CM109 Build your first Shiny app

Julia Gustavsen and Jenny Bryan

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Plan

- What is Shiny?
- Examples of Shiny in action
- Basic working parts of Shiny
- Build a simple app

What is Shiny?

Delicious cheese

http://stockarch.comImage

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Amazing, elegant appetizer

Image from: http://simplystated.realsimple.com/2010/11/01/baked-brie-fresh-365/

Heat

What is Shiny?

R scripts

http://stockarch.comImage

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package
“shiny”

html
css
for design
and
interactivity

http://simplystated.realsimple.com/2010/11/01/baked-brie-fresh-365/

elegant,
interactive
app

Shiny in action

This will be familiar to you:

http://shinyapps.stat.ubc.ca/STAT545/peer-review/

Hosted examples:

http://spark.rstudio.com/ahmed/drift/

http://shinyapps.stat.ubc.ca/r-graph-catalog/

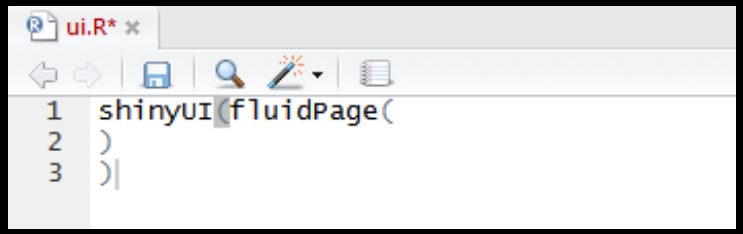
Run locally:

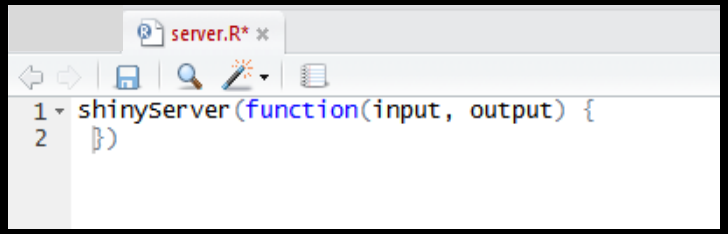
Phyloseq + Shiny (McMurdie and Holmes, 2014)

```
library("phyloseq")
library("shiny")
shiny::runGitHub("shiny-phyloseq","joey711")
```

