

BUILDING CROSS-PLATFORM GUIS FAST USING FYNE

FYNE – WHAT'S NEW?

(RE-)INTRODUCTION TO FYNE

**To be the best toolkit for easily developing
beautiful, native graphical applications
across all platforms.**

- ▶ Team and community built around a common goal
- ▶ Open by default - everything is free

(RE-)INTRODUCTION TO FYNE

▶ History

- ▶ Started February 2018
- ▶ 4 major upgrades to 1.x
- ▶ 1.0 in March 2019
- ▶ 2.0 in January 2021

▶ Stats

★ 12'100 GitHub stars

⌨ 4900 commits

👥 80 contributors

🍾 19 releases

TOOLKIT DESIGN

- ▶ API - design from scratch
 - ▶ Solve issues of threading, data handling
 - ▶ Multiple themes to match user's preference
 - ▶ Public API based on behaviour not render details
- ▶ UI
 - ▶ Material design inspired for clear, clean UI
 - ▶ Vector graphics throughout
 - ▶ Light and dark themes, consistent UX

INSTALLATION AND DISTRIBUTION

```
go get fyne.io/fyne/v2/cmd/fyne
```

► Local install

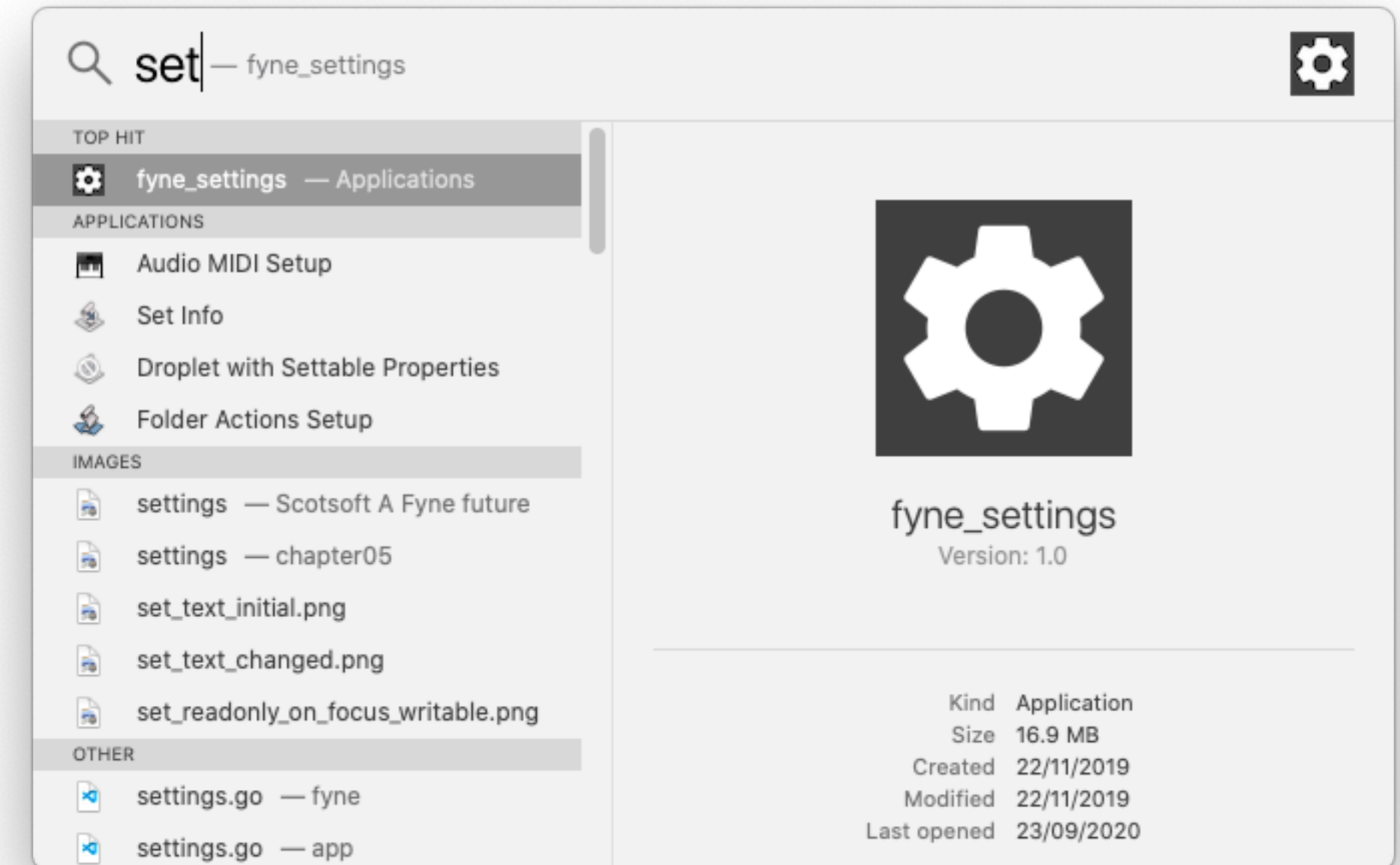
```
fyne install
```

► Distro to users

```
fyne package -os <platform>
```

► Upload to stores

```
fyne release -appID <myid> -appVersion 1.0.0 -appBuild 25
```



SHOW ME THE CODE

HELLO WORLD

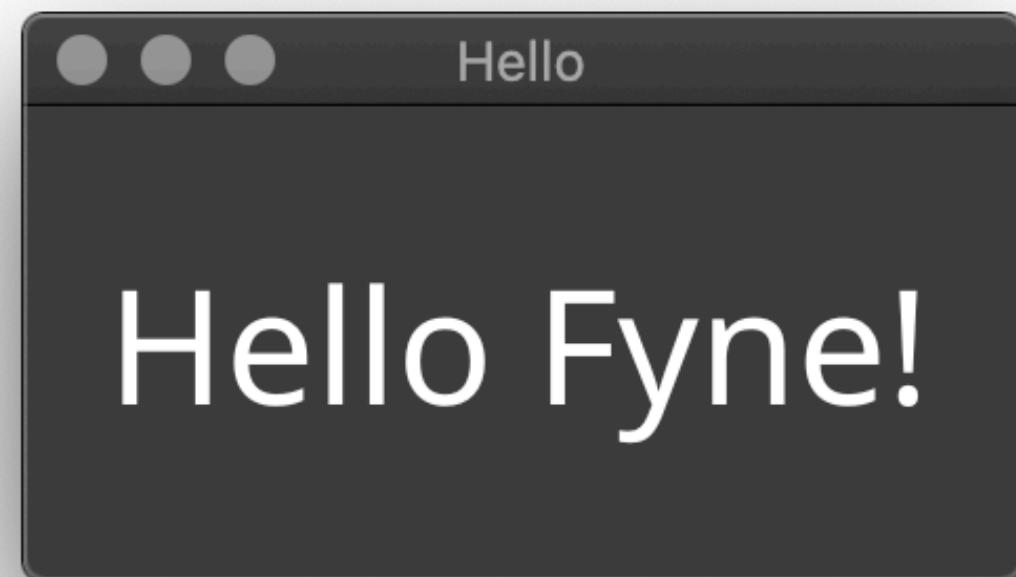
```
package main
```

```
import (  
    "fyne.io/fyne/v2/app"  
    "fyne.io/fyne/v2/widget"  
)
```

