shinyMobile: : CHEAT SHEET

Basics

shinyMobile is a template to design mobile ready and desktop Shiny Apps. shinyMobile is leveraging the progressive web app capability, thereby providing a standalone/fullscreen support.

```
install.package("shinyMobile")
Remotes::install_github("RinteRface/shinyMobile")
)
```

You can setup custom desktop icons and splashscreen to produce a native app feeling

3 TEMPLATES

shinyMobile has 3 predefined templates:

- **f7SingleLayout**(..., navbar, toolbar = NULL, panels = NULL, appbar = NULL, statusbar = f7Statusbar()): one page layout
- **f7TabLayout**(..., navbar, panels = NULL, appbar = NULL, statusbar = f7Statusbar()): tab layout
- **f7SplitLayout**(..., navbar, sidebar, toolbar = NULL, panels = NULL, appbar = NULL, statusbar = f7Statusbar()): ipad specific layout with sidebar panel and main panel

f7Page is the main wrapper function

```
library(shiny)
Library(shinyMobile)
ui <- f7Page()
server <- function(input, output){}
shinyApp(ui = ui, server = server)
```

BOOKMARK YOUR APP:

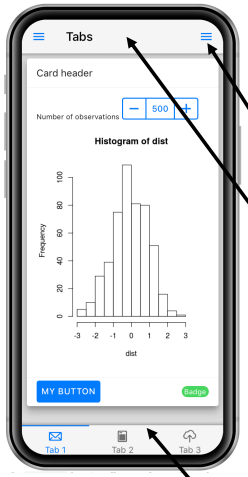
Host it on shinyapps.io, RStudio Connect (www.rstudio.com/products/connect/)
or Build your own Shiny Server (www.rstudio.com/products/shiny-server/)

1. **Visit your app using your favorite web browser (Chrome, Firefox, ...)**
2. Depending on the web browser, select the add to home screen feature
3. Change the name
4. Click on ok
5. Enjoy!

RinteRface

Layout Examples: Simple and Tabs (1)

TAB LAYOUT

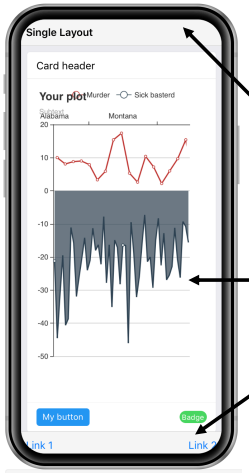



```
library(shiny)
library(shinyMobile)

shiny::shinyApp(
 ui = f7Page(
  title = "Tab Layout",
  f7TabLayout(
   # panels are not mandatory. These are similar to sidebars
   panels = tagList(
    f7Panel(side = "left", theme = "light", effect = "cover", ...),
    f7Panel(side = "right", theme = "dark", effect = "reveal", ...)
   ),
   navbar = f7Navbar(
    title = "Tabs",
    # enable both panels
    left_panel = TRUE,
    right_panel = TRUE
   ),
   # f7Tabs is a special toolbar with included navigation
   f7Tabs(
    animated = TRUE,
    id = "tabs",
    f7Tab(
     tabName = "Tab 1",
     icon = f7Icon("email"),
     active = TRUE,
     # Tab 1 content
     ...
    ),
    # Other tabs
    ...
   )
  )
 ),
 server = function(input, output) {}
)
```

f7TabLayout is probably the most versatile template since it adapts to many situations. By specifying an id to **f7Tabs**, you may recover the currently selected tab in input$id

SINGLE LAYOUT



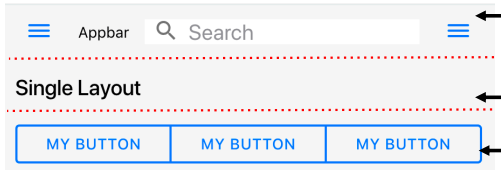

```
library(shiny)
Library(shinyMobile)

ui <- f7Page(
 title = "My app",
 f7SingleLayout(
  # navbar is mandatory
  navbar = f7Navbar(
   title = "Single Layout",
   hairline = FALSE,
   shadow = TRUE
  ),
  # main content
   ...,
  # toolbar
  toolbar = f7Toolbar(
   position = "bottom",
    # toolbar content
    ...
  )
 )
)

server <- function(input, output){}
shinyApp(ui = ui, server = server)
```

f7SingleLayout is well suited for simple prototype apps, with only one view.

