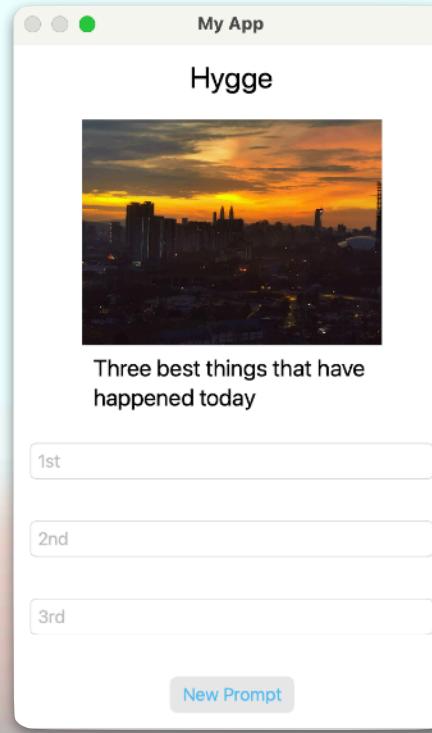




Beginners Guide to Creating Your First App



By James Abela

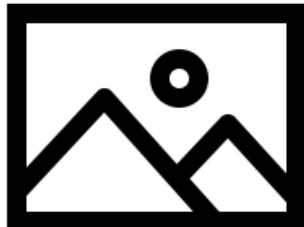


Distinguished
Educator

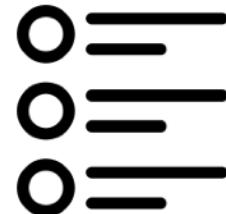
Today's Coding will include:



Displaying Text



Pictures & icons



List handling

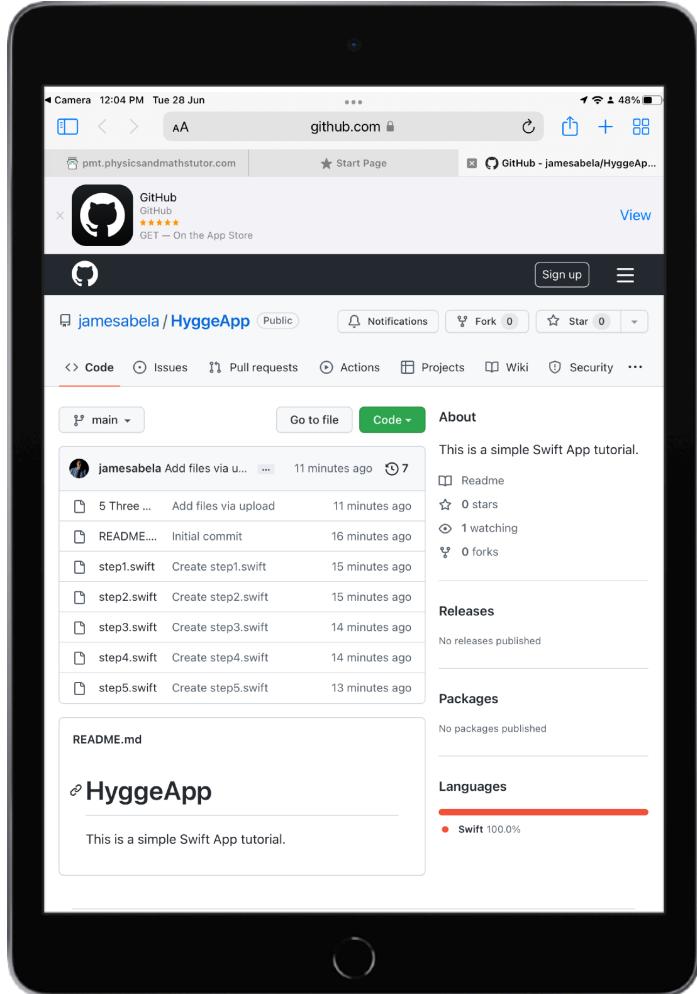


Inputting text

Can use iPad or Mac OS with Swift Playgrounds 4.1

Files at: <https://github.com/jamesabela/HyggeApp>





	jamesabela	Add files via u...	...	11 minutes ago	7
	5 Three ...	Add files via upload		11 minutes ago	
	README....	Initial commit		16 minutes ago	
	step1.swift	Create step1.swift		15 minutes ago	
	step2.swift	Create step2.swift		15 minutes ago	
	step3.swift	Create step3.swift		14 minutes ago	
	step4.swift	Create step4.swift		14 minutes ago	
	step5.swift	Create step5.swift		13 minutes ago	



Files at: <https://github.com/jamesabela/HyggeApp>

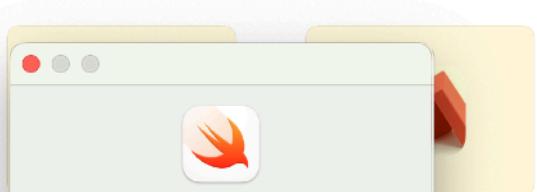
About Playgrounds

[Preferences...](#)[Services](#)[Hide Playgrounds](#)[Hide Others](#)[Show All](#)[Quit Playgrounds](#)

Filter



Basic Three Good Things



Three Good Things Tidied



Fonts You Can Use



Organizing with Grids



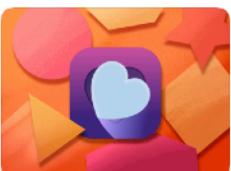
About Me



My App copy



Meme Creator



Animating Shapes



More Playgrounds



See All



App



Playground



Shapes



Blu's Adventure



Spirals



Answers



Sonic Create



Choose Your Own Story



Puzzle World

About Playgrounds

- Preferences... ⌘ ,
- Services >
- Hide Playgrounds ⌘ H
- Hide Others ⌘ ⌥ H
- Show All
- Quit Playgrounds ⌘ Q

Basic Three Good Things



Organizing with Grids



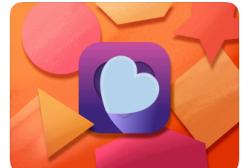
Fonts You Can Use



Playgrounds

Version 4.1 (1674.8)

