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# Demo of Shiny app for ggplot2 Scatterplots
# code for ui.R:
require(shiny)
# Define UI Scatterplot Graph View
shinyUI(pageWithSidebar(
  # Application title
  headerPanel("Bivariate Scatterplot"),
  sidebarPanel(
    helpText("Choose an alternative plot type and then press Update View"),
    radioButtons("xy", "Scatterplot type:",
                 list("Basic with points" = "base",
                      "Points plus 2D contours" = "contour",
                      "Rasterized 2D Density" = "raster1",
                      "Points plus Rasterized 2D Density" = "raster2",
                      "Points plus tiled 2D Density" = "tile")),
    submitButton("Update View"),
    br(),
    helpText("Note: These graphs are produced with the ggplot2 package in R")
    ),
  mainPanel(
    h3("Old Faithful Geyser Data Set"),
    h4("Eruption Duration (eruptions) vs Eruption Interval (waiting)"),
    plotOutput("scatter")
  )
))
# code for server.R:
library(shiny)
library(datasets)
require(ggplot2)
# Define server logic required create and view the plot
shinyServer(function(input, output) {
  # use Old Faithful Data set
  data(faithful)
  output$scatter <- renderPlot({
    #create base graph entity wthout displaying anything
    pbase <- ggplot(faithful, aes(x=waiting,y=eruptions))
    #display the scatterplot with the data points
    if(input$xy == "base")
      print(pbase + geom_point())
    if(input$xy == "contour")
      print(pbase + geom_point() + stat_density2d(col="skyblue"))
    if(input$xy == "raster1")
      print(pbase
            + stat_density2d(aes(fill=..density..), geom="raster",contour=FALSE))
    if(input$xy == "raster2")
      print(pbase
            + stat_density2d(aes(fill=..density..), geom="raster",contour=FALSE)
            + geom_point(colour="gold",size=1))
    if(input$xy == "tile")
      print(pbase + geom_point() +
              stat_density2d(aes(alpha=..density..), geom="tile",contour=FALSE))
  },height=500,width=500)
 })

```