COMMON LAYOUT ELEMENTS

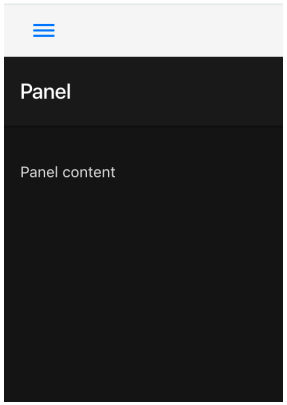


f7Appbar(..., left_panel = FALSE, right_panel = FALSE, maximizable = FALSE)

f7Navbar(...)

f7SubNavbar(...)

f7TabLayout and **f7SingleLayout** have an extra slot for an appbar. **f7Appbar** is an extra navigation bar!




```
f7Panel(
  ...,
  inputId = NULL,
  title = NULL,
  side = c("left", "right"),
  theme = c("dark", "light"),
  effect = c("reveal", "cover"),
  resizable = FALSE
)
```

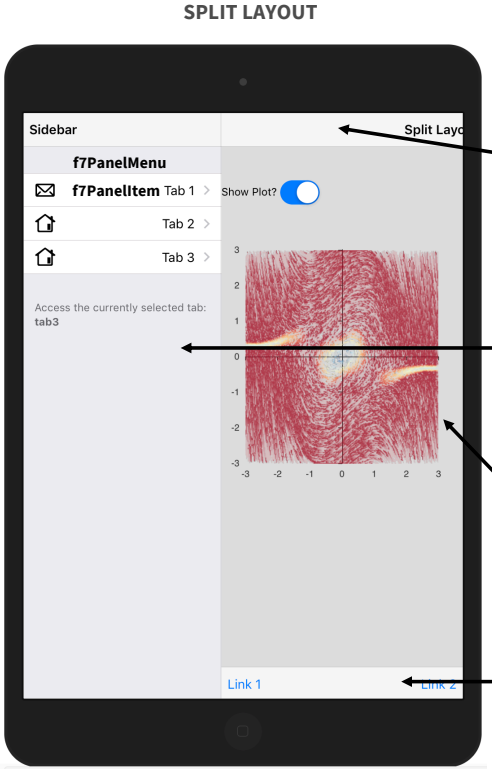
ONLY FOR SPLIT LAYOUT

f7PanelMenu(..., id = NULL)

f7PanelItem(title, tabName, icon = NULL, active = FALSE)

When used in a **split layout** context, input$<inputId> returns the currently select panel item. These items may be passed in the ...

Layout Example: Split (2)




```
library(shiny)
library(shinyMobile)

shiny::shinyApp(
  ui = f7Page(
    title = "Split Layout",
    f7SplitLayout(
      navbar = f7Navbar( title = "Split Layout", hairline = FALSE, shadow = TRUE ),
      sidebar =  f7Panel(
        inputId = "sidebar",
        title = "Sidebar",
        side = "left",
        theme = "light",
        # menu
        f7PanelMenu(
          id = "menu",
          f7PanelItem(tabName = "tab1", title = "Tab 1", icon = f7Icon("email"), active = TRUE),
          # other items
        ),
        effect = "reveal"
      ),
      # main content
      f7Items(
        f7Item(
          tabName = "tab1",
          # tab content
        ),
        # other items
      ),
      toolbar = f7Toolbar(
        position = "bottom",
        f7Link(label = "Link 1", src = "https://www.google.com"),
        f7Link(label = "Link 2", src = "https://www.google.com", external = TRUE)
      ),
    ),
    server = function(input, output) {}
)
```

f7SplitLayout is a tablet/desktop specific layout. By specifying an id to **f7PanelMenu,** you may recover the currently selected tab in input$id. Importantly, each **f7PanelItem** tabName must have a corresponding **f7Item** in the body content!