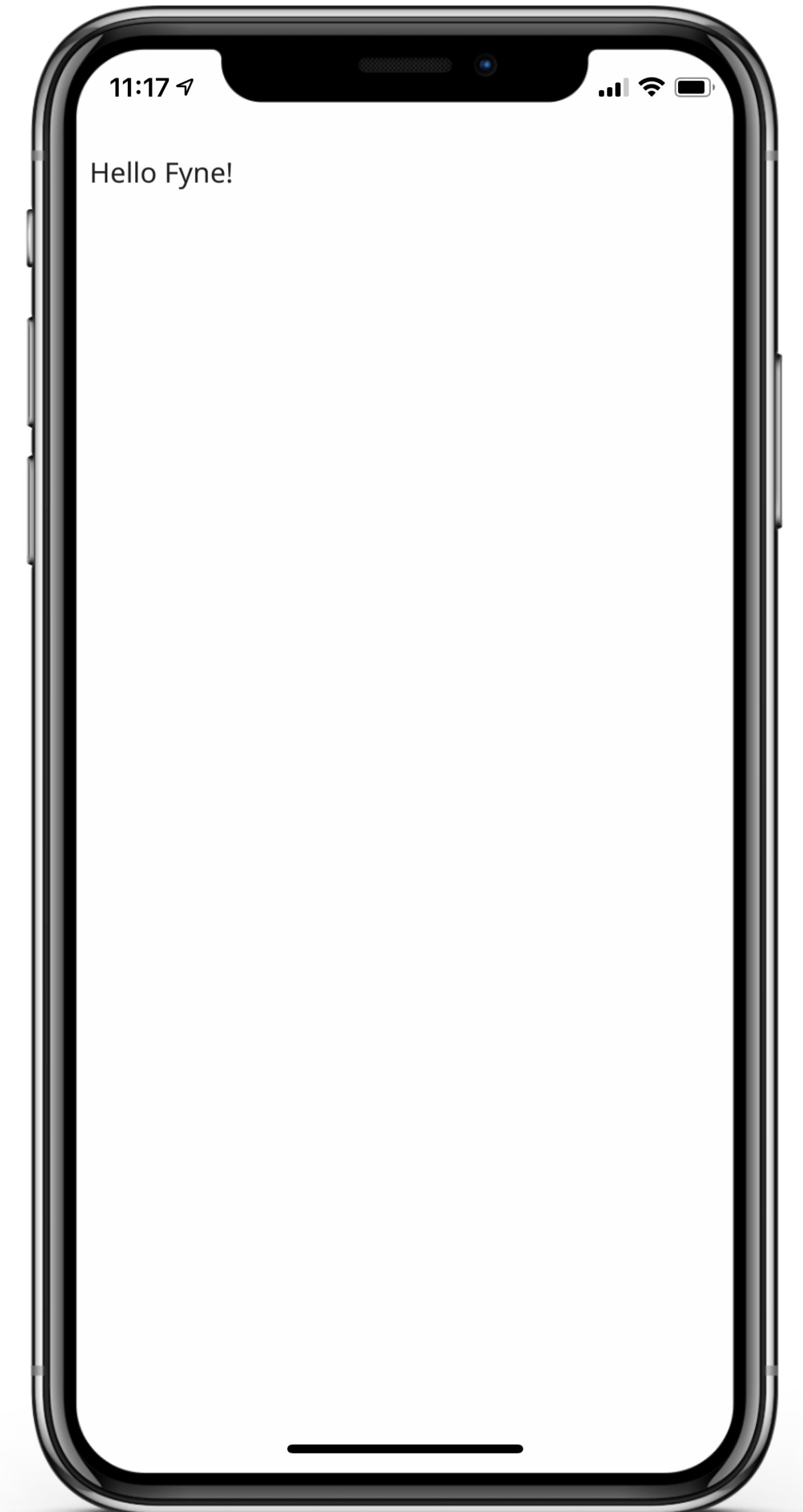
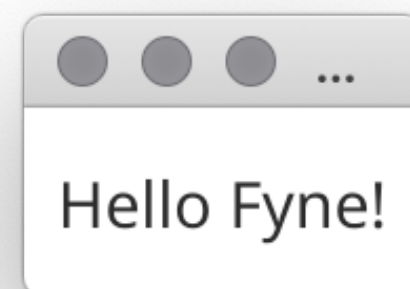
```
func main() {  
    a := app.New()  
    w := a.NewWindow("Hello")  
  
    w.SetContent(widget.NewLabel("Hello Fyne!"))  
    w.ShowAndRun()  
}
```

