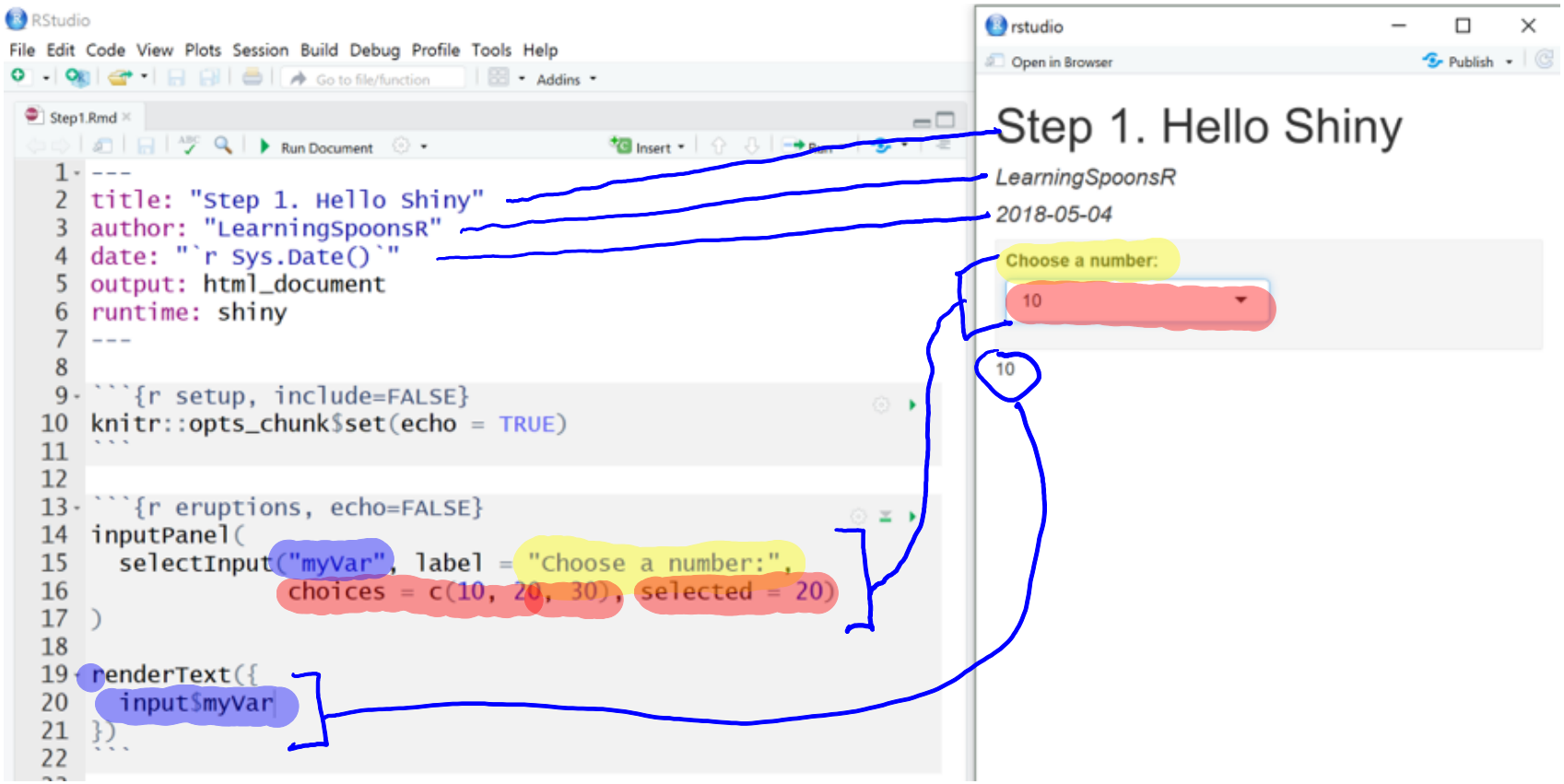
Review - Flexdashboard



- Interactive한 feature를 추가한다면, 대시보드는 어떤 모양이어야 할까요?

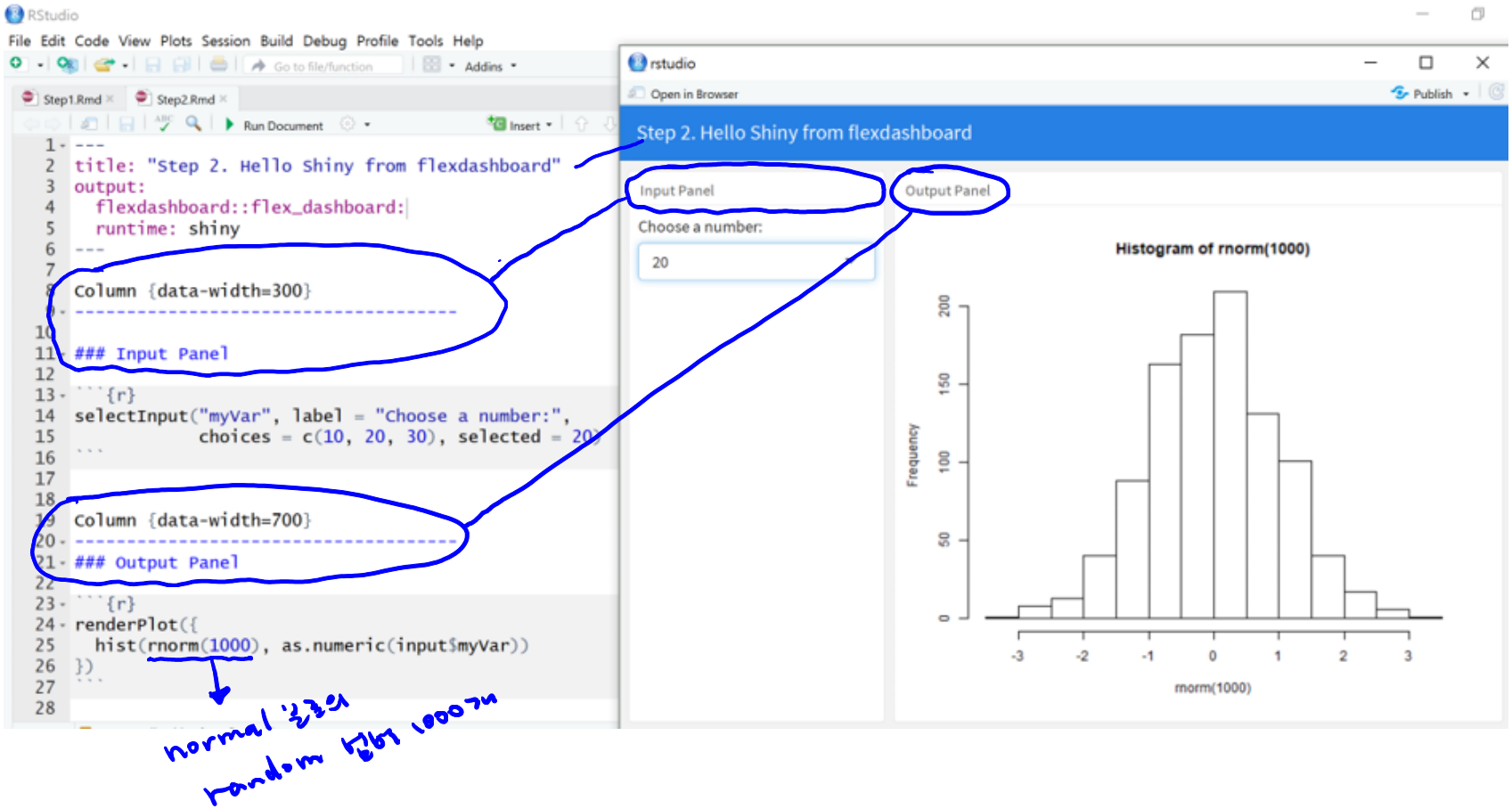
Part I. “Hello, Shiny!”

- 파일 - 새파일 - 새 R Markdown - Shiny



Part II. “Hello shiny” from flexdashboard

- 파일 - 새파일 - 새 R Markdown - From Template - flexdashbard



Shiny 실행시 주의점

1. 에러가 난다면 Tools - Check for Package Updates…로 가서 모든 패키지를 최신 상태로
2. `activate`와 같이 패키지를 인스톨하는 명령이나 시스템을 변경시키는 명령은 실행 전에 하는 것이 좋음
3. 컴퓨터가 인터넷에 연결이 되어있지 않으면 정상적으로 작동하지 않는 경우가 있음

Part III. Wordcloud using fd & shiny

```
---
title: "Word Cloud Program on Shiny"
author: LearningSpoonsR
output:
  flexdashboard::flex_dashboard:
  runtime: shiny
---

```{r setup, include=FALSE}
knitr::opts_chunk$set(echo = FALSE)
knitr::opts_chunk$set(message = FALSE)
#-----------------------------------------#
#--------- 1.Source & Package ------------#
#-----------------------------------------#
```

Inputs {.sidebar}

```{r}
#-----------------------------------------#
#--------- 2.Taking Input ----------------#
#-----------------------------------------#
```
```

```
Column {data-width=500}
-------------------------------------

### Barplot

```{r}
renderPlot({
  #-----------------------------------------#
  #--------- 3.Render Barplot --------------#
  #-----------------------------------------#
})
```

Column {data-width=500}

Word Cloud

```{r, warning = FALSE, fig.width=18, fig.height=18}
renderWordcloud2({
  #-----------------------------------------#
  #--------- 4.Render Wordcloud ------------#
  #-----------------------------------------#
})
```
```

1. Source & Package & 2. Taking Input

````
```{r setup, include=FALSE}
knitr::opts_chunk$set(echo = FALSE)
knitr::opts_chunk$set(message = FALSE)
source("../../LSR.R")
setLang("kr")
library(tm); library(SnowballC); library(KoNLP); library(pdftools); library(cld3)
library(ggplot2); library(dplyr); library(wordcloud2); library(RColorBrewer)
```

Inputs {.sidebar}
-------------------------------------

```{r}
selectInput(inputId = "theFile", label = "Choose a file",
            choice = list.files("../script/"))
```
````

input $ theFile

3.Render Barplot & 4.Render Wordcloud

````
Column {data-width=500}
-------------------------------------

### Barplot

```{r}
renderPlot({
  docs <- getDocs2(paste0("../script/", input$theFile))
  freqTable <- cleanDocsGenerateFreqTable(docs, attr(docs, "lang"))
  g <- ggplot(head(freqTable,20)) +
    geom_bar(aes(x = reorder(word, freq), y = freq), stat="identity") +
    theme(axis.text = element_text(size = 16)) +
    labs(x = "Word", y = "Frequency") +
    coord_flip()
  print(g)
})
```

Column {data-width=500}
-------------------------------------

### Word Cloud

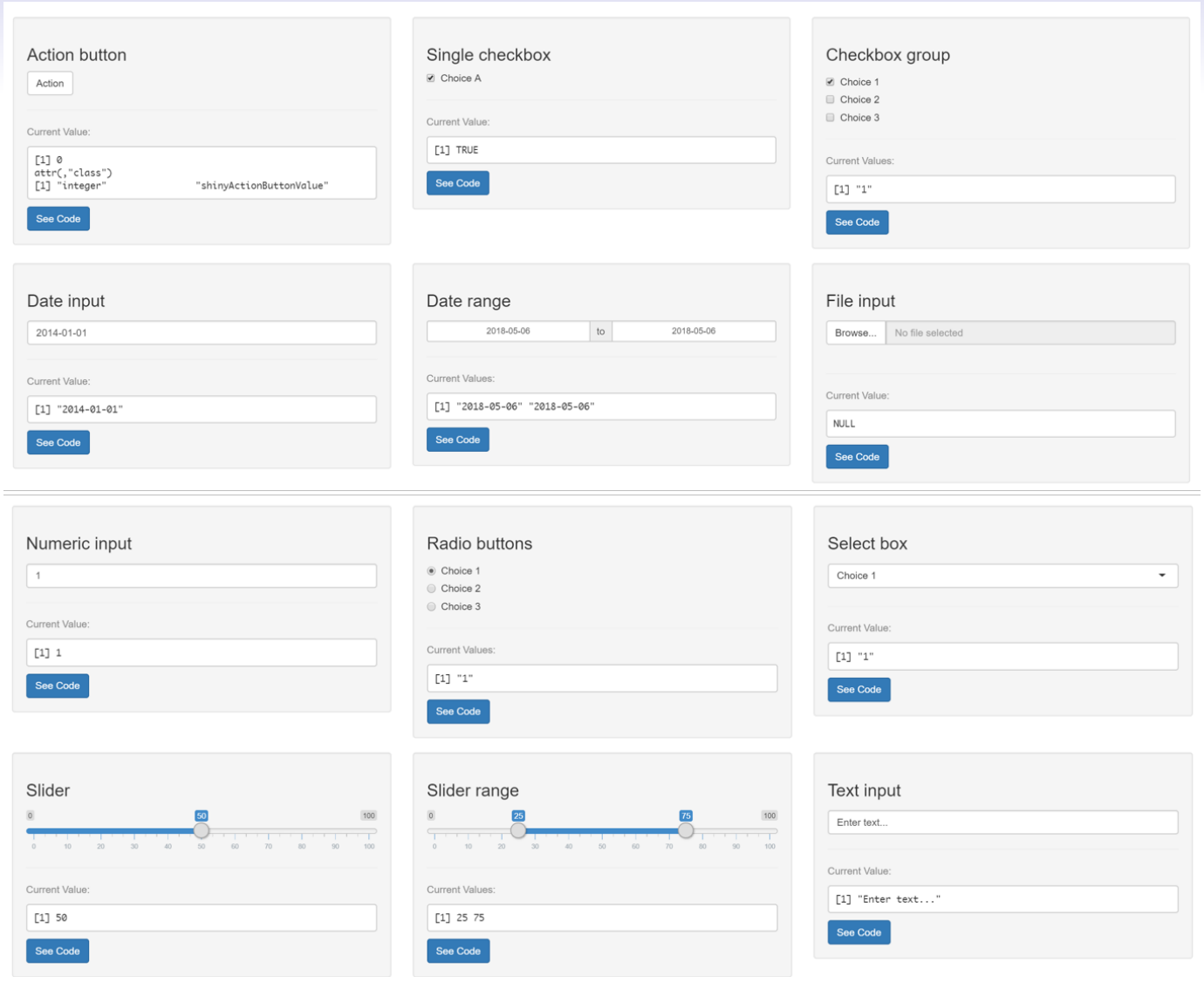
```{r, warning = FALSE, fig.width=18, fig.height=18}
renderWordcloud2({
  docs <- getDocs2(paste0("../script/", input$theFile))
  freqTable <- cleanDocsGenerateFreqTable(docs, attr(docs, "lang"))
  w <- wordcloud2(freqTable, color = "random-light", backgroundColor = "grey")
  print(w)
})
```
````

시연

Part IV. Control Widgets & Rendering

- Control Widgets
- http://shiny.rstudio.com/gallery/widget-gallery.html

Function	Widget	비고
checkboxGroupInput	*A group of check boxes*	복수선택 가능
checkboxInput	*A single check box*	Boolean (TRUE/FALSE)
dateInput	*A calendar to aid date selection*	
dateRangeInput	*A pair of calendars for selecting a date range*	
numericInput	*A field to enter numbers*	
radioButtons	*A set of radio buttons*	복수선택 불가
selectInput	*A box with choices to select from*	드랍다운 메뉴
sliderInput	*A slider bar*	
textInput	*A field to enter text*	
submitButton	*A submit button*	


Action button
Action
Current Value:
[1] 0
attr(,"class")
[1] "integer" "shinyActionButtonValue"
See Code
Single checkbox
Choice A
Current Value:
[1] TRUE
See Code
Checkbox group
Choice 1
Choice 2
Choice 3
Current Values:
[1] "1"
See Code
Date input
2014-01-01
Current Value:
[1] "2014-01-01"
See Code
Date range
2018-05-06
to
2018-05-06
Current Values:
[1] "2018-05-06" "2018-05-06"
See Code
File input
Browse...
No file selected
Current Value:
NULL
See Code
Numeric input
1
Current Value:
[1] 1
See Code
Radio buttons
Choice 1
Choice 2
Choice 3
Current Values:
[1] "1"
See Code
Select box
Choice 1
Current Value:
[1] "1"
See Code
Slider
0
50
100
Current Value:
[1] 50
See Code
Slider range
0
25
75
100
Current Values:
[1] 25 75
See Code
Text input
Enter text...
Current Value:
[1] "Enter text..."
See Code

- `renderOBJECT` 함수를 이용해서 결과물을 보여줌.
- (기본적인것 외에 패키지에서 제공하는 render함수도 있음)
-

- `renderOBJECT` 종류

1. `renderText`
2. `renderTable`
3. `renderPlot`
4. `renderDygraph`
5. `renderWordClouds`
6. …

- https://shiny.rstudio.com/tutorial/

```
"Hello"
```