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Animating Shapes

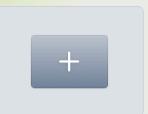


See All

More Playgrounds



App



Playground



Shapes



Blu's Adventure



Spirals



Answers



Sonic Create



Choose Your Own Story



Puzzle World

My Playgrounds



Basic Three Good Things



My App copy 3



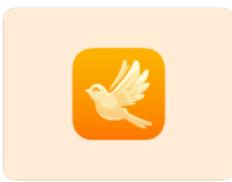
Fathers Day Card



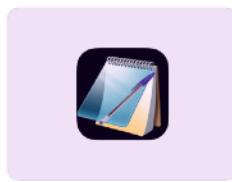
Box Ga



About Me



My App copy



Notepad 3



Meme Ci



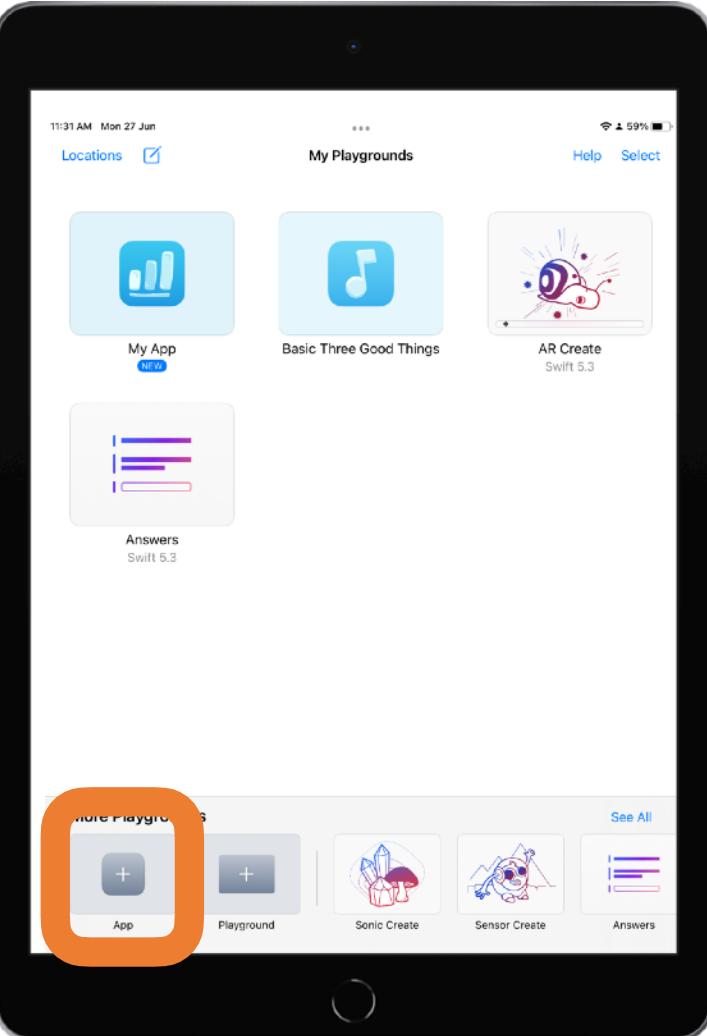
More Playgrounds



Pseudocode →



Pseudocode →



My Playgrounds

Filter



My App
NEW



Basic Three Good Things



Fathers Day Card



Box Game



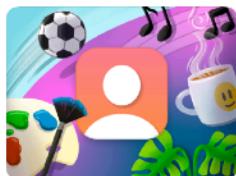
Three Good Things Tidied



Fonts You Can Use



Organizing with Grids



About Me



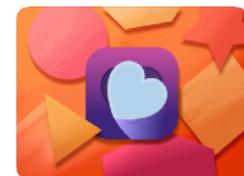
My App copy



Notepad 3



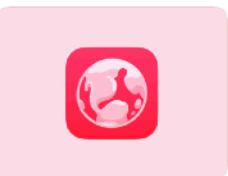
Meme Creator



Animating Shapes



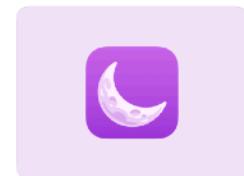
Choose Your Own Story co...



