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Reg. No.: 20BDS0162 | **Date: 13th February, 2023**
Slot: L31+L32 | **Faculty: Dr. Prakash M.**

Exercise Number - 3

Dashboard in R

Q1. Create a Simple dashboard using Shiny.

Aim: To create a simple dashboard in R using the Shiny library

Code:

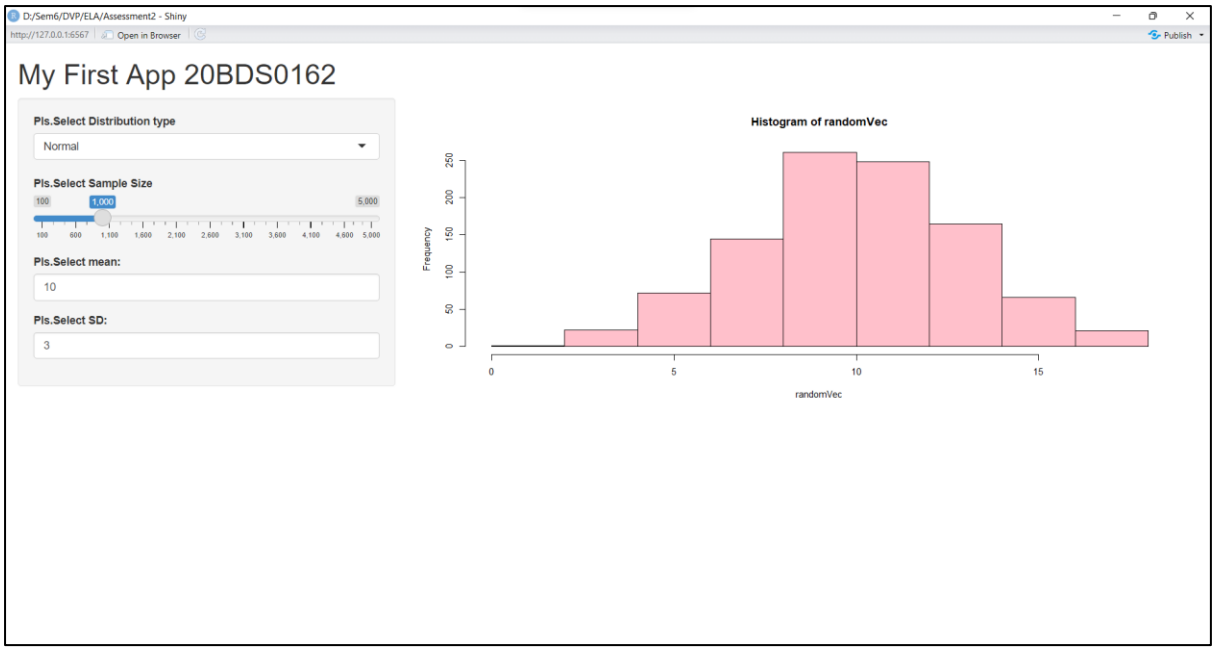
ui.R

```
install.packages("shiny")
install.packages("shinydashboard")
library(shiny)
library(shinydashboard)
shinyServer(
  pageWithSidebar(
    headerPanel("My First App 20BDS0162"),
    sidebarPanel(
      selectInput("Distribution",'Pls.Select Distribution type',
                  choices =c('Normal','Exponential')),
      sliderInput("sampleSize",
                  'Pls.Select Sample Size',
                  min =100,max=5000,
                  value=1000,step=100),
      conditionalPanel(condition="input.Distribution=='Normal'",
                       textInput("mean","Pls.Select mean:",10),
                       textInput("sd","Pls.Select SD:",3)),
      conditionalPanel(condition="input.Distribution=='Exponential'",
                       textInput("lambda","Pls.Select Exp lamda:",1))
    ),
    mainPanel(plotOutput('myPlot'))
  )
)
```

server.R

```
shinyServer(
  function(input,output,session){
    output$myPlot<-renderPlot({
      distType = input$Distribution
      size <-input$sampleSize
      if(distType=="Normal"){
        randomVec <- rnorm(size,mean=as.numeric(input$mean),
                           sd=as.numeric(input$sd))
      }else{
        randomVec <- rexp(size,rate=1/as.numeric(input$lambda))
      }
      hist(randomVec,col ="pink")
    })
  }
)
```

Output:



Result:

Successfully created a straightforward dashboard in R using the Shiny package. The dashboard shows a randomVec histogram, and the user may select the normal or exponential distribution type, as well as the sample size, mean, and standard deviation for each distribution.