Anatomy of a Shiny App

Two scripts: ui.R and server.R





Anatomy of a Shiny app

How can we arrange things in Shiny?

```
shinyUI(fluidPage(
titlePanel(),
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    sidebarPanel(),
    mainPanel()
  )
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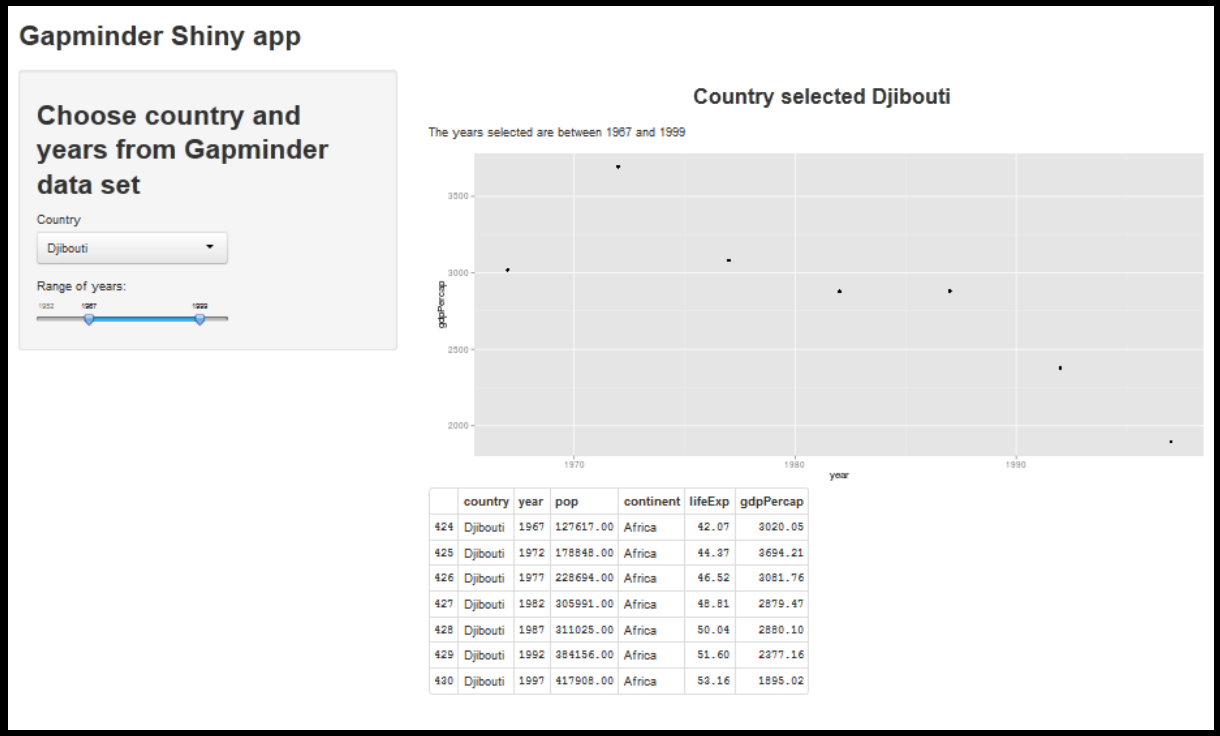

	country	year	pop	continent	lifeExp	gdpPercap