My Map



IGCSE
Pseudocode →



More Playgrounds

See All



App



Playground



Shapes



Blu's Adventure



Spirals



Answers



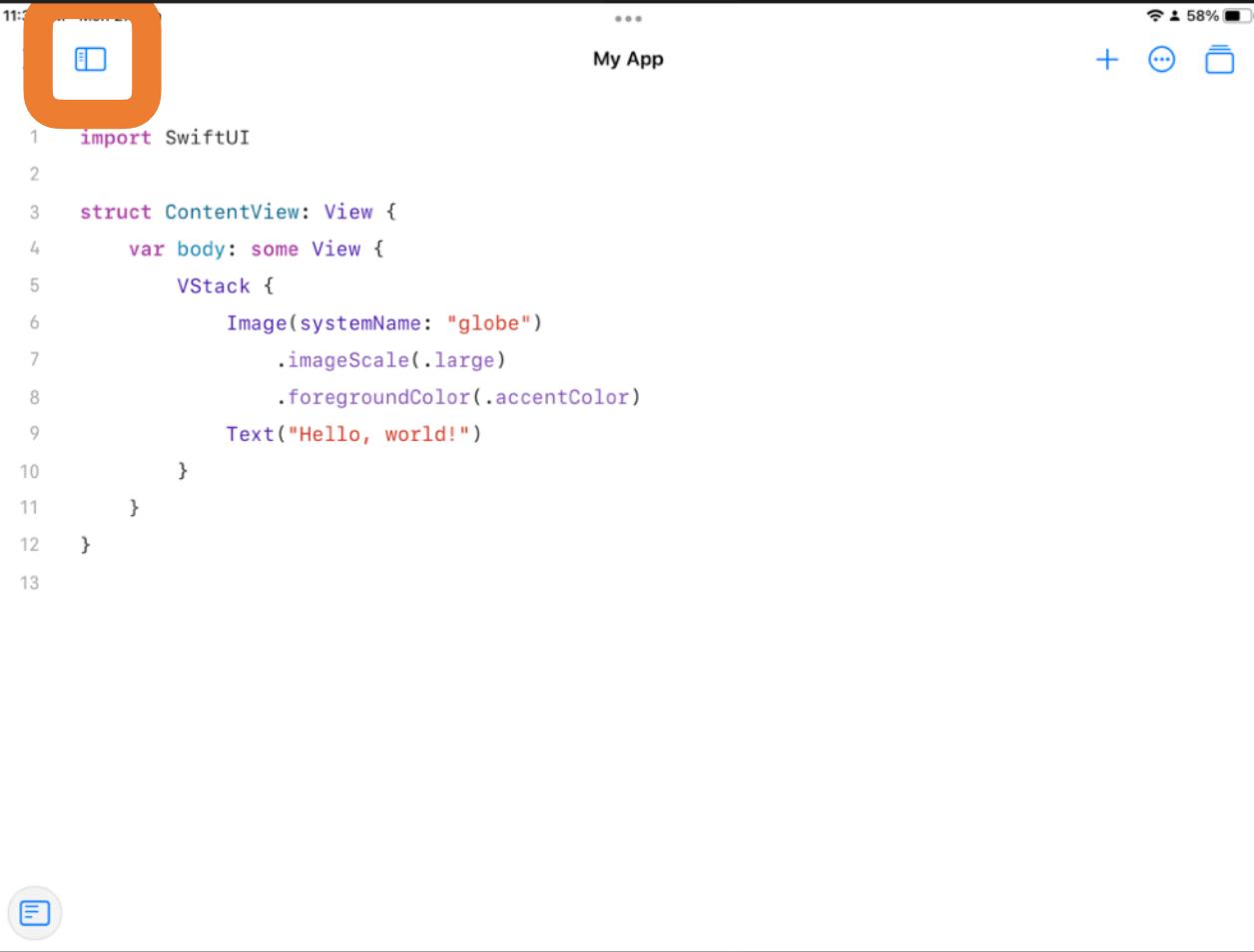
Sonic Create

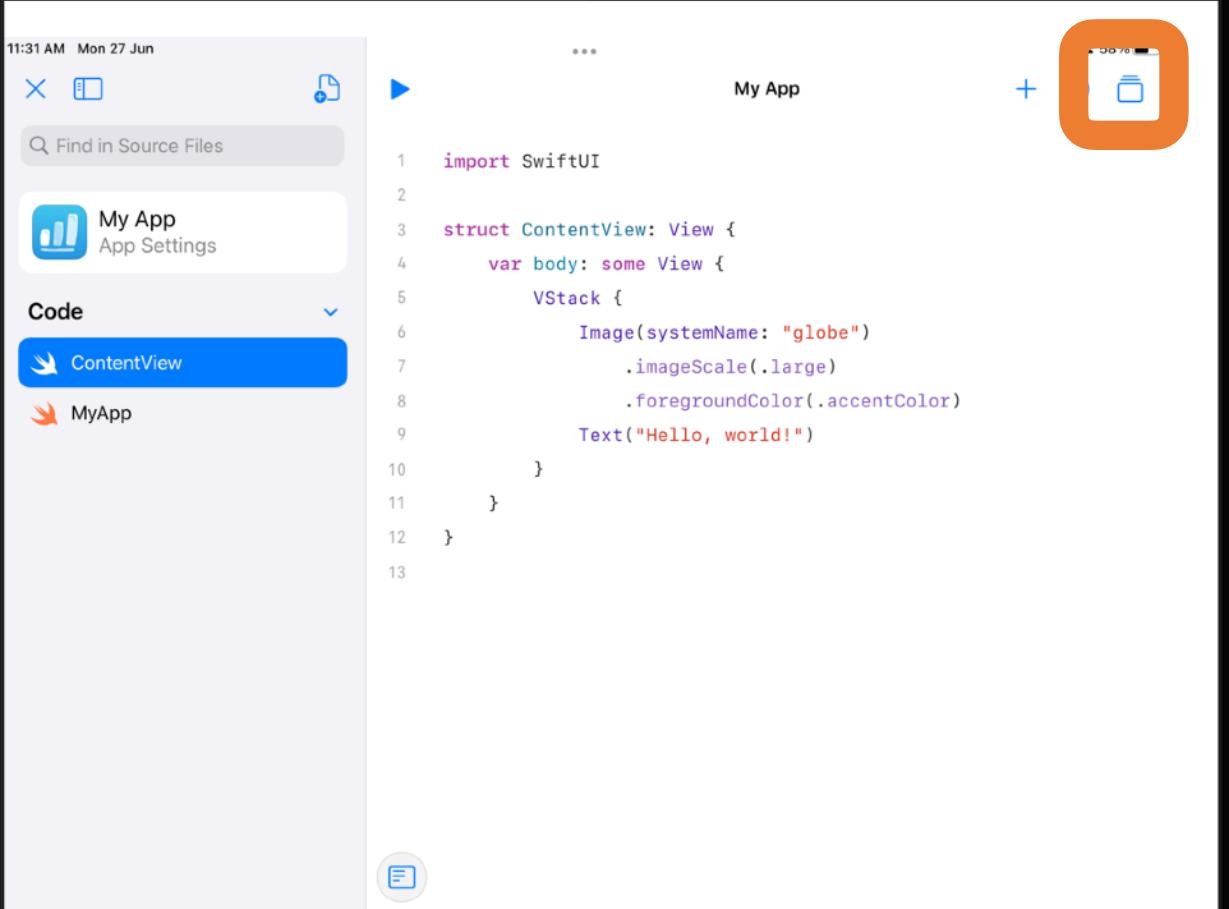


Choose Your Own Story



Puzzle World





11:31 AM Mon 27 Jun



My App

...



App Preview

58%

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Image(systemName: "globe")
7                 .imageScale(.large)
8                 .foregroundColor(.accentColor)
9             Text("Hello, world!")
10        }
11    }
12 }
13
```

Hello, world!



My App copy 3



App Preview ▾



Find in Source Files



My App

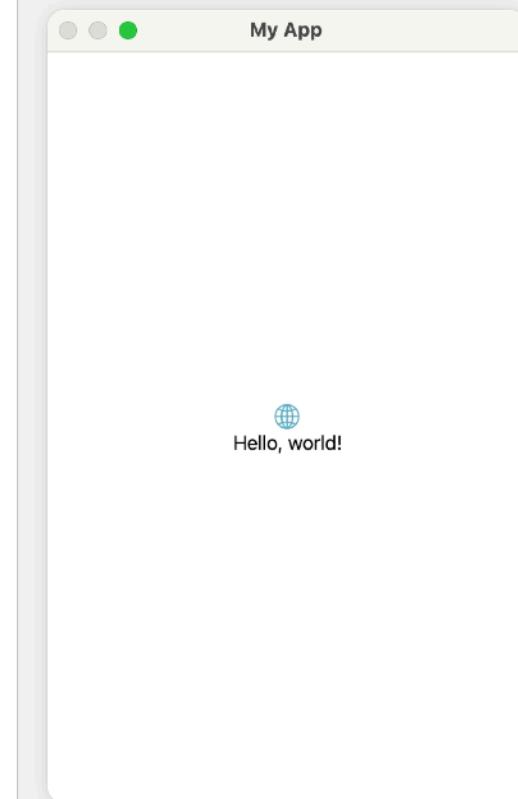
App Settings

Code

ContentView

MyApp

