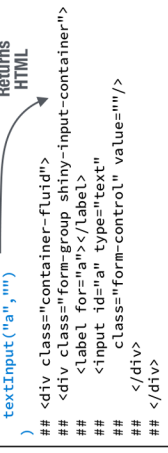


Reactivity

Reactive values work together with reactive functions. Call a reactive value from within the arguments of one of these functions to avoid the error `Operation not allowed without an active reactive context`.



render*() functions
(see front page)

render*() functions
(see front page)

display. Will rerun code in body to rebuild the object whenever a reactive value in the code changes.

Save the results to **output\$<outputid>**

TRIGGER ARBITRARY CODE

```
observeEvent(eventExpr,
  handlerExpr, event.env,
  event.quoted, handler.env,
  handler.quoted, label,
  suspended, priority, domain,
  autoDestroy, ignoreNULL)
```

1. To include a CSS file, use **includeCSS()**, or
2. Place the file in the **www** subdirectory
3. Link to it with

DELAY REACTIONS

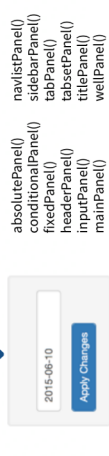
eventReactive(eventExpr, valueExpr, event.env, event.quoted, value.env, value.quoted, label, domain, ignoreNULL)

Creates reactive expression with code in 2nd argument that only invalidates when reactive values in 1st argument change.

Layouts Combine multiple elements into a "single element" that

Combine multiple elements into a "single element" that has its own properties with a panel function, e.g.

```
wellPanel(dateInput("a", ""),
  submitButton()
```



Organize panels and elements into a layout with a layout function. Add elements as arguments of the layout function.

```
fluidRow()
```

```
ui <- fluidPage(  
  flowLayout( # object 1,  
               # object 2,  
               # object 3  
            )  
)
```

```
ui <- fluidPage(
  splitLayout(# object 1,
               # object 2
               )
)
```

```
verticalLayout()
  object 1
  object 2
  object 3
)
)

ui <- fluidPage(
  verticalLayout(
    # object 1,
    # object 2,
    # object 3
  )
)
```

Layer tabPanels on top of each other, and navigate between them, with:



IMAGES

To include an image

1. Place the file in the **www** subdirectory
2. Link to it with `img(src="<file name>")`

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