

STA 3100 Programming With Data in R: Shiny Widgets

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What are Shiny Widgets?

Shiny Widgets are interactive components that can be used to build user interfaces with Shiny. They allow users to interact with the app by providing inputs, such as selecting options from a dropdown menu, entering text, or clicking on a button. Shiny Widgets are built using the Shiny package and can be used to create powerful and dynamic apps.

Types of Shiny Widgets

Shiny Widgets come in many different types, including:

- **Input Widgets**: These widgets allow users to provide input to the app, such as selecting an option from a dropdown menu, entering text, or clicking on a button. Examples include ``selectInput()``, ``textInput()``, and ``actionButton()``.
- **Output Widgets**: These widgets allow users to view the output of the app, such as a plot or table. Examples include ``plotOutput()`` and ``tableOutput()``.
- **Layout Widgets**: These widgets allow users to control the layout of the app, such as arranging the widgets in a grid or column. Examples include ``fluidRow()`` and ``column()``.

Coding Example

The following code creates a Shiny app with a dropdown menu, a text input, and a button. When the button is clicked, the app prints out the selected option from the dropdown menu and the text entered in the text input.

Start of Code

```
```
```

```
library(shiny)
```

```
Define UI
```

```
ui <- fluidPage(
```

```
 selectInput("dropdown", "Select an option:",
```

```
 choices = c("Option 1", "Option 2", "Option 3")),
```

```
 textInput("text", "Enter some text:"),
```

```
 actionButton("button", "Click me!")
```

```
)
```

```
Define server logic
```

```
server <- function(input, output) {
```

```
 observeEvent(input$button, {
```

```
 print(paste("You selected", input$dropdown,
```

```
 "and entered", input$text))
```

```
 })
 }
 # Run the app
 shinyApp(ui = ui, server = server)
 ``
```

End of Code

## ## Practice Multiple Choice Questions

Q1. Which of the following is an example of an input widget?

- A. `plotOutput()`
- B. `selectInput()`
- C. `fluidRow()`
- D. `tableOutput()`

Answer: B. `selectInput()`