UI Configuration

shinyMobile has a dedicated configuration function allowing to fine tune the behavior of layout components, the global theme and skin.

```
f7Page(
  init = f7Init(
    skin = c("ios", "md", "auto", "aurora"),
    theme = c("dark", "light"),
    filled = FALSE,
    color = NULL,
    tapHold = TRUE,
    iosTouchRipple = FALSE,
    iosCenterTitle = TRUE,
    iosTranslucentBars = FALSE,
    hideNavOnPageScroll = FALSE,
    hideTabsOnPageScroll = FALSE
  )
)
```

The tapHold feature is unique to shinyMobile. A tapHold event corresponds to a long press on a button for instance. This allows to handle another kind of click, since on mobile, right click is not possible.

Layout: block

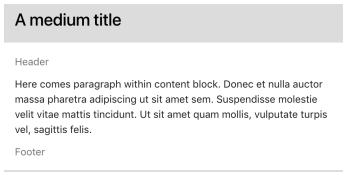
f7Block(..., hairlines = TRUE, strong = FALSE, inset = FALSE, tablet = FALSE)

f7BlockTitle(title = NULL, size = NULL)

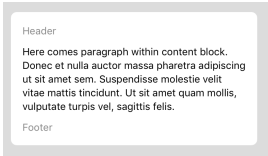
f7BlockHeader(text = NULL)

f7BlockFooter(text = NULL)

STRONG

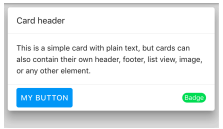


STRONG + INSET



Layout: effects

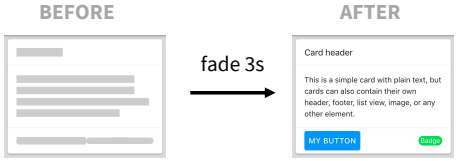
SHADOW



f7Shadow(tag, intensity, hover = FALSE, pressed = FALSE)

SKELETON (LOADING OVERLAY)

f7Skeleton(tag, effect = "fade", duration = 2)



Layout: typography

f7Align(tag, side = c("left", "center", "right", "justify"))

f7Float(tag, side = c("left", "right"))

f7Margin(tag, side = NULL)

f7Padding(tag, side = NULL)

Note: f7Align only work on text tags like p, h1, …

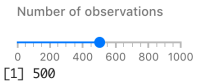
RinteRface

UI: Inputs

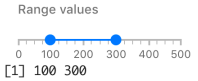
shinyMobile has brand new inputs for Shiny! Moreover each input has its own design depending on the currently selected skin (iOS, material or desktop)

SLIDERS

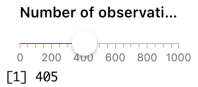
f7Slider(inputId, label, min, max, value, step = NULL, scale = FALSE, vertical = FALSE, scaleSteps = 5, scaleSubSteps = 0, vertical = FALSE, verticalReversed = FALSE, labels = NULL)



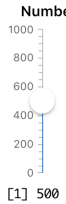
simple slider with material design



range slider with material design



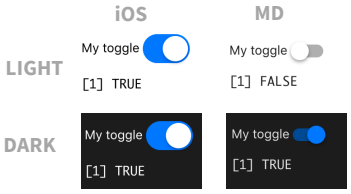
simple slider with iOS design



vertical iOS slider

TOGGLE

f7Toggle(inputId, label, checked = FALSE, color = NULL)



STEPPER

f7Stepper(inputId, label, min, max, value, step = 1, fill = FALSE, rounded = FALSE, raised = FALSE, size = NULL, color = NULL, wraps = FALSE, autorepeat = TRUE, manual = TRUE, decimalPoint = 4, buttonsEndInputMode = TRUE)

simple stepper

[1] 4

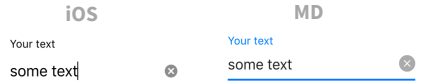
Stepper with raised, fill and rounded set to TRUE