```
1 import SwiftUI
2
3 @main
4 struct MyApp: App {
5     var body: some Scene {
6         WindowGroup {
7             ContentView()
8         }
9     }
10 }
11
```



Hello, world!



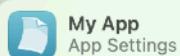
My App copy 3



App Preview ▾



Find in Source Files



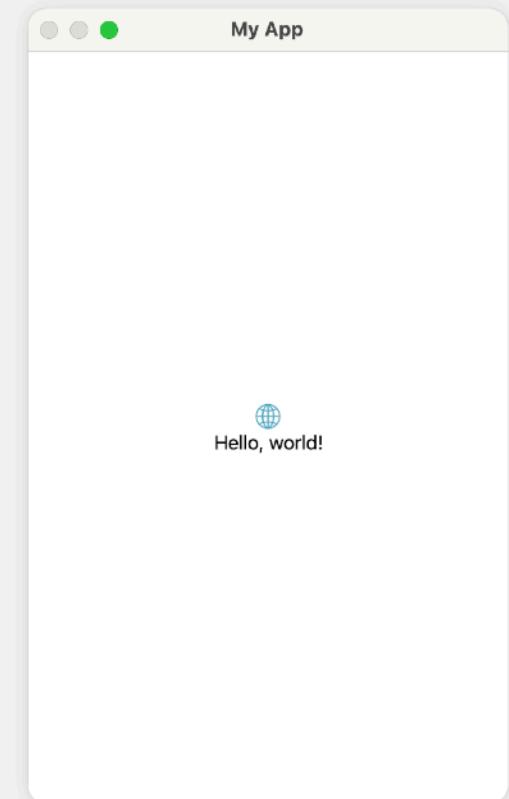
My App

App Settings

Code

ContentView

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Image(systemName: "globe")
7                 .imageScale(.large)
8                 .foregroundColor(.accentColor)
9             Text("Hello, world!")
10        }
11    }
12 }
13
```



Hello, world!

My App copy 3

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Image(systemName: "globe")
7                 .imageScale(.large)
8                 .foregroundColor(.accentColor)
9             Text("Hello, world!")
10        }
11    }
12 }
13
```

0 1 2 3 4 5



My App copy 3



Find in Source Files

My App
App Settings

Code

ContentView

MyApp

```
1 import SwiftUI
```

V accentColor	V indigo
V black	V mint
V blue	V orange
V brown	V pink
V clear	V primary
V cyan	V purple
V gray	V red
V green	V secondary
V teal	V teal
V white	V white
V yellow	V yellow

```
/view: View {
    some View {
        Image(systemName: "globe")
            .imageScale(.large)
            .foregroundStyle(.accentColor)
        text("Hello, world!")
    }
}
```

U large
U medium
U small

Change some settings. See what it does

Vertical Stack

```
1
1   import SwiftUI
2
3   struct ContentView: View {
4       var body: some View {
5           VStack {
6               Image(systemName: "globe")
7                   .imageScale(.large)
8                   .foregroundColor(.accentColor)
9               Text("Hello, world!")
10
11
12
13 }
```



Predict

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Text("Hello, world!")
7             Image(systemName: "globe")
8                 .imageScale(.large)
9                 .foregroundColor(.green)
10
11     } ...
12 }
13 }
14
```

Spot the difference?

ContentView

MyApp

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Text("Hello, world!")
7             Image(systemName: "globe")
8                 .imageScale(.large)
9                 .foregroundColor(.green)
10
11     } ...
12 }
13
14 }
```

My App

Hello, world!

Spot the difference?

ContentView

MyApp

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Text("Hello, world!")
7             Image(systemName: "globe")
8                 .imageScale(.large)
9                 .foregroundColor(.green)
10
11     } ...
12 }
13
14 }
```

My App

Hello, world!

Spot the difference?

```
1 import SwiftUI  
2  
3 struct ContentView: View {  
4     var body: some View {  
5         VStack {  
6             Image(systemName: "globe")  
7                 .imageScale(.large)  
8                 .foregroundColor(.accentColor)  
9             text("Hello, world!")  
10        }  
11    }  
12 }  
13
```

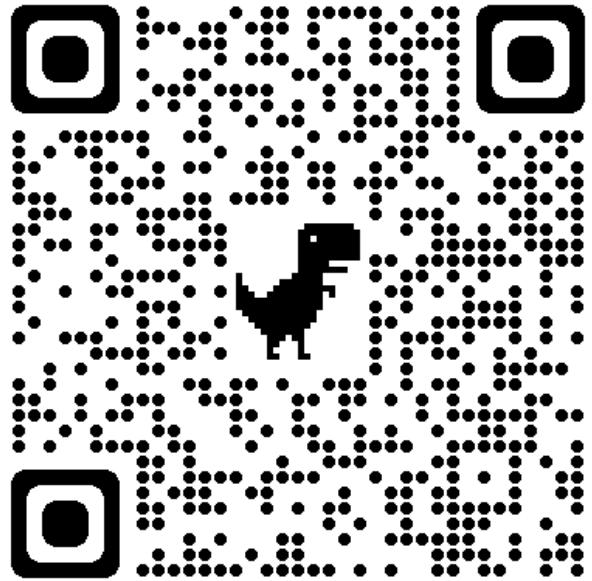
Spot the bug?

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Image(systemName: "globe")
7                 .imageScale(.large)
8                 .foregroundColor(.accentColor)
9             text("Hello, world!")
10        }
11    }
12 }
13
```

Watch out - Swift is cASE sENSITIVE

Step 1

Files at: <https://github.com/jamesabela/HyggeApp>





```
1 import SwiftUI  
2  
3 struct ContentView: View {  
4     var body: some View {  
5         VStack {  
6             Text("Hello, world!")  
7             Image(systemName: "globe")  
8                 .imageScale(.large)  
9                 .foregroundColor(.green)  
10        }  
11    }  
12 }  
13 }  
14 }
```

1. Delete everything inside the Vstack

My App

ContentView

MyApp

Find in Source Files

My App

App Settings

Code

ContentView

MyApp

```
1 import SwiftUI
2
3 struct ContentView: View {
4     var body: some View {
5         VStack {
6             Text("Hello, world!")
7             Image(systemName: "globe")
8                 .imageScale(.large)
9                 .foregroundColor(.green)
10        }
11    }
12 }
13 }
14 }
```

My App

Hello, world!

App Preview

0 1 2 3 4 5

The screenshot shows the Xcode interface with the following details:

- Top Bar:** Standard Xcode icons for file, edit, search, and navigation.
- Search Bar:** "Find in Source Files" search bar.
- Sidebar:** "My App" icon, "App Settings" link, "Code" dropdown menu with "ContentView" selected, and "MyApp" link.
- Editor:** A code editor window titled "ContentView" under "MyApp". The code is as follows:

```
1 import SwiftUI
2
3 func RandomPrompt() -> String{
4     let things = ["Three people you enjoyed talking to today", "Three things you
5         are grateful for today."]
6     return String(things.randomElement()!)
7 }
8 struct ContentView: View {
9     var body: some View {
10         VStack {
11             ...
12         }
13     }
14 }
15
```

- Compiler Error:** A red callout bubble at the bottom right of the code editor says "Cannot find 'GoodThingPrompt' in scope".
- Preview:** An "App Preview" window titled "My App" displays the text "Three things you are grateful for today."
- Bottom:** A navigation bar with icons for file, edit, and search, and a page number indicator "0 1 2 3 4 5".

