Playgrounds - Get Started with Apps **MyApp ExperimentView IntroView FriendDetailView** Playgrounds - Keep Going with Apps **Modifying State Using a Conditional Modifier Built In Views** Practice with Built in views Navigating in SwuiftUI **Navigation Experiment** NavigationSplitViewExperiment **MyApp ContentView Sharing Data Between Views** Create a New View to Share Data Add and Delete Creatures Add a CreatureDetail View CreatureDetail **ContentView** Playgrounds - Keep Going with Apps (files) **Bindings** ConditionalCircle **ConditionalViews ContentView**

CreatureDetail

CreatureEditor
CreatureRow

CreatureZoo

CreatureZooExtension

DancingCreatures

MyApp

NavigationExperiment

NavigationSplitViewExperiment

ResizableFont

SlidingRectangle

StoryEditor

TestView

Playgrounds - Get Started with Apps - Files

IntroView - Get Started with Apps

```
import SwiftUI
struct ExperimentView: View {
    var body: some View {
        VStack {
            FriendDetailView()
            HStack {
                Image("Blu")
                    .resizable()
                    .scaledToFit()
                VStack {
                    Text("a")
                         .font(.caption)
                    Text("a")
                        .font(.caption)
            HStack {
                Image("Hopper")
struct ExperimentView_Previews: PreviewProvider {
    static var previews: some View {
        VStack {
            ExperimentView()
```

FriendDetailView - Get Started with Apps

```
}
}
struct FriendDetailView_Previews: PreviewProvider {
    static var previews: some View {
        VStack {
            FriendDetailView()
        }
    }
}
```

MyApp - Get Started with Apps

```
import SwiftUI
import Guide

@main
struct MyApp: App {
    var body: some Scene {
        WindowGroup {
            IntroView()
        }
    }
}
```

Playgrounds - Keep Going with Apps

Modifying State - Keep Going with Apps

```
import SwiftUI
struct ConditionalViews: View {
   @State var is0n = false
   @State var isReady = false
    var body: some View {
        VStack {
            Button("Toggle Ready") {
                isReady.toggle()
            if isReady {
                Text("Ready!")
            } else {
                Text("Not Ready")
            if isOn {
                Circle()
                    .frame(maxHeight: 200)
                    .foregroundColor(.yellow)
```

Using a Conditional Modifier - Keep Going with Apps

Built In Views - Keep Going with Apps

```
import SwiftUI
struct Bindings: View {
```

Practice with Built in Views - Keep Going with Apps

```
import SwiftUI
struct StoryEditor: View {
    @State var name: String = ""
    @State var hobby: String = ""
    @State var favoriteFood: String = ""
    var body: some View {
        VStack {
            Text("Hello, my name is \((name), my favorite hobby is \((hobby)) and I
can't stop eating \((favoriteFood)!")
            TextField("Enter name", text: $name)
            TextField("Enter hobby", text: $hobby)
            TextField("Enter favorite food", text: $favoriteFood)
        .padding()
struct StoryEditor_Previews: PreviewProvider {
    static var previews: some View {
        StoryEditor()
```

Navigating in SwiftUI - Keep Going with Apps

NavigationExperiment - Navigating in SwiftUI

NavigationSplitViewExperiment - Navigating in SwiftUI

```
List {
                    NavigationLink{
                        SlidingRectangle()
                            .navigationTitle("Sliding rectangle")
                    } label: {
                        HStack {
                            Text("Tap to navigate")
                            Spacer()
                            Image(systemName: "arrow.forward.circle")
                                .font(.largeTitle)
                    NavigationLink("Second link") {
                        Text("2")
                    NavigationLink {
                        Image(systemName: "arrow.forward.circle")
                    } label: {
                        Text("New navigation link")
            } detail: {
                Text("a")
struct NavigationSplitViewExperiment_Previews: PreviewProvider {
    static var previews: some View {
        NavigationSplitViewExperiment().assess()
```

