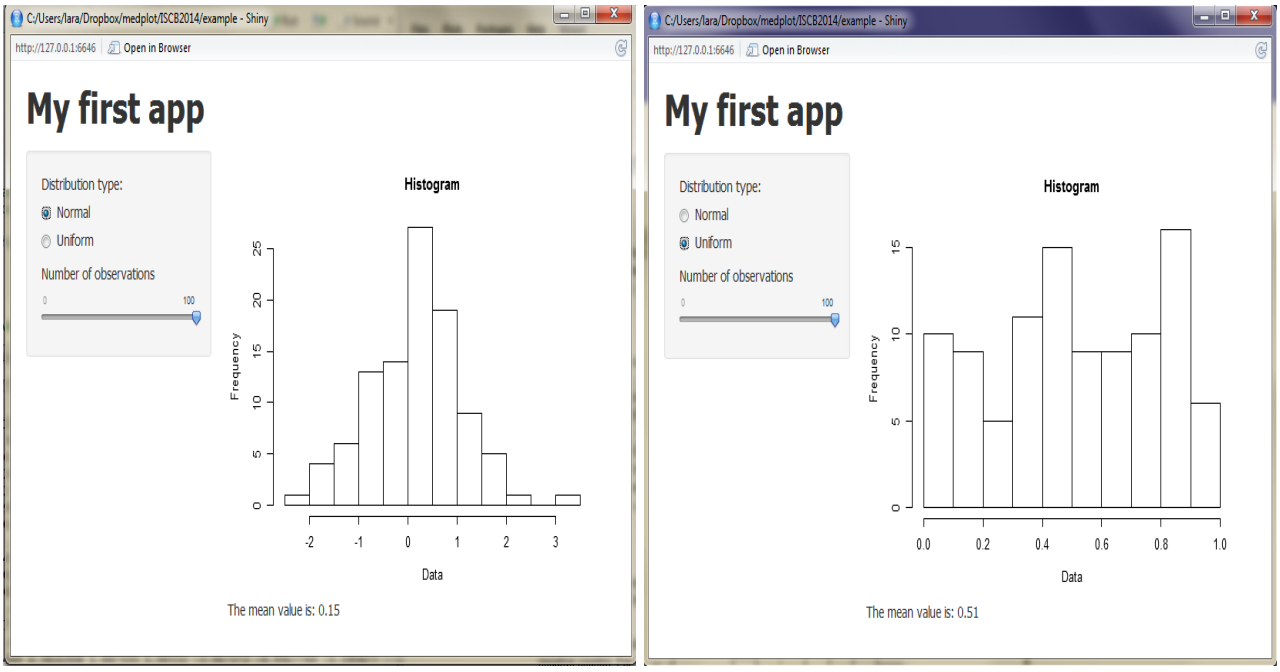
Example 0



1 Run the app in R

```
#start R
#install the shiny package - if you still haven't
#install.packages("shiny")

#load the shiny package
library(shiny)

#save the name of the directory where you stored the unzipped material of the course, for example
my.dir="C:/Users/lara/Dropbox/AS2014_shiny_workshop/downloadedMaterial/AS2014_shiny_workshop-master"
#save the name of the directory where
my.dir.app=file.path(my.dir, "exercises/exercise0")

#1. set the working directory to the directory that stores the ui.R and server.R files of example0
setwd(my.dir.app)
#start the app using the runApp funcion in the current working directory
runApp()

#2. or use the runApp function specifying the directory where the server.r and ui.r files are stored
runApp(my.dir.app)

#3. to visualize the code behind the app use the showcase mode
```

```
runApp(appDir=my.dir.app, display.mode="showcase")

#4. run the app from github
runGitHub(repo="AS2014_shiny_workshop", username="crtahlin", subdir="exercises/exercise0
    ")
```

../runApp.r

2 Code in R (to obtain a similar result)

```
#distribution: string with the type of distribution, "norm" or "unif"
#obs: number of observations

distribution="norm"
obs=100

if(distribution=="norm") my.x=rnorm(obs) else my.x=runif(obs)

#calculate the average and save it
my.av.x=round(mean(my.x),2)

#generate the outputs
#histogram
hist1=hist(my.x, ylab="Frequency", xlab="Data", main="Histogram" )
#string
text1=paste("The mean value is: ", my.av.x)
```

../r.r

3 ui.r

```
shinyUI(
  pageWithSidebar(
    #title of the App
    headerPanel("My first app"),

    #what appears on the side - reads the inputs
  sidebarPanel(

    #distribution type, saved in input$distribution
        radioButtons("distribution", "Distribution type:",
                     list("Normal" = "norm",
                          "Uniform" = "unif")),

        #number of observations, saved in input$obs
    sliderInput("obs", "Number of observations",
      min=0, max=100, value=50)
    ),

  #what appears in the main panel, displays the outputs
    mainPanel(plotOutput("hist1"),
              textOutput("text1")
              )

    )
)
```

../ui.r

4 server.r

```
library(shiny)
shinyServer(function(input, output) {

    #simulate data
   my.x=reactive({
       if(input$distribution=="norm") {x=rnorm(input$obs)}
       if(input$distribution=="unif") x=runif(input$obs)
       x
      })


  #calculate the average and save it in a reactive object
    my.av.x=reactive(round(mean(my.x()),2))

   #save the outputs
   #histogram
   output$hist1=renderPlot(hist(my.x(), ylab="Frequency", xlab="Data", main="Histogram"
       ))
   #string
   output$text1=renderText(paste("The mean value is: ",
                my.av.x()))

})
```

../server.r