```
import SwiftUI

func RandomPrompt() -> String{
    let things = ["Three people you enjoyed talking to today","Three things you are grateful for today."]
    return String(things.randomElement()!)
}

struct ContentView: View {
    @State var GoodThingPrompt: String = RandomPrompt()
    var body: some View {
        VStack {
            Text(GoodThingPrompt)
        }
    }
}
```

Random list function

Variable monitored in the view

Text

What else could you make with this code?

Magic 8 Ball

Random Name Generator

Dice

```
import SwiftUI

func RandomPrompt() -> String{
    let things = ["Three people you
enjoyed talking to today","Three things
you are grateful for today."]
    return String(things.randomElement()!)
}

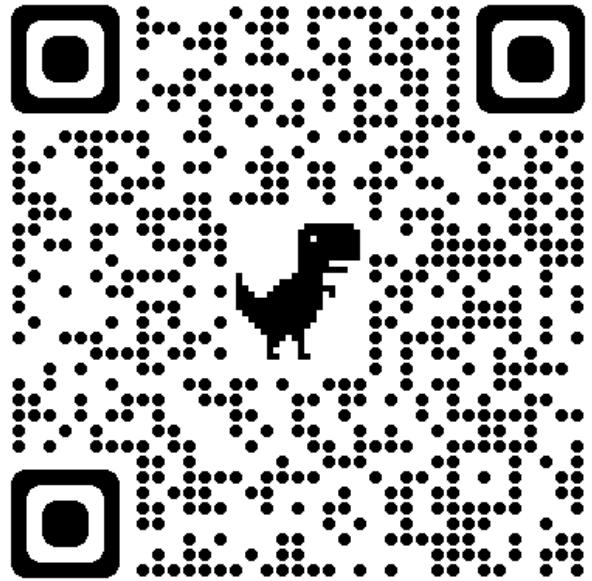
struct ContentView: View {
    @State var GoodThingPrompt: String =
RandomPrompt()
    var body: some View {
        VStack {
            Text(GoodThingPrompt)

        }
    }
}
```

Story Prompts

Step 2

Files at: <https://github.com/jamesabela/HyggeApp>



TextFields

1. We need to declare a text string for each item

```
@State var GoodThing1: String = ""
```

2. We need to add textfields

```
TextField("1st", text: $GoodThing1)
```

Prompt text

Variable

Three moments that made you smile today

1st

2nd

3rd

```
import SwiftUI

func RandomPrompt() -> String{
    let things = ["Three people you enjoyed talking to today",
    "Three things you are grateful for today", "Three moments that
    made you smile today", "Three best things that have happened
    today"]
    return String(things.randomElement()!)
}

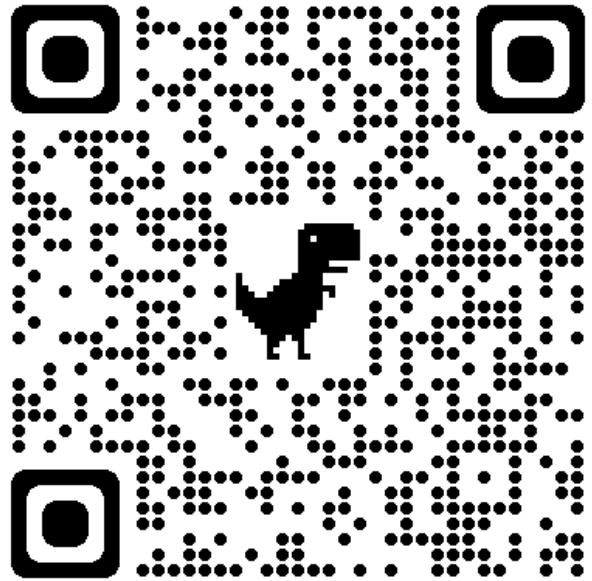
struct ContentView: View {
    @State var GoodThing1: String = ""
    @State var GoodThing2: String = ""
    @State var GoodThing3: String = ""
    @State var GoodThingPrompt: String = RandomPrompt()

    var body: some View {
        VStack {
            Text(GoodThingPrompt)
            TextField("1st", text: $GoodThing1)
            TextField("2nd", text: $GoodThing2)
            TextField("3rd", text: $GoodThing3)
        }
    }
}
```

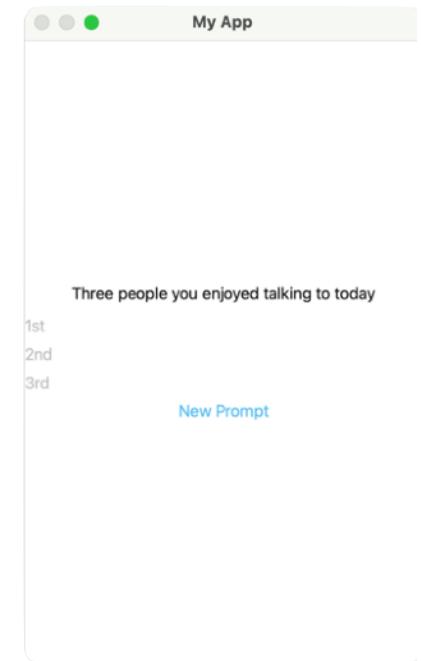
Three moments that made you smile today
1st
2nd
3rd

Step 3

Files at: <https://github.com/jamesabela/HyggeApp>



Add a button



Button Prompt

```
Button("New Prompt"){\n    GoodThingPrompt = RandomPrompt()\n}
```

Code to call
function

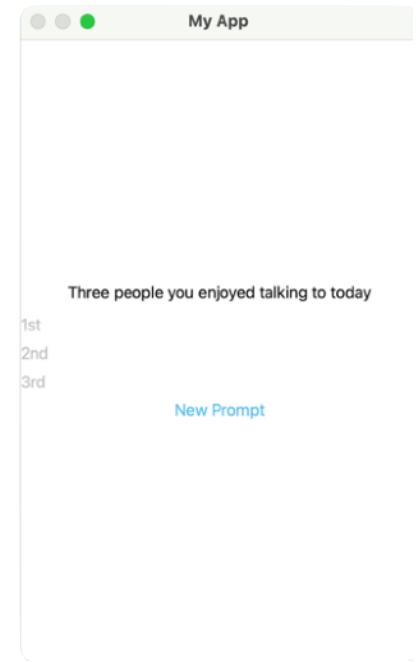
```
import SwiftUI
```