[1] 4

TEXT

f7Text(inputId, label, value = "", placeholder = NULL)

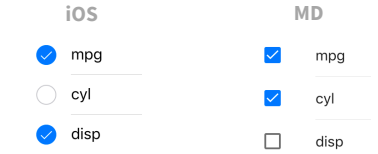
f7Password(inputId, label, value = "", placeholder = NULL)



CHECKBOXES/GROUPS

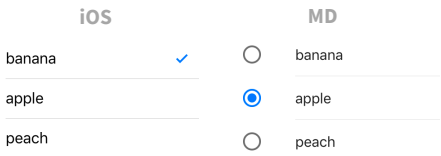
f7checkBox(inputId, label, value = FALSE)

f7checkBoxGroup(inputId, label, choices = NULL, selected = NULL)



RADIO

f7Radio(inputId, label, choices = NULL, selected = NULL)



ACTION BUTTON

f7Button(inputId = NULL, label = NULL, src = NULL, color = NULL, fill = TRUE, outline = FALSE, shadow = FALSE, rounded = FALSE, size = NULL)

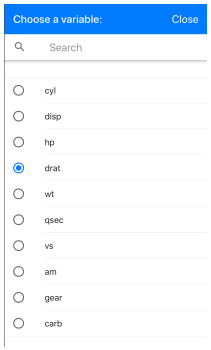
shinyMobile tip: **f7Button** may be grouped in an **f7Segment** .

SMART SELECT

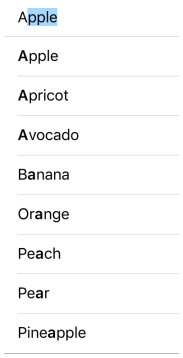
f7SmartSelect(inputId, label, choices, selected = NULL, type = c("sheet", "popup", "popover"), smart = TRUE, multiple = FALSE)

MD

(2)



AUTOCOMPLETE

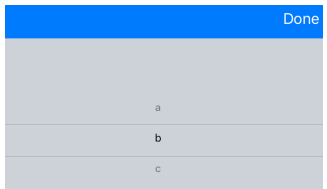


f7AutoComplete(inputId, label, placeholder = NULL, value = choices[1], choices, typeahead = TRUE, expandInput = TRUE, type = c("popup", "page", "dropdown"), dropdownPlaceholderText = NULL, multiple = FALSE)

Autocomplete input in a popup with multiple enable

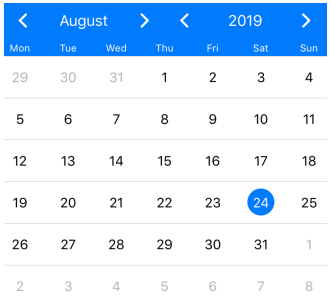
PICKER

f7Picker(inputId, label, placeholder = NULL, value = choices[1], choices)



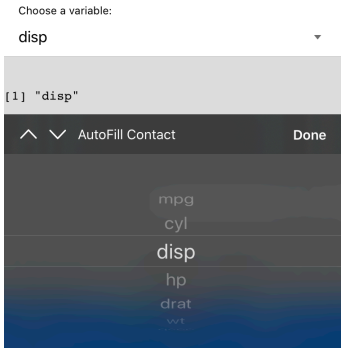
DATE PICKER

f7DatePicker(inputId, label, value = NULL, min = NULL, max = NULL, format = "yyyy-mm-dd")



SELECT

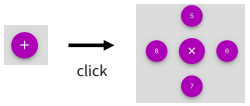
f7Select(inputId, label, choices)



ACTION BUTTON (FABS)

f7Fabs(..., position = c("right-top", "right-center", "right-bottom", "left-top", "left-center", "left-bottom", "center-center", "center-top", "center-bottom"), color = NULL, extended = FALSE, label = NULL, sideOpen = c("left", "right", "top", "bottom", "center"), morph = FALSE, morphTarget = NULL)

f7Fab(inputId, label, width = NULL, ..., flag = NULL)



shinyMobile tip: **f7Fabs** contain f7Fab, an improved action button.