HELLO WORLD

- ▶ Write once run anywhere



FYNE_SCALE=2.5



WIDGETS

Entry

Invalid 



Username

Password

✕ Cancel

✓ Submit

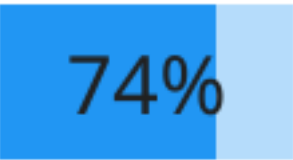
☒ Check

(Select one) ▾



Card Title


Subtitle



✕ Cancel

```
1 | TextGrid
2 | · · Content
```



Password 

- Item 1
- Item 2

Text label

▾ A

▴ B

Shown item

WIDGETS

Theme Icons

↓ Widgets

Accordion

Button

Card

Entry

Form

Input

Text

Toolbar

DarkLight

Form

Gathering input widgets for data submission.

Name

John Smith

Your full name

Email

almost@an

not a valid email

Password

Password

Message

Cancel

Submit

Animations

Theme Icons

↓ Widgets

Accordion

Button

Card

Entry

Form

Input

Text

DarkLight

Input

A collection of widgets for user input.

(Select one)

Type or select

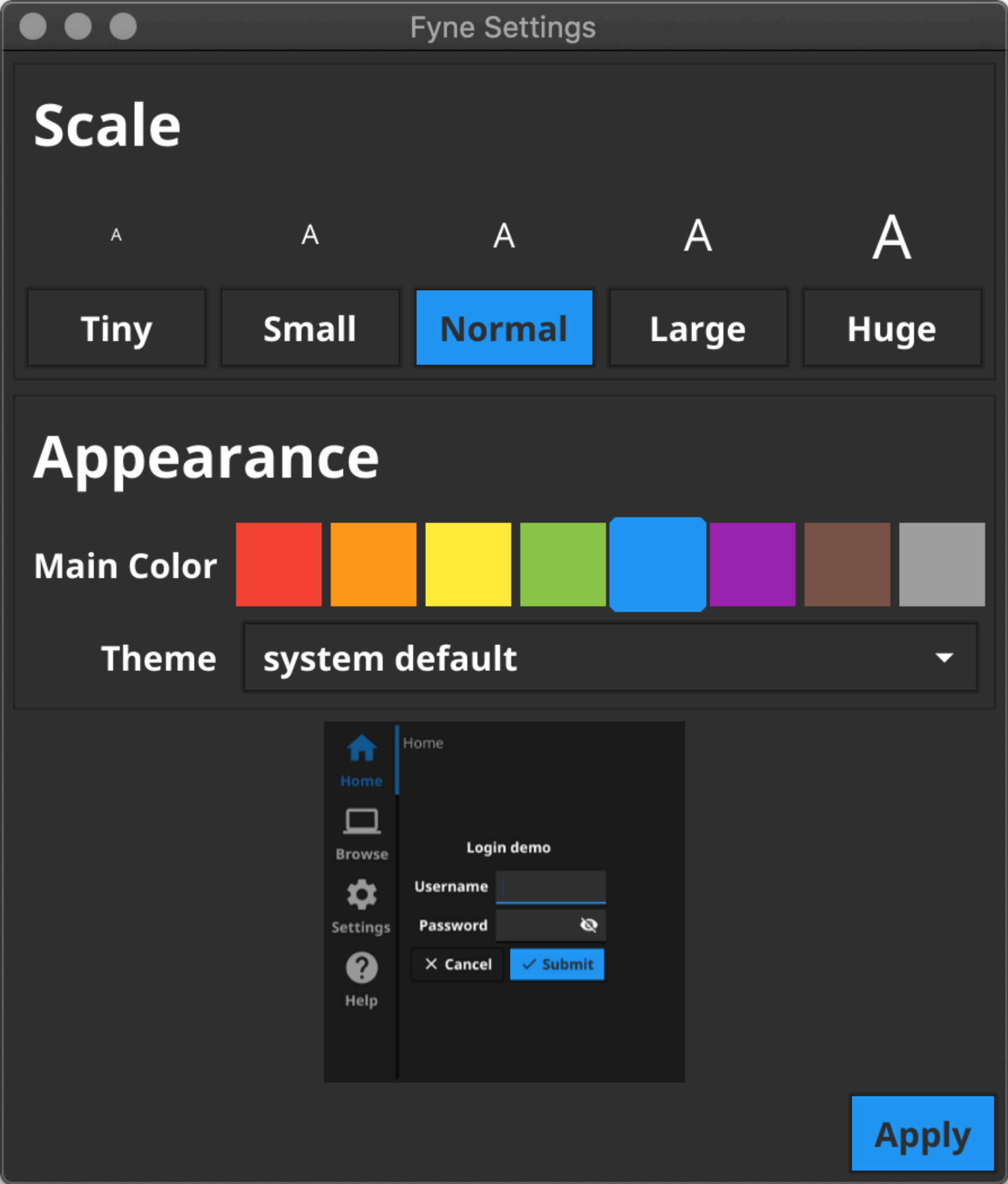
Check

Disabled check

Radio Item 1Radio Item 2

Disabled radio

SETTINGS



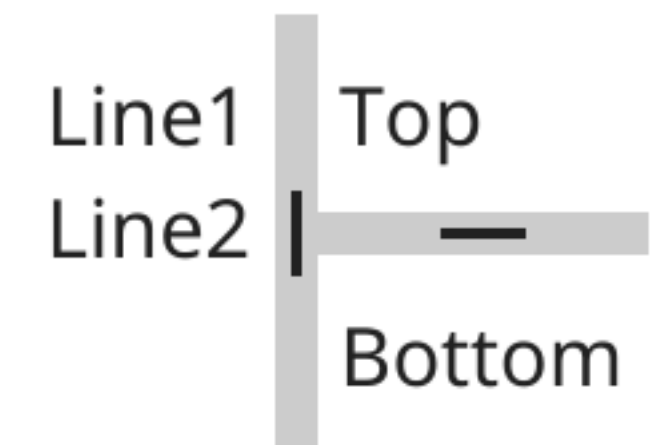
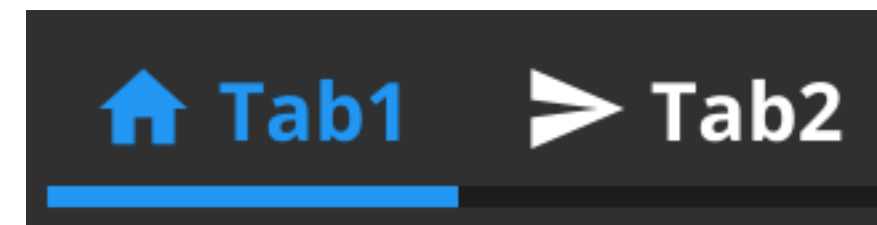
WHAT'S NEW?

