

Appsilon
Data Science

shiny.collections

Google Docs-like live collaboration in Shiny

useR!2017 Brussels

Marek Rogala // @marekrog

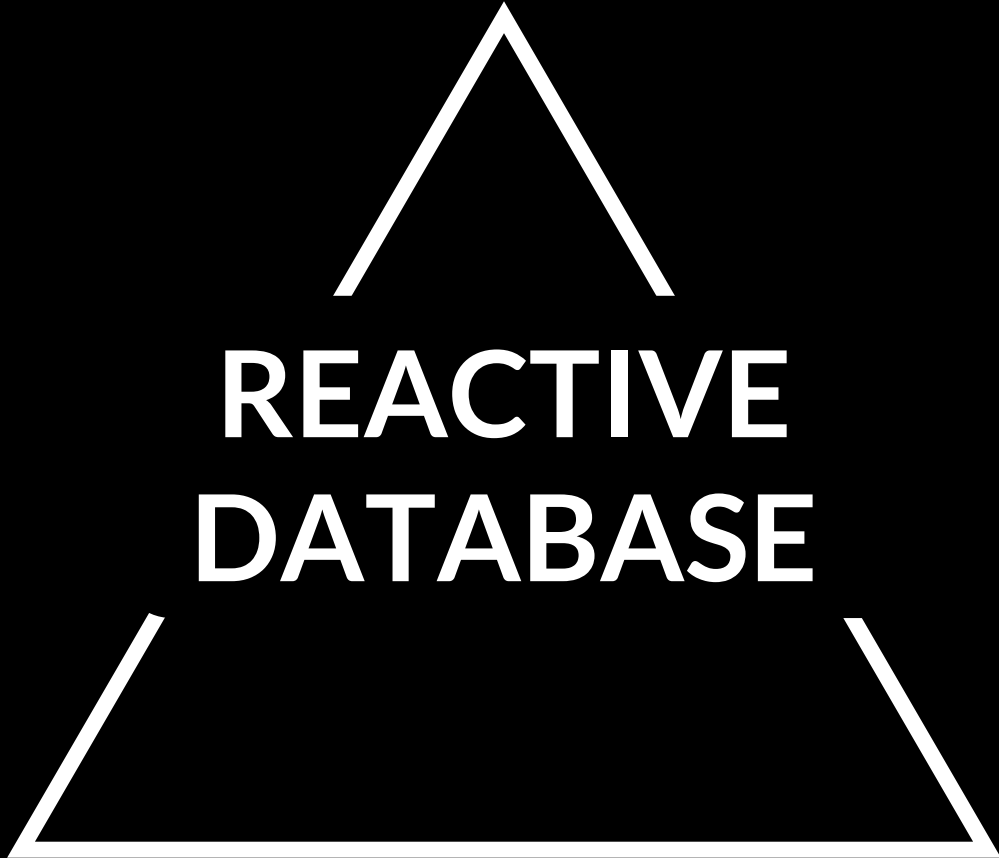
What Shiny apps users expect



- 1 data persistence
- 2 live collaboration
- 3 delivered fast

live collaboration &
data persistence



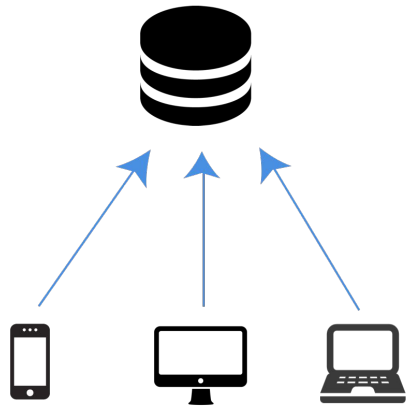


**REACTIVE
DATABASE**

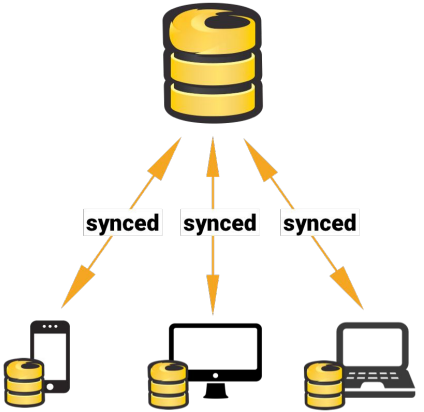
What is a reactive database?



Old way



Reactive way



Examples of reactive databases



library(rethinker)

- RethinkDB API in R
- Callback-based
- Painful to use in Shiny

library(shiny.collections)

- RethinkDB collections in Shiny
- Results as Shiny reactives
- Let's see how this works!


```
library(shiny)
library(dplyr)
library(purrr)
library(purrrlyr)

ui <- shinyUI(fluidPage(
  titlePanel("Chat app (shiny.collections demo)"),
  div(textInput("username_field", "Username", width = "200px")),
  uiOutput("chatbox"),
  div(style = "display:inline-block",
    textInput("message_field", "Your message", width = "500px")),
  div(style = "display:inline-block",
    actionButton("send", "Send"))
))

server <- shinyServer(function(input, output, session) {

  # TODO

})

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

Chat app (shiny.collections demo)

Username

Your message

Send

```
connection <- shiny.collections::connect()
server <- shinyServer(function(input, output, session) {
  chat <- shiny.collections::collection("chat", connection)
})
```

```
observeEvent(input$send, {  
  message <- list(user = input$username_field,  
                  text = input$message_field,  
                  time = Sys.time())  
  shiny.collections::insert(chat, message)  
  updateTextInput(session, "message_field", value = "")  
})
```

```
output$chatbox <- renderUI({
  if (!is_empty(chat$collection)) {
    rows <- chat$collection %>% 
      arrange(time) %>%
      by_row(~ div(class = "item",
                  a(class = "header", .$user),
                  div(class = "description", .$text)
                )) %>% pull(.out)

    div(class = "ui very relaxed list", rows)
  }
})
```

Chat app (shiny.colli x)

← → ↻ ⓘ 127.0.0.1:6233 ☆ ⋮

Chat app (shiny.collections demo)

Username

[marek](#)
Hi! How are you?

[olga](#)
Doing great! And you?

Your message

Chat app (shiny.colli x)

← → ↻ ⓘ 127.0.0.1:6233 ☆ ⋮

Chat app (shiny.collections demo)

Username

[marek](#)
Hi! How are you?

[olga](#)
Doing great! And you?

Your message

shiny.collections



DT::datatable
leaflet
rhandsontable



GITHUB.COM / APPSILON / SHINY.COLLECTIONS

QUESTIONS?

marekrog



appsilondatascience.com



marek@appsilondatascience.com