MyApp - Navigating in SwiftUI

Sharing Data Between Views - Keep Going with Apps

CreatureZoo - Sharing Data Between Views

```
import SwiftUI
import Guide
struct ContentView: View {
   @EnvironmentObject var data : CreatureZoo
   var body: some View {
       SPCAssessableGroup(view: self) {
            List {
                Text("ContentView")
                Section("Dance") {
                    NavigationLink {
                        DancingCreatures()
                            .navigationTitle("Dancing Creatures")
                    } label: {
                        Text("Make some creatures dance around")
                ForEach(data.creatures) { creature in
                    CreatureRow(creature: creature)
```

MyApp - Sharing Data Between Views

```
.navigationTitle("My Creatures")
}
.environmentObject(data)
}
}
}
```

Create a New View to Share Data - Keep Going with Apps

DancingCreatures - Create a New View to Share data

```
import SwiftUI
import Guide
struct DancingCreatures: View {
    @EnvironmentObject var data : CreatureZoo
    var body: some View {
        SPCAssessableGroup(view: self) {
            VStack {
                ZStack {
                    ForEach(data.creatures) { creature in
                        Text(creature.emoji)
                            .resizableFont()
                            .offset(creature.offset)
                            .rotationEffect(creature.rotation)
                            .animation(.spring(response: 0.5, dampingFraction:
0.5), value: creature.rotation)
                            .animation(.default, value: creature.offset)
                            .animation(.default.delay(data.indexFor(creature) /
10), value: creature.offset)
                .onTapGesture {
                    data.randomizeOffsets()
struct DancingCreatures_Previews: PreviewProvider {
    static var previews: some View {
        DancingCreatures().environmentObject(CreatureZoo())
```

Add and Delete Creatures - Keep Going with Apps

CreatureEditor - Add and Delete Creatures

```
import SwiftUI
import Guide
struct CreatureEditor: View {
   @State var newCreature : Creature = Creature(name: "", emoji: "")
   @EnvironmentObject var data : CreatureZoo
   @Environment(\.dismiss) var dismiss
   var body: some View {
       SPCAssessableGroup(view: self) {
            VStack(alignment: .leading) {
                Form {
                    Section("Name") {
                        TextField("Name", text: $newCreature.name)
                    Section("Emoji") {
                        TextField("Emoji", text: $newCreature.emoji)
                    Section("Creature Preview") {
                        CreatureRow(creature: newCreature)
            .toolbar {
                ToolbarItem {
                    Button("Add") {
                        data.creatures.append(newCreature)
                        dismiss()
struct CreatureEditor_Previews: PreviewProvider {
    static var previews: some View {
       NavigationStack() {
            CreatureEditor().environmentObject(CreatureZoo())
```

ContentView - Add and delete creatures

```
import SwiftUI
import Guide

struct ContentView: View {
// @StateObject var data = CreatureZoo()
    @EnvironmentObject var data : CreatureZoo
```

```
var body: some View {
    SPCAssessableGroup(view: self) {
        List {
            Text("ContentView")
            Section("Dance") {
                NavigationLink {
                    DancingCreatures()
                        .navigationTitle("Dancing Creatures")
                } label: {
                    Text("Make some creatures dance around")
            ForEach(data.creatures) { creature in
                NavigationLink {
                    CreatureDetail(creature: creature)
                        .navigationTitle(creature.name)
                } label: {
                    CreatureRow(creature: creature)
            .onDelete { indexSet in
                data.creatures.remove(atOffsets: indexSet)
        .toolbar {
            ToolbarItem {
                NavigationLink("Add") {
                    CreatureEditor()
                        .navigationTitle("Add Creature")
```

Add a CreatureDetail View - Keep Going with Apps

CreatureDetail - Add a CreatureDetail View

```
import SwiftUI
struct CreatureDetail: View {
    let creature : Creature
   @State var isScaled = false
    @State var color = Color.white
    @State var shadowRadius : CGFloat = 0.5
    @State var angle = Angle(degrees: