

# Shiny Apps

## Hands-on Tutorial

Harshvardhan, 4 Feb 2021

# Interactive web apps

# Machine



Input  
Process  
Output

# What your apps must have

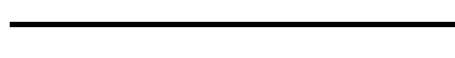
## Minimum working example

```
ui = fluidPage()
```



**Visual aspects of machine**

```
server = function (input, output) {  
}
```



**Machine**

```
shinyApp (ui = ui, server = server)
```



**Running the machine**

# Basic widgets

# Input

## Buttons

ActionSubmit

## Date range

 to 

## Radio buttons

- Choice 1
- Choice 2
- Choice 3

## Single checkbox

Choice A

## Checkbox group

- Choice 1
- Choice 2
- Choice 3

## Date input

## File input

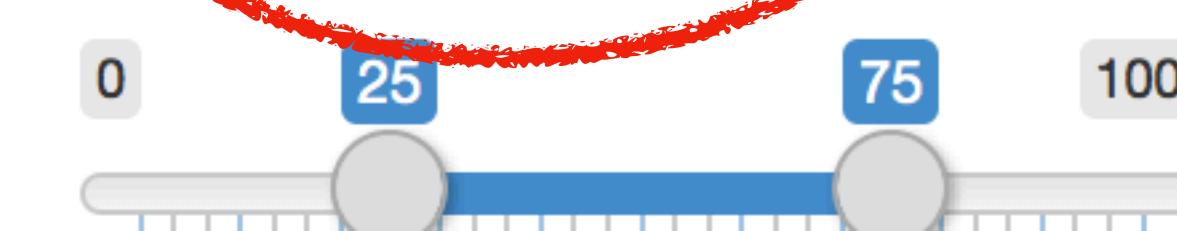
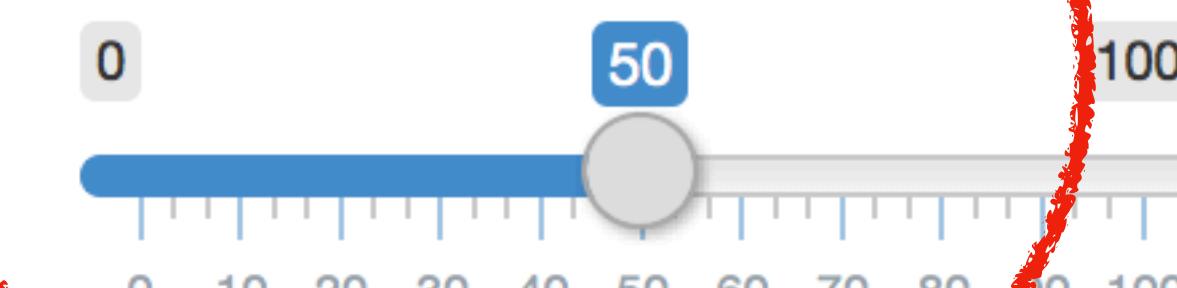
## Select box

▾

## Help text

Note: help text isn't a true widget, but it provides an easy way to add text to accompany other widgets.

## Sliders



## Numeric input

1

## Text input

```
sliderInput (inputId = “num”, label = “Sample  
Size”, value = 10, min = 1, max = 100)
```



Server

Output

# What it shows

## Output reactives

	*Output in ui	render* in server
<b>dataTable</b>	dataTableOutput	renderDataTable
<b>html</b>	htmlOutput	renderUI
<b>image</b>	imageOutput	renderImage
<b>plot</b>	plotOutput	renderPlot
<b>table</b>	tableOutput	renderTable
<b>text</b>	textOutput	renderText
<b>ui</b>	uiOutput	renderUI
<b>verbatimText</b>	verbatimTextOutput	

# Let's get it running

**A simple central limit theorem app**

# Customisations

## Going beyond *vanilla* Shiny app

- HTML and CSS
- library (`shinythemes`) for pretty themes
- library (`shinyWidgets`) for pretty widgets

# Sharing your Shiny app

## Ways to increase your app's reach

- Share your source code: *app.R*
- [shinyapps.io](#)
- Personal server

# Examples

## Shiny in real life

- COVID-19 India: <https://umich-biostatistics.shinyapps.io/covid19/>
- Tweets analysis: <https://ermoore.shinyapps.io/twittr/>
- Quotes: [https://harshvardhan.shinyapps.io/quotes\\_generator/](https://harshvardhan.shinyapps.io/quotes_generator/)
- Our app: <https://harshvardhan.shinyapps.io/shiny/>

# **Thank you!**

**Special thanks to Pritam Ranjan sir for giving me this wonderful opportunity.**