```
func RandomPrompt() -> String{
    let things = ["Three people you enjoyed talking to today",
    "Three things you are grateful for today", "Three moments that made
    you smile today", "Three best things that have happened today"]
    return String(things.randomElement()!)
}

struct ContentView: View {
    @State var GoodThing1: String = ""
    @State var GoodThing2: String = ""
    @State var GoodThing3: String = ""
    @State var GoodThingPrompt: String = RandomPrompt()

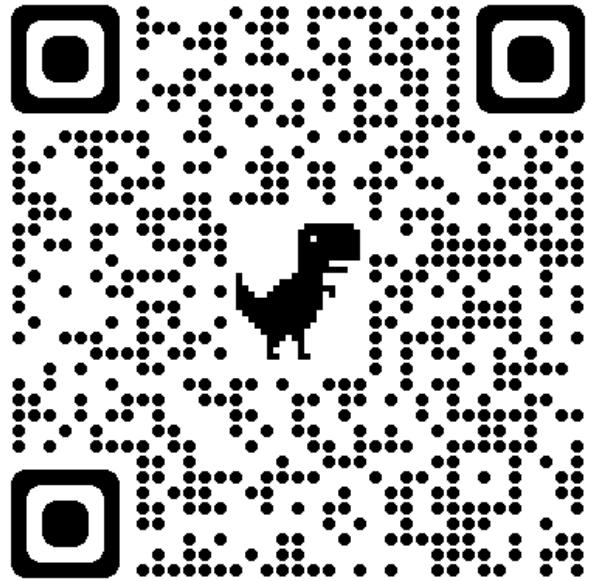
    var body: some View {
        VStack {
            Text(GoodThingPrompt)
            TextField("1st", text: $GoodThing1)
            TextField("2nd", text: $GoodThing2)
            TextField("3rd", text: $GoodThing3)
            Button("New Prompt"){
                GoodThingPrompt = RandomPrompt()
            }
        }
    }
}
```

```
0 1 2 3 4 5
```



Step 4

Files at: <https://github.com/jamesabela/HyggeApp>



Add a Title

Text

Text("Hygge")

Add space

Font Style

- `font(.title)`
- `padding()`
- `foregroundColor(.mint)`

Color choice

Hygge

Three best things that have happened today

1st

2nd

3rd

New Prompt

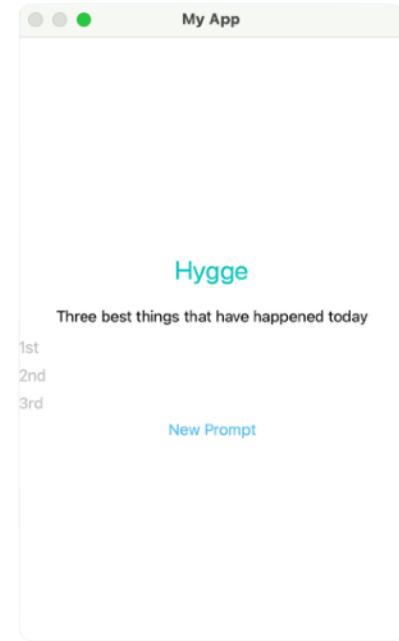
```
import SwiftUI

func RandomPrompt() -> String{
    let things = ["Three people you enjoyed talking to today", "Three things you are
grateful for today", "Three moments that made you smile today", "Three best things that have
happened today"]
    return String(things.randomElement()!)
}
```

```
struct ContentView: View {
    @State var GoodThing1: String = ""
    @State var GoodThing2: String = ""
    @State var GoodThing3: String = ""
    @State var GoodThingPrompt: String = RandomPrompt()

    var body: some View {
        VStack {
            Text("Hygge")
                .font(.title)
                .padding()
                .foregroundColor(.mint)

            Text(GoodThingPrompt)
            TextField("1st", text: $GoodThing1)
            TextField("2nd", text: $GoodThing2)
            TextField("3rd", text: $GoodThing3)
            Button("New Prompt"){
                GoodThingPrompt = RandomPrompt()
            }
        }
    }
}
```



Font Choices