RinteRface

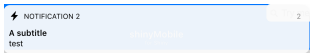
Server: Alerts

shinyMobile has brand new notifications, popups, … Except for the **f7Popup** and **f7Tooltip**, all items are generated on the server side

NOTIFICATIONS

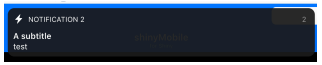
f7Notif(text, icon = NULL, title = NULL, titleRightText = NULL, subtitle = NULL, closeTimeout = 5000, closeButton = FALSE, closeOnClick = TRUE, swipeToClose = TRUE, session)

iOS



MD

iOS/DARK



TOOLTIP

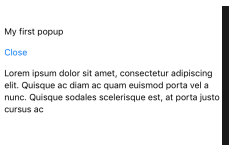
f7Tooltip(tag, text)

POPUP

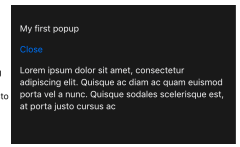
f7Popup(..., id, title, backdrop = TRUE, closeByBackdropClick = TRUE, closeOnEscape = FALSE, animate = TRUE, swipeToClose = FALSE)

f7TogglePopup(id, session = shiny::getDefaultReactiveDomain())

LIGHT



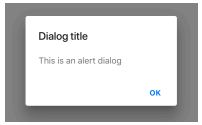
DARK



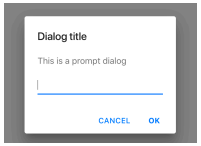
DIALOG

f7Dialog(inputId = NULL, title = NULL, text, type = c("alert", "confirm", "prompt", "login"), session)

MD

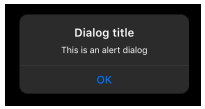


Simple dialog

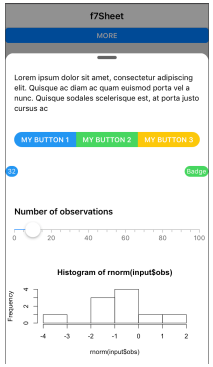


Dialog with prompt input

iOS/DARK



MODAL SHEET



f7Sheet(..., hiddenItems = NULL, id, label = "Open", orientation = c("top", "bottom"), swipeToClose = FALSE, swipeToStep = FALSE, backdrop = FALSE, closeByOutsideClick = TRUE, swipeHandler = TRUE **)**

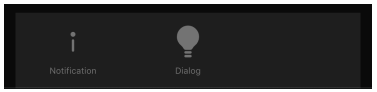
shinyMobile tip: **f7Sheet** may also open from the top. swipeToStep allows to keep the sheet slightly open instead of completely closing it.

ACTION SHEET

f7ActionSheet(id, session = shiny::getDefaultReactiveDomain(), grid = FALSE, buttons, icons = NULL)

iOS

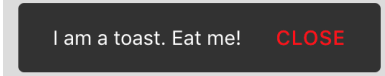
MD



shinyMobile tip: in **f7ActionSheet** buttons must be provided in a dataframe, icons in a list.

TOAST

f7Toast(session, text, position = c("bottom", "top", "center"), closeButton = TRUE, closeButtonText = "close", closeButtonColor = "red", closeTimeout = 3000, icon = NULL)



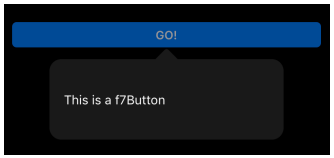
POPOVER (ONLY INPUT ELEMENTS)

f7Popover(targetId, content, session)

f7PopoverTarget(tag, targetId)

iOS/LIGHT

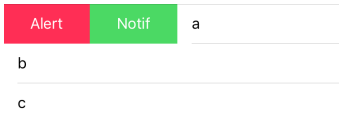
iOS/DARK



SWIPEOUT

f7Swipeout(tag, ..., left = NULL, right = NULL, side = c("left", "right", "both"))

f7SwipeoutItem(id, label, color = NULL)



shinyMobile tip: **f7Swipeout** must to be used in combination with **f7ListItem.** Pass any **f7SwipeoutItem** in the … argument. The id attributes allows to perform actions on the server side with input$id.

Server: Update

INPUTS

updateF7AutoComplete(session, inputId, value = NULL)

updateF7Checkbox(session, inputId, label = NULL, value = NULL)

updateF7Fab(session, inputId, label = NULL)

updateF7Picker(session, inputId, value = NULL, choices = NULL)

updateF7Slider(session, inputId, min = NULL, max = NULL, value = NULL, scale = FALSE, scaleSteps = NULL, scaleSubSteps = NULL, step = NULL)

updateF7Stepper(session, inputId, min = NULL, max = NULL, value = NULL, step = NULL, fill = NULL, rounded = NULL, raised = NULL, size = NULL, color = NULL, wraps = NULL, autorepeat = NULL, manual = NULL, decimalPoint = NULL)

updateF7Text(session, inputId, label = NULL, value = NULL, placeholder = NULL)

updateF7Toggle(session, inputId, checked = NULL, color = NULL)

OTHER ELEMENTS

shinyMobile tip: shinyMobile elements like tabs, panels, sheet, accordion, cards, gauges, progress have an associated input to trigger events on the server side. There are function to update these inputs!

updateF7Accordion(inputId, selected = NULL, session)

updateF7Card(id, session)

updateF7Gauge(session, id, value)

updateF7Panel(inputId, session)

updateF7Progress(session, id, value)

updateF7Sheet(inputId, session)

updateF7Tabs(session, id, selected = NULL)

f7HideNavbar(session, animate = TRUE, hideStatusbar = FALSE)

f7ShowNavbar(session, animate = TRUE)

Server: tapHold

shinyMobile tip: to trigger a taphold event (long press) on a tag, use the **f7TapHold** function

f7TapHold(target, callback, session)

RinteRface

UI: Widgets

shinyMobile has brand new widgets for Shiny! Some of them have their own design depending on the currently selected skin (iOS, material or desktop)

ACCORDIONS

f7Accordion(..., inputId = NULL, multiCollapse = FALSE)

f7AccordionItem(..., title = NULL, open = FALSE)

If inputId is passed, one may retrieve the currently selected item as follows

- input$<inputId>$state is TRUE if open, else FALSE
- input$<inputId>$value is NULL if closed else contain the **f7AccordionItem** value

BADGES

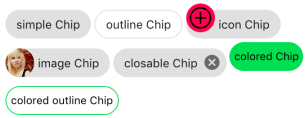
f7Badge(..., color = NULL)

LIGHT

DARK

CHIPS

f7Chip(label = NULL, img = NULL, icon = NULL, outline = FALSE, status = NULL, icon_status = NULL, closable = FALSE)



MESSAGES

f7Messages(..., id)

f7Message(content, src = NULL, author = NULL, date = NULL, state = c("sent", "received"), type = c("text", "img"))

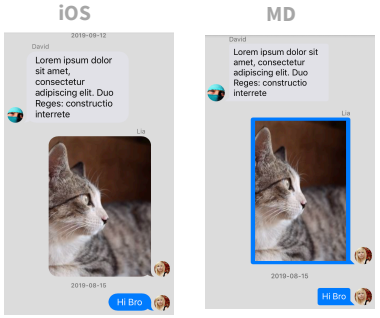


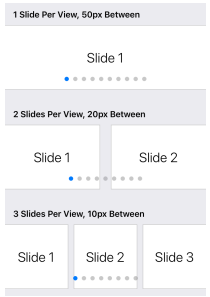
PHOTO BROWSER

f7PhotoBrowser(id, label, photos, theme = c("light", "dark"), type = c("popup", "standalone", "page"))

SWIPER SLIDER

f7Swiper(..., id, spaceBetween = 50, slidePerView = "auto", centered = TRUE, speed = 400)

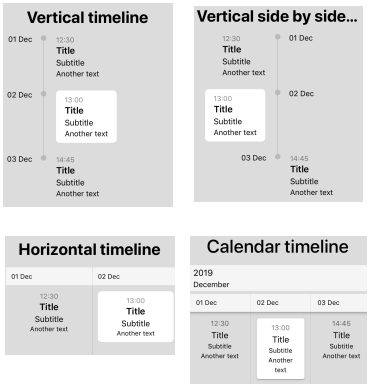
f7Slide(...)



TIMELINES (Examples with iOS design)

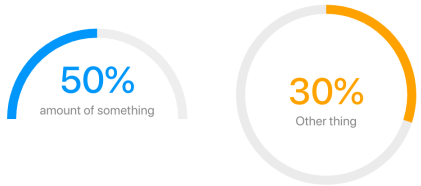
f7Timeline(..., sides = FALSE, horizontal = FALSE, calendar = FALSE, year = NULL, month = NULL)

f7TimelineItem(..., date = NULL, card = FALSE, time = NULL, title = NULL, subtitle = NULL, side = NULL)



GAUGES

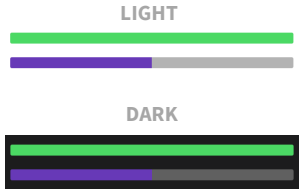
f7Gauge(id, type = NULL, value = NULL, size = NULL, bgColor = NULL, borderBgColor = NULL, borderColor = NULL, borderWidth = NULL, valueText = NULL, valueTextColor = NULL, valueFontSize = NULL, valueFontWeight = NULL, labelText = NULL, labelTextColor = NULL, labelFontSize = NULL, labelFontWeight = NULL)



PROGRESS BARS

f7Progress(id, value, color)

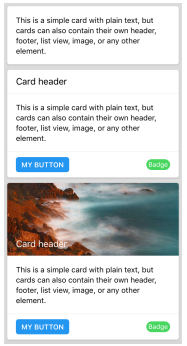
f7ProgressInf(color = NULL)



UI: Cards

CARDS

f7Card(..., img = NULL, title = NULL, footer = NULL, outline = FALSE, height = NULL)



Card without header nor footer

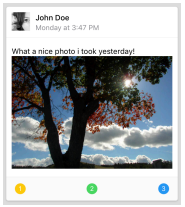
Card with header and footer

Card with header, footer and header image

shinyMobile tip: Don't forget that you may apply shadow effects to cards with **f7Shadow**!

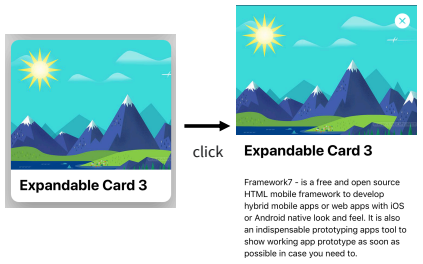
SOCIAL CARDS

f7SocialCard(..., author_img = NULL, author = NULL, date = NULL, footer = NULL)



EXPANDABLE CARDS

f7ExpandableCard(..., id = NULL, title = NULL, subtitle = NULL, color = NULL, img = NULL, fullBackground = FALSE)



RinteRface

UI: Lists

shinyMobile lists are a major element of the template

f7List(..., mode = NULL, inset = FALSE)

f7ListGroup(..., title)

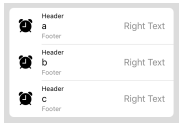
f7ListItem(..., title = NULL, subtitle = NULL, header = NULL, footer = NULL, url = NULL, media = NULL, right = NULL)

SIMPLE LISTS

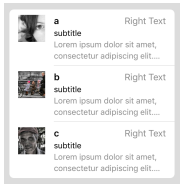
Below, we set inset to TRUE to apply margins around the list. We only show for iOS design. Material is similar

iOS

Simple list items



List items, with header, footer , right content and media (icon here)



List in “media” mode with list items containing title, subtitle , right content and media (images here)

List items with an url

List in “contact” mode with list group containing list items.

