



# Design Patterns for Big Shiny Apps



@alexkgold

[github.com/akgold/erum-big-shiny](https://github.com/akgold/erum-big-shiny)

# Time For



```
library(shiny)
library(shinydashboard)
library(httr)
library(ggplot2)
library(dplyr)
library(leaflet)
```

```
# Create UI
ui <- dashboardPage(
  header = navbarPage("Shiny App",
    tabsetPanel(
      tabPanel("Home",
        # Main content area
        # ...
      ),
      tabPanel("Feeds",
        # ...
      )
    )
  ),
  body = fluidPage(
    # ...
  )
)

# Get URL of station feed
station_url <- feeds %>%
  dplyr::filter(name == "station_information") %>%
  dplyr::pull(url)
```



```
plot_data <-
  reactive({
    stations, status_dat()$dat) %>%
    = glue::glue(
```

# Shiny

# Module

```
color = "white",
color = "red",
paste0(plot_val)
```

```
# Run the application
shinyApp(ui = ui, server = server)
```

## Server



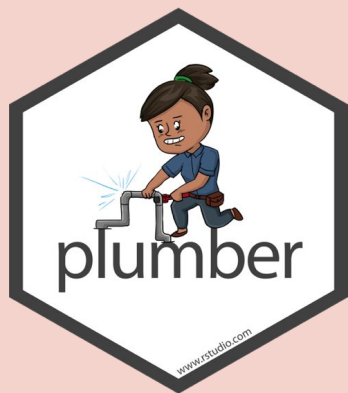
**1. Business Logic** →

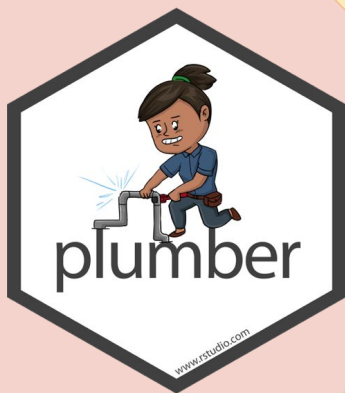


**2. Connections** →









# And Now, Some







More work up front



More readable code



Much easier to test  
components



More maintainable code

Quick Classroom Stats

7	Instances Running
0	Instances Creating

Available Classrooms

Classroom States

Created Activated

Show 10 5 entries

	Classroom	Owner	Requested For	Status	Running Instances	Creating Instances
1	Alex Class	steve.nolen		created	NA	NA
2	4ed700ac-7637-4eef-a875-5b1fa384da7	steve.nolen		activated	NA	NA
3	39493e0c-d729-4c15-bb03-2027f1a5fd0	steve.nolen		activated	NA	NA
4	2e106c5c-8357-4ea0-a0f5-994360bbde1c	steve.nolen		activated	NA	NA
5	testtesttest	alex.gold	2020-03-11	activated	NA	NA
6	980a7b85-0131-475e-9596-27f3a4f92968	steve.nolen		activated	NA	NA
7	asd#####	alex.gold	2019-12-05	created	NA	NA
8	Test no notofaofd	alex.gold	2019-12-05	created	NA	NA
9	73438da3-399c-4af8-a4b4-d6c2b7dbabbb	steve.nolen		activated	NA	NA
10	aab898d0-f5cb-4f85-a9cd-df52f630c771	steve.nolen		activated	NA	NA

Showing 1 to 10 of 11 entries

Refresh

Previous 1 2 Next

Manage Class Attributes

Classroom Request Details

testtesttest  
owner\_email: alex.gold@rstudio.com  
student\_password: testtesttest\_pass  
student\_user: testtesttest\_user  
duration: 1  
class\_id: testtesttest  
workshop\_date: 2020-03-11  
student\_image\_name: general-training-image  
n\_students: 2

Freshest AMI IDs

Image	ID	Updated
General	76d02468-ad06-4522-a249-532d771fa21	2020-03-12
Admin	b0266e8e-09a7-4e10-bd39-66f75dd999	2020-01-27

Classroom Details

Class: 01494e8e-e76e-496f-9423-adceb4721383

Startup:

runcmd: NA  
Sudo runcmd: NA  
In Progress ID: NA  
Passcode: SVRIHL

Image Parameters:

Image ID: 538daa8b-5fbf-4fdf-aba8-  
Profile ARN: arn:aws:iam: instance-profile/training-instance-role  
Root Vol Siz: 30

AWS Parameters:

Instance Type: t3.medium  
Key Name: training-tool  
Region: us-east-2  
CIDR Block: 10.8.8.0/22  
Map Public IP: TRUE

Tool-Created:

IG ID: sg-1234567  
VPC ID: vpc-1234567  
SG ID: sg-1234567

Update Classroom

Update Class Attributes

Which Attribute

cidr\_block

Attribute Value

Apply Update (WARNING: NO CHECKS)

Update Run Command

Current Value (Apply Changes Here)

NA

Runcmd Type

user

Script Language

bash

Presets

admin

Preset Runcmd (Copy/Paste to Above to Use)

git clone https://github.com/rstudio/pro\_admin\_training\_assets.git /usr/share/class/pro\_admin\_training\_as  
cp /usr/share/class/babynames.csv /usr/share/class/pro\_admin\_training\_assets/babynames.csv

Apply Update (WARNING: NO CHECKS)

Manage Classroom Instances

Instance Info

Student Username: testtesttest\_user  
Student Password: testtesttest\_pass

Current instance states:running: 2

Show 10 5 entries

ID	State	URL	In Progress ID	Created	Updated
1	i-1234567	http://blah.example:80	NA	2020-03-27 19:51:29	
2	i-1234567	http://blah.example:80	NA	2020-03-27 19:51:29	2020-03-27 19:51:29

Showing 1 to 2 of 2 entries

Refresh Sync with Student DB

Add Instances

How Many?

0

Create

Previous 1 Next

Thanks!

Especially to Cole Arendt



<https://github.com/akgold/stickr>

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