```
.font(.largeTitle)  
.font(.title)  
.font(.title2)  
.font(.title3)  
.font(.headline)  
.font(.subheadline)  
.font(.body)  
.font(.callout)  
.font(.caption)  
.font(.caption2)
```

.bold()

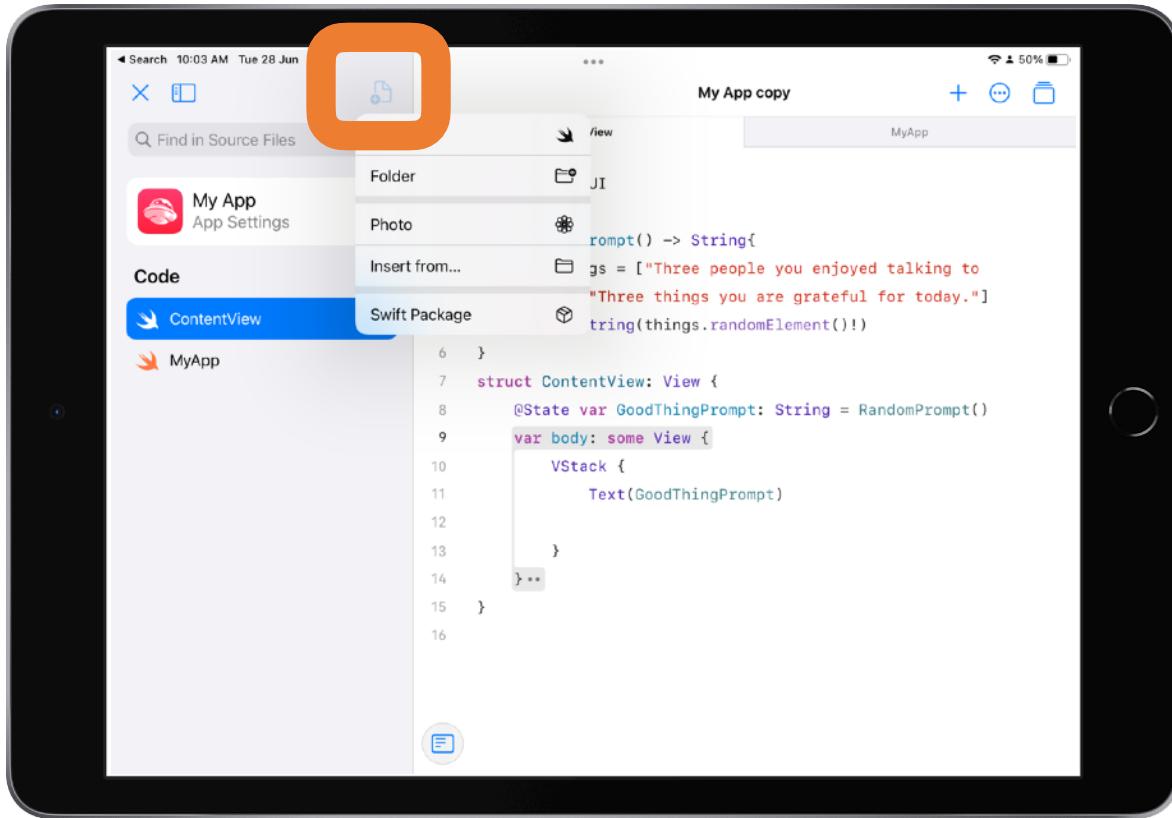
.italic()

`.font(.system(.caption, design: .monospaced))`

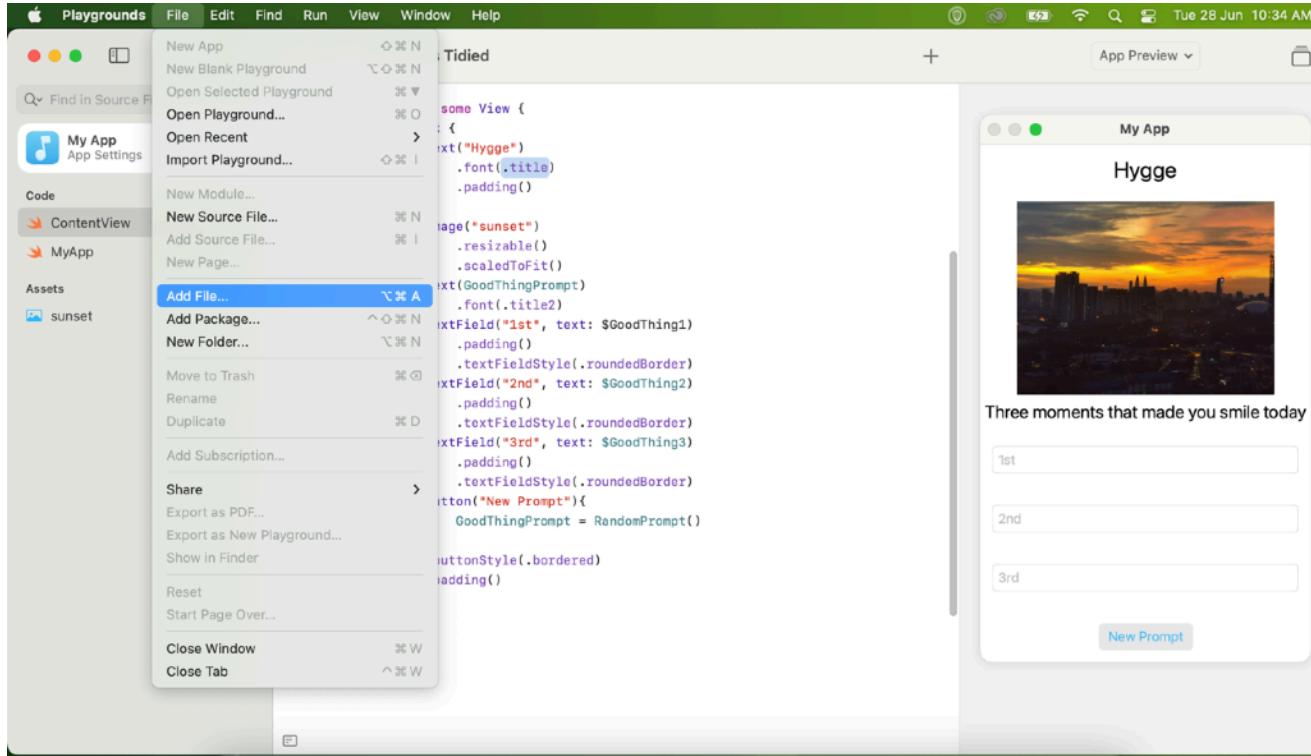
Colors

V accentColor	V indigo
V black	V mint
V blue	V orange
V brown	V pink
V clear	V primary
V cyan	V purple
V gray	V red
V green	V secondary
V teal	V white
V yellow	

Add an image (iPad)

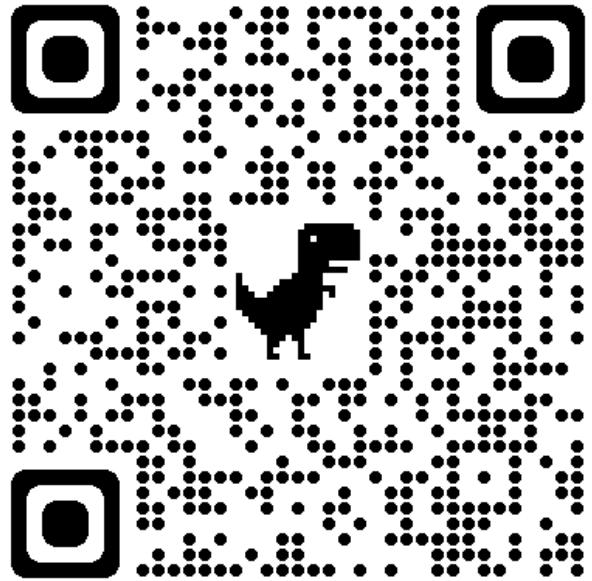


Add an image (Mac OS)



Step 5

Files at: <https://github.com/jamesabela/HyggeApp>



Code for image

```
Image("sunset")  
    .resizable()  
    .scaledToFit()
```

Image file name

Can change size

Fits in size given

```

import SwiftUI

func RandomPrompt() -> String{
    let things = ["Three people you enjoyed talking to today", "Three things you are grateful for today", "Three moments that made you smile today", "Three best things that have happened today"]
    return String(things.randomElement()!)
}

struct ContentView: View {
    @State var GoodThing1: String = ""
    @State var GoodThing2: String = ""
    @State var GoodThing3: String = ""
    @State var GoodThingPrompt: String = RandomPrompt()

    var body: some View {
        VStack {
            Text("Hygge")
                .font(/*@START_MENU_TOKEN@*/.title/*@END_MENU_TOKEN@*/)
                .padding()