424	Djibouti	1967	127617.00	Africa	42.07	3020.05
425	Djibouti	1972	178848.00	Africa	44.37	3694.21
426	Djibouti	1977	228694.00	Africa	46.52	3081.76
427	Djibouti	1982	305991.00	Africa	48.81	2879.47
428	Djibouti	1987	311025.00	Africa	50.04	2880.10
429	Djibouti	1992	384156.00	Africa	51.60	2377.16
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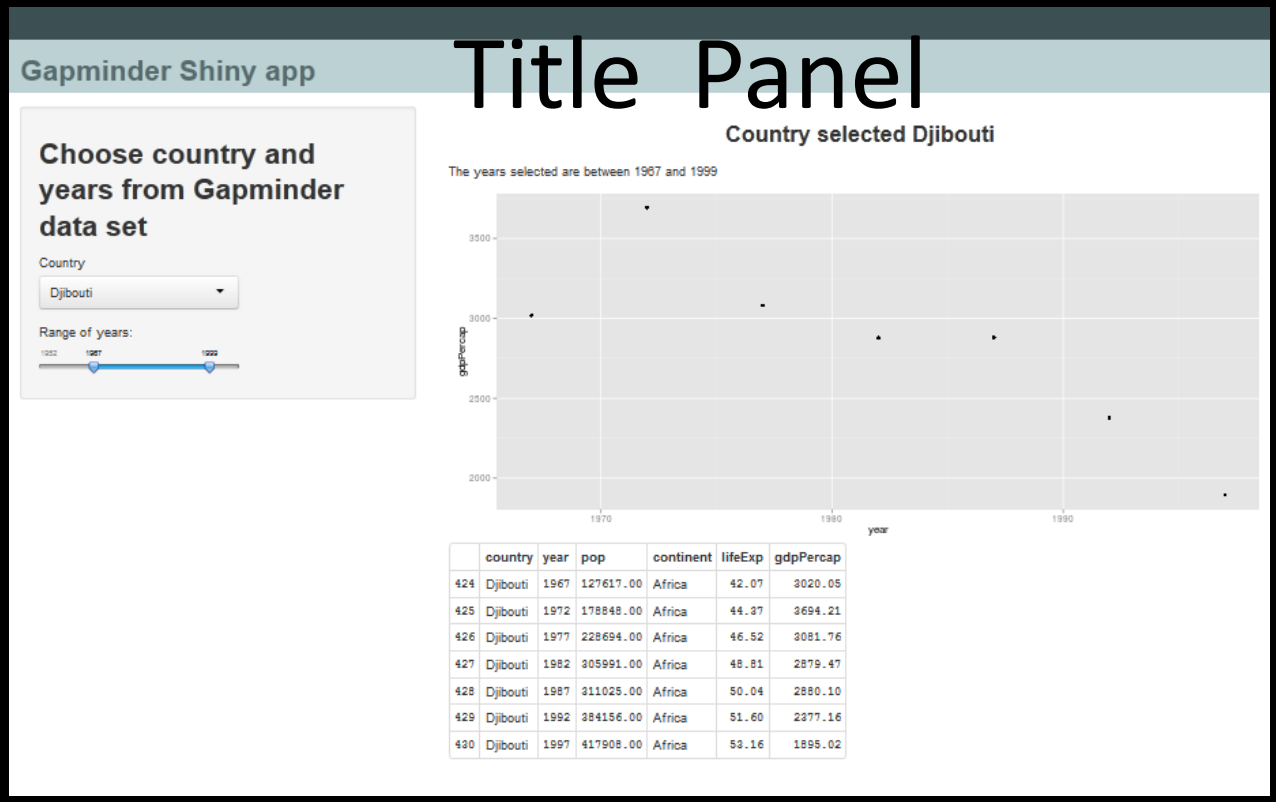