CONTAINERS AND COLLECTIONS

- ▶ Container widgets

- ▶ Simple: Border, Center, Grid, GridWrap, HBox, Max, Padded, VBox

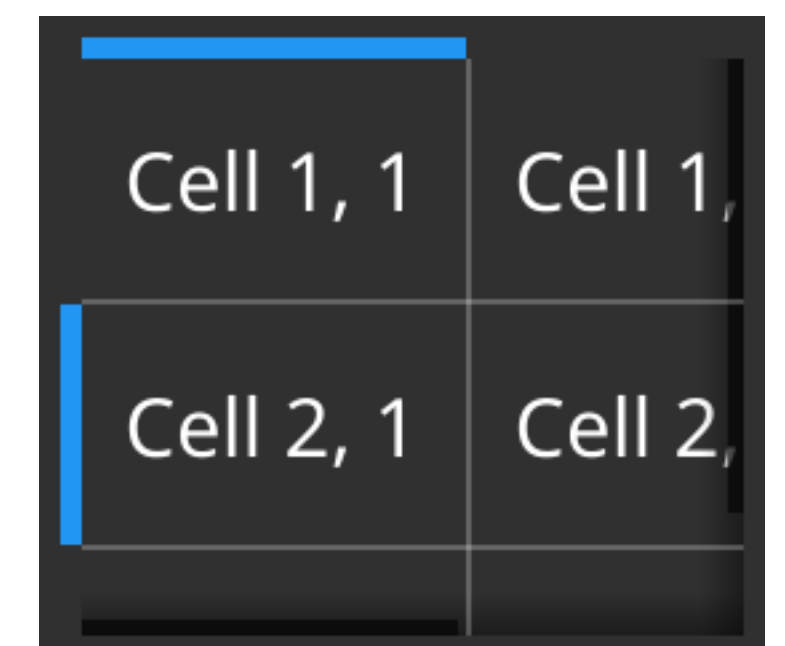
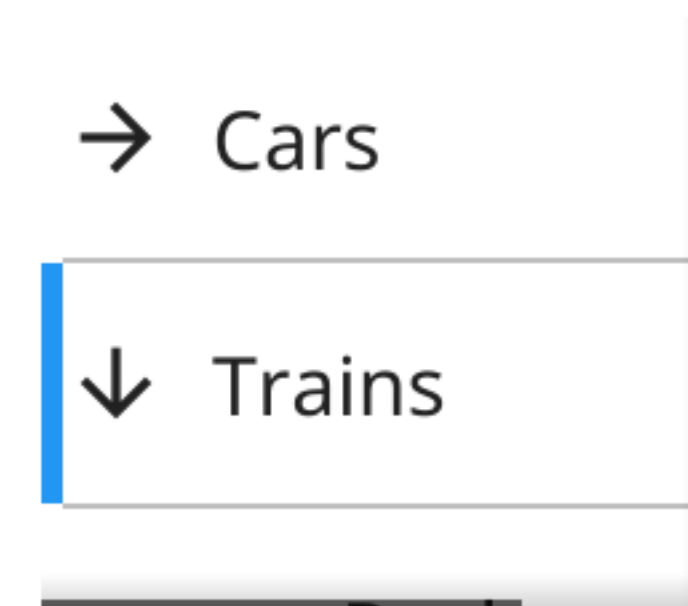
- ▶ Structural: AppTabs, Scroll, Split



- ▶ Collection widgets for large data

- ▶ List, Table and Tree

- ▶ Caching, templates, lazy loading



DATA BINDING

- ▶ Primitive Types
 - ▶ Bool, Int, Float, Rune, String - new value or bind to primitive
- ▶ List, Map, Struct
 - ▶ <Type>List, UntypedMap, Struct - bind to existing or create in memory
- ▶ Preferences
 - ▶ BindPreference<Type>

DATA BINDING

► Use in Widgets

```
str := binding.NewString()  
input := widget.NewEntryWithData(str)
```

► Conversions

```
f := binding.NewFloat()  
str := binding.FloatToStringWithFormat(f, "value %f")  
text := widget.NewLabelWithData(str)
```


URI, STORAGE AND REPOSITORIES

- ▶ URI for identification

`file://`, `content://` (`https://` etc to follow)

- ▶ Storage to manage files

`storage.Reader(uri)`; `storage.List(uri)`

- ▶ Repository to manage storage providers - extensible

`repository.Register("myscheme", &myRepo{})`

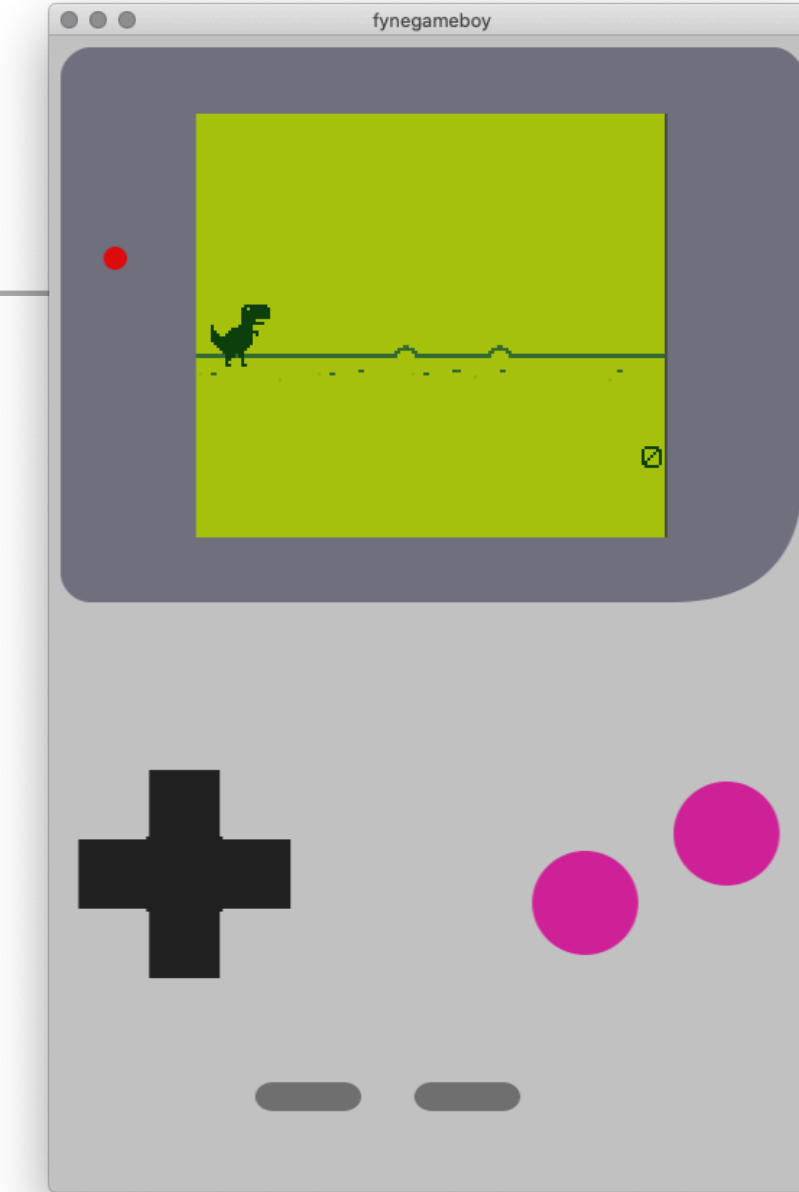
ANIMATION AND CUSTOM THEMES

► Animating things

```
anim = canvas.NewPositionAnimation(  
fyne.NewPos(0, 10), fyne.NewPos(90, 10), canvas.DurationStandard, func(p fyne.Position) {  
    obj.Move(p)  
    obj.Refresh()  
})  
anim.Start()
```

► Custom themes

► Configuring Colour, Font, Icons and sizes





DEVELOPER.FYNE.IO

THANKS!



- fyne.io
- developer.fyne.io
- youtube.com/c/fyne-io
- twitch.tv/andydotxyz
- github.com/sponsors/fyne-io
- patreon.com/andydotxyz
- "Building Cross-Platform GUI Applications with Fyne"