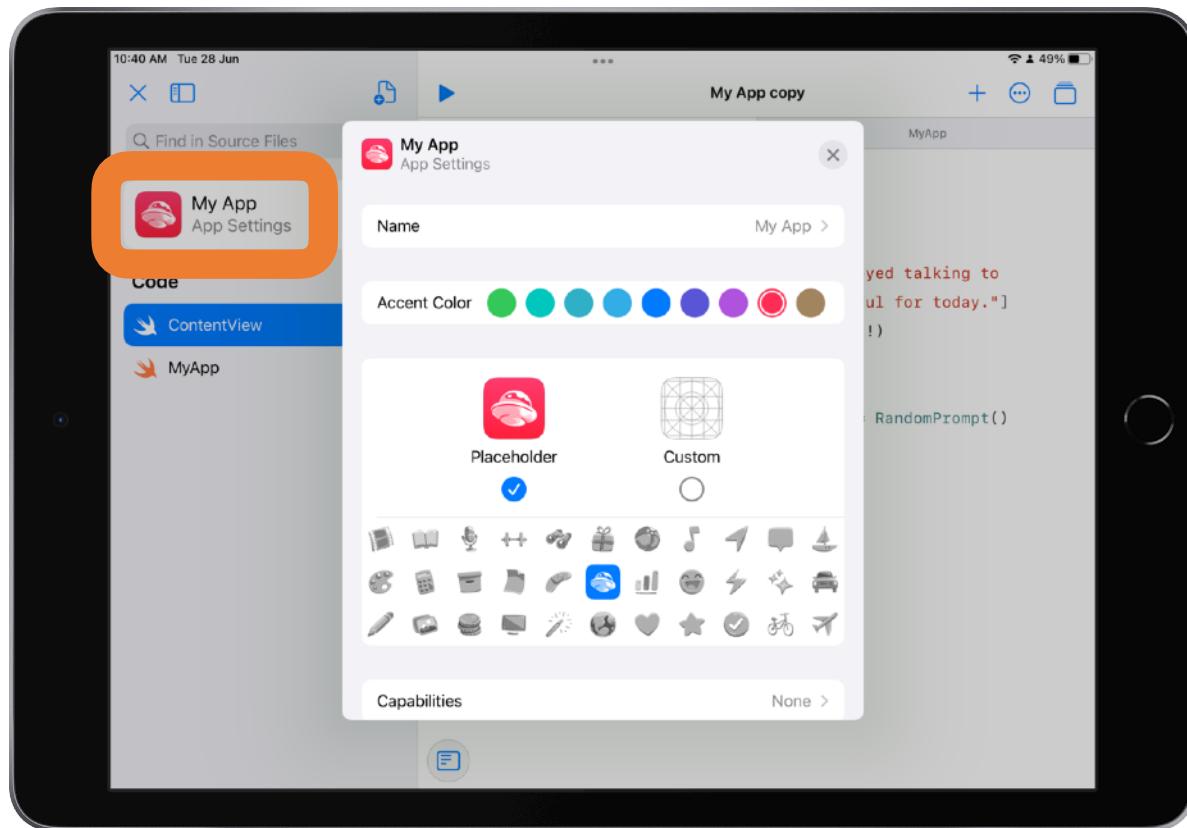
            Image("sunset")
                .resizable()
                .scaledToFit()

            Text(GoodThingPrompt)
                .font(.title2)
            TextField("1st", text: $GoodThing1)
                .padding()
                .textFieldStyle(.roundedBorder)
            TextField("2nd", text: $GoodThing2)
                .padding()
                .textFieldStyle(.roundedBorder)
            TextField("3rd", text: $GoodThing3)
                .padding()
                .textFieldStyle(.roundedBorder)
            Button("New Prompt"){
                GoodThingPrompt = RandomPrompt()
            }
            .buttonStyle(.bordered)
            .padding()
        }
    }
}

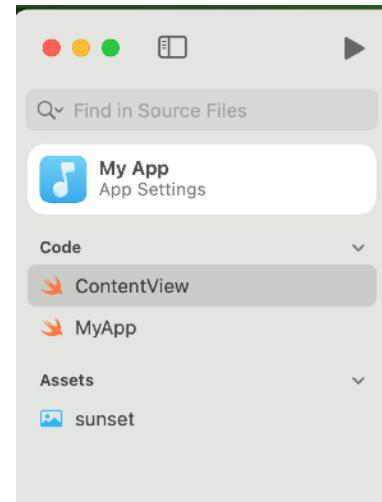
```



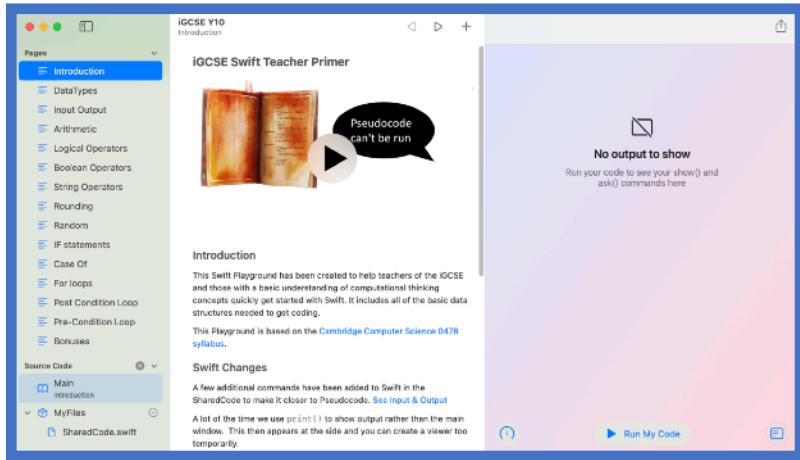
Name your app & make an icon



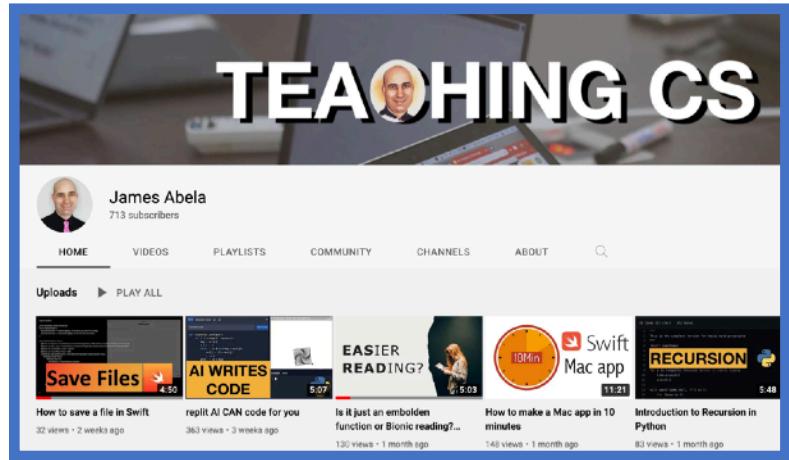
Mac OS



Next Steps



<https://bit.ly/swiftiGCSE>



<https://www.youtube.com/c/JamesAbela>

Teaching Code: <https://www.apple.com/my/education/k12/teaching-code/>

Too easy? <https://www.hackingwithswift.com/100/swiftui>