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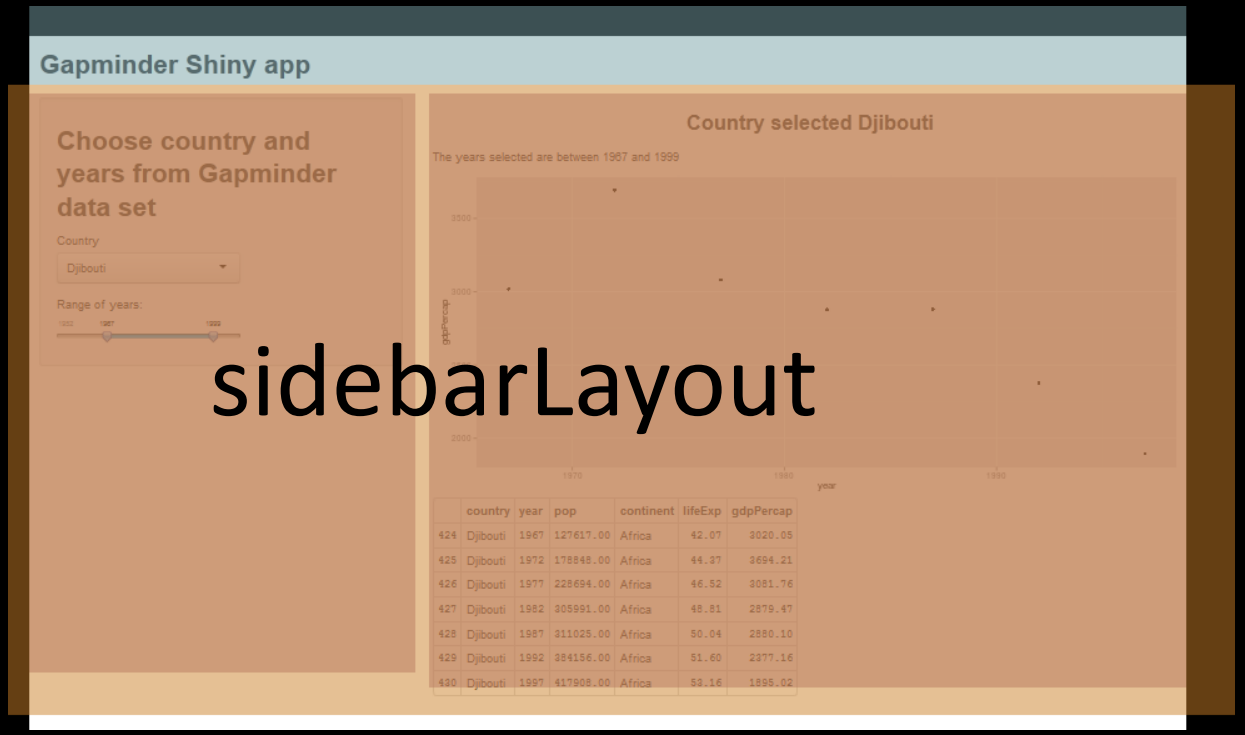

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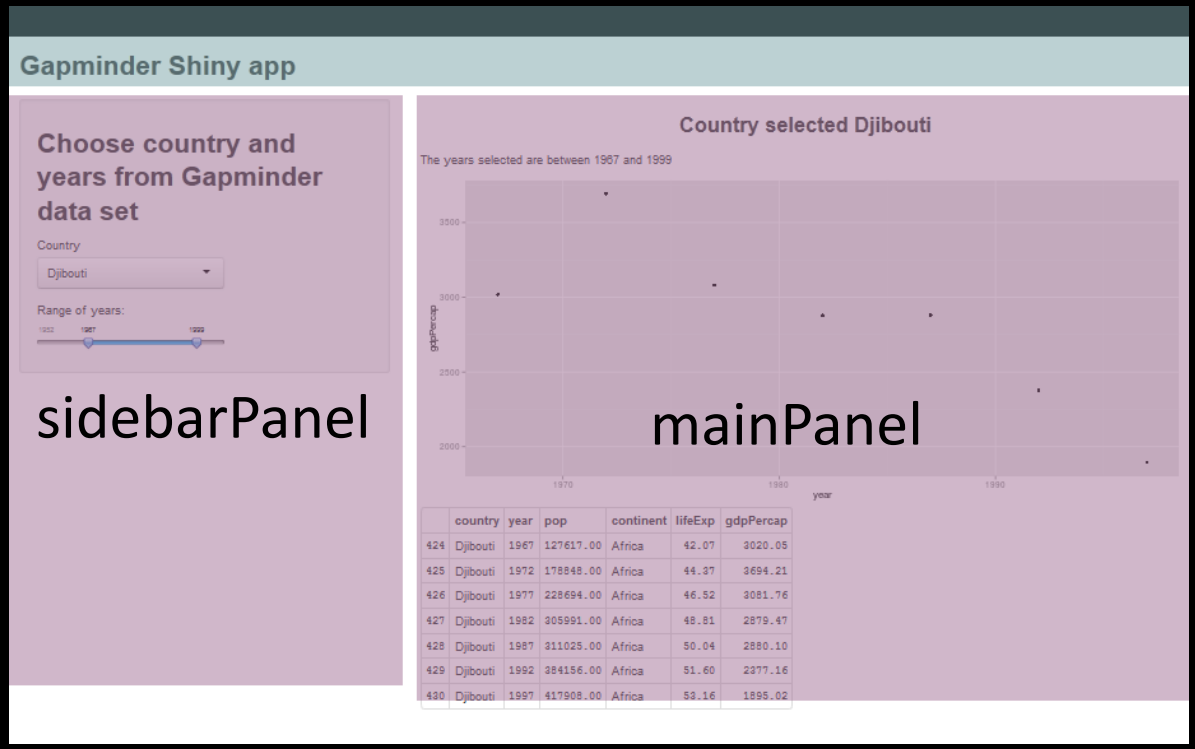
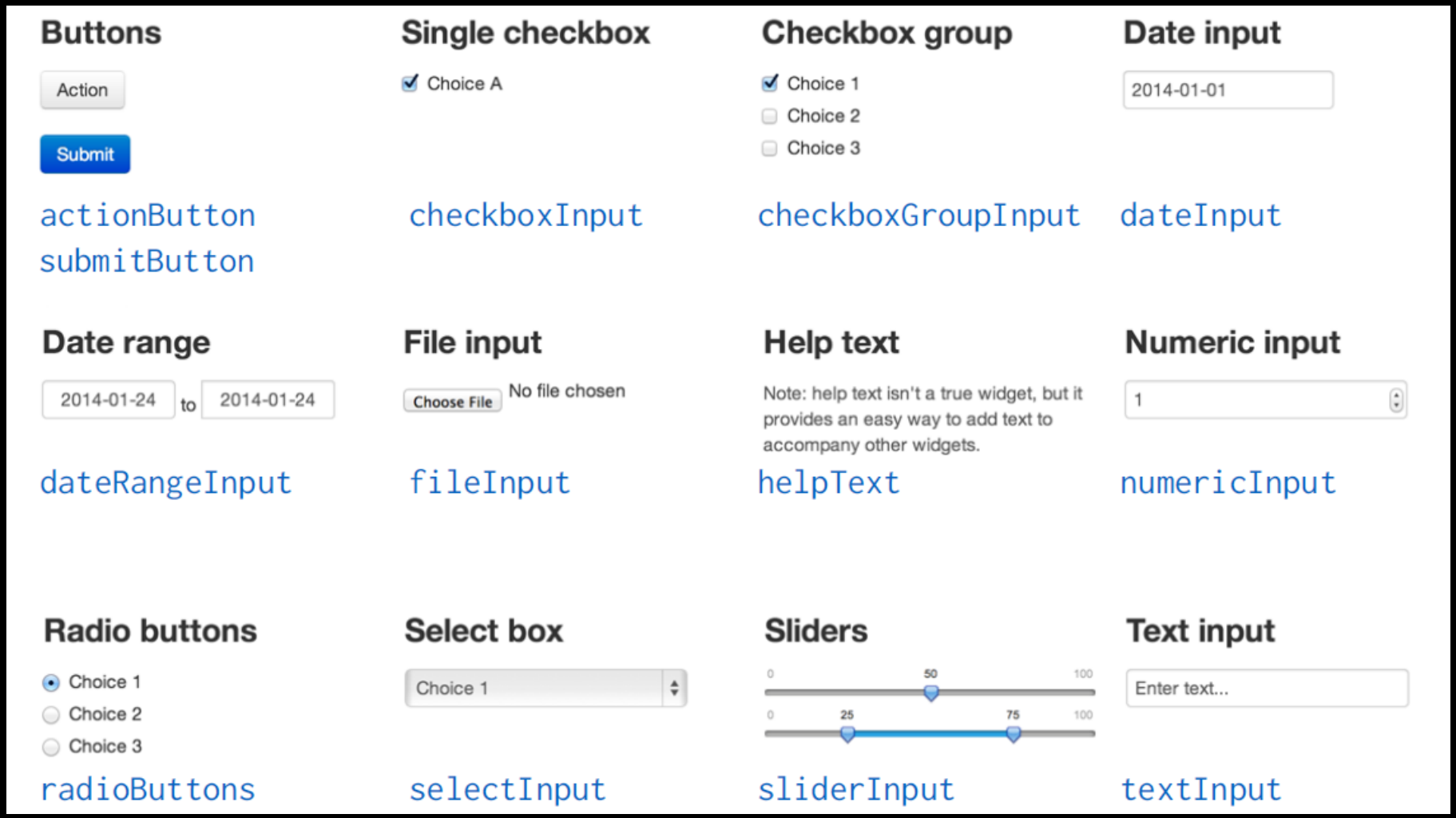
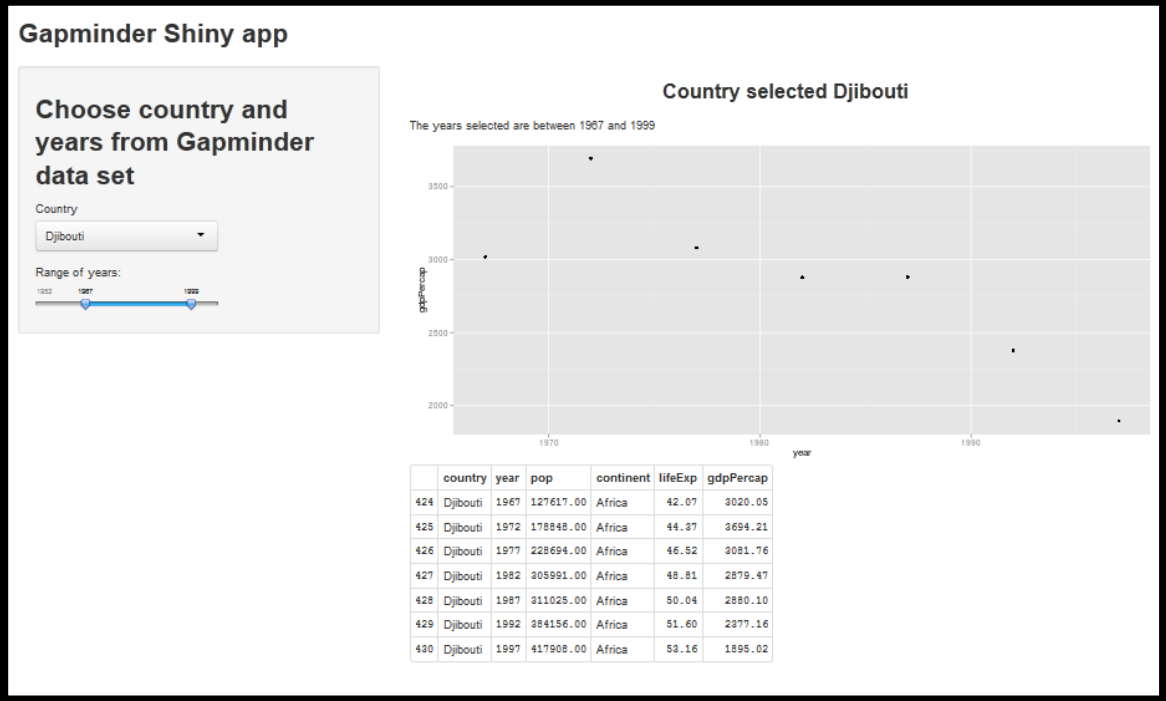


How can we interact with an app?



How do you run these apps?

- On your own computer:
  - runApp() # needs the path to the directory
  - runUrl() # needs the url
  - runGitHub() # needs the repository (and subdirectory if applicable)
- Hosted on web:
  - ShinyApps.io (easy deployment from within Rstudio: we will do this)
  - Shiny Pro server (host your app using your own server –like our peer review submission app)

What are we building together?