LIST INDEX

This widget is useful in case you want to sort items by name an quickly navigate them with a scroll handle.

f7ListIndex(..., id)

f7ListGroup(..., title)

f7ListItem(..., title = NULL, subtitle = NULL, header = NULL, footer = NULL, url = NULL, media = NULL, right = NULL)

LIST UTILS: SEARCHBAR

shinyMobile has a searchbar that allows to browse in a list or page containing multiple lists. The searchbar must be included in **f7Navbar** or **f7Appbar**.

f7Searchbar(id = NULL, placeholder = "Search", expandable = FALSE, inline = FALSE)

f7SearchbarTrigger(targetId)

f7Found(tag)

f7NotFound(tag)

f7HideOnSearch(tag)

There are 3 ways of using the searchbar:

- Call **f7Searchbar** anywhere in **f7Navbar** or **f7Subnavbar**
- Use a **f7SearchbarTrigger** where id points to the searchbar unique id and put the searchbar anywhere
- Put the **f7Searchbar** in the **f7Appbar**. The inline parameter must be TRUE

```
f7SingleLayout(
navbar = f7Navbar(
 title = "f7Searchbar",
 f7SearchbarTrigger(targetId = "search1"),
 subNavbar = f7SubNavbar(
  f7Searchbar(id = "search1")
 )
),
f7Block(
 "This block will be hidden on search.
    Lorem ipsum dolor sit amet, consectetur adipisicing elit."
) %>% f7HideOnSearch() # to hide on search,
f7List(
 lapply(seq_along(cars), function(i) {
  f7ListItem(cars[i])
 })
) %>% f7Found(),  # to show on search

f7Block(
 p("Nothing found")
) %>% f7NotFound() # to show if nothing is found
)
```

Progressive Web App

shinyMobile is first designed to develop mobile ready apps! However, there is no sense opening a mobile app in a web browser like chrome or safari.

MANIFEST

Progressive web apps (PWA) have the ability to display as standalone apps, even bein available offline (the later not available for shinyMobile). Creating a manifest allow us to pass useful information such as the start url, the display mode, …

create_manifest(path, name = "My App", shortName = "My App", description = "What it does!", lang = "en-US", startUrl, display = c("minimal-ui", "standalone", "fullscreen", "browser"), icons)

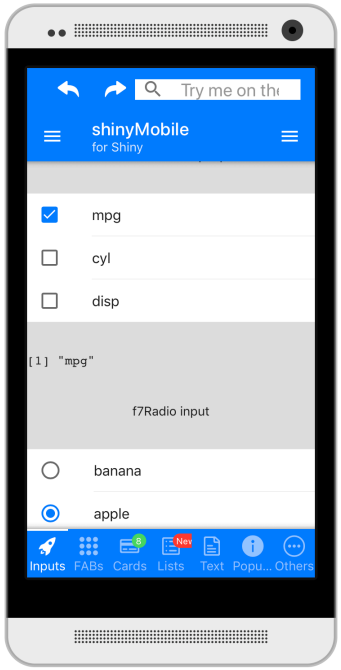
This function creates a www folder containing a manifest.json file as well as 2 subdirectories that will contain app icons and splashscreens. While splashscreens are automatically created in android, they must be generated for iOS. Warning: this function does not design icons for you.

```
{
 "name": "My App",
 "short_name": "My App",
 "description": "My App",
 "lang": "en-US",
 "start_url": "https://www.google.com/",
 "display": "standalone",
 "icons": [
  {
   "src": "icons/128x128.png",
   "sizes": "128x128",
   "type": "image/png"
  },
  {
   "src": "icons/144x144.png",
   "sizes": "144x144",
   "type": "image/png"
  }
 ]
}
```

APP PREVIEW

A cool feature in shinyMobile is the capability to preview the app (online or local) before publishing it on your favourite server.

preview_mobile(appPath = NULL, url = NULL, port = 3838, device = c("iphoneX", "galaxyNote8", "iphone8", "iphone8+", "iphone5s", "iphone5c", "ipadMini", "iphone4s", "nexus5", "galaxyS5", "htcOne"), color = NULL, landscape = FALSE **)**



RinteRface