RV3 - ui.R (Mark Leonawicz)

```
library(shiny)
shinyUI(pageWithSidebar(
        headerPanel(
                HTML(
                      '<div id="stats_header">
                  Distributions of Random Variables
           <a href="http://snap.uaf.edu" target="_blank">
          <img id="stats_logo" align="right" alt="SNAP Logo"
    src="http://www.snap.uaf.edu/images/snap_acronym_rgb.gif" />
                                  </a>
                                </div>'
                                  ),
                 "Distributions of Random Variables"
        ),
        sidebarPanel(
                radioButtons("dist","Distribution type:",
                        list(
                       # discrete distributions
                          "Bernoulli"="bern",
                           "Binomial"="bin",
                       "Discrete Uniform"="dunif",
                           "Geometric"="geom",
                        "Hypergeometric"="hgeom",
                       "Negative Binomial"="nbin",
                            "Poisson"="poi",

                       # continuous Distributions

                             "Beta"="beta",
                          "Cauchy"="cauchy",
                        "Chi-squared"="chisq",
                          "Exponential"="exp",
                                "F"="F",
                             "Gamma"="gam",
                  "Laplace (Double xponential)"="lap",
                           "Logistic"="logi",
                         "Log-Normal"="lognorm",
                           "Normal"="norm",
                          "Pareto"="pareto",
                               "t"="t",
                           "Uniform"="unif",
                           "Weibull"="weib"
                                )
                ),
```

```
        sliderInput("n","Sample size:",1,1000,500),

# Conditional  - New Output
        uiOutput("dist1"),
        uiOutput("dist2"),
        uiOutput("dist3"),

# Other inputs – as before
        checkboxInput("density","Show density curve",FALSE),
                conditionalPanel(
                        condition="input.density==true",
                        numericInput("bw","bandwidth:",1)
                ),
        downloadButton('dldat', 'Download Sample')

        ),

# Main Panel – as before

        mainPanel(
            tabsetPanel(
               tabPanel("Plot",plotOutput("plot",height="auto")),
                tabPanel("Summary",verbatimTextOutput("summary")),
                tabPanel("Table",tableOutput("table"))
                )
        )
))
```

RV3 – server.R

```
library(shiny)
library(datasets)

rt2 <- function(n=500,dft=15){ rt(n=n,df=dft) }
formals(rgamma)[1:2] <- c(500,1)
rchisq2 <- function(n=500,dfx=1){ rchisq(n=n,df=dfx) }
formals(rf)[1:3] <- c(500,1,15)
rexp2 <- function(n=500,rate2=1){ rexp(n=n,rate=rate2) }
formals(rbeta)[1:3] <- c(500,2,2)


load("plotmathExpressions.RData", envir=.GlobalEnv)
……
#All this stuff is same as before
……


output$dist3 <- renderUI({
      lab <- switch(input$dist,
                    dunif="Step size:",
                       hgeom="K:")
      ini <- switch(input$dist,
                         dunif=1, hgeom=5)

     if(any(input$dist==c("dunif","hgeom")))    {
                 numericInput(dat()[[2]][3],lab,ini)
                }
……

        output$summary <- renderPrint({
                summary(dat()[[1]])
        })

        output$table <- renderTable({
                data.frame(x=dat()[[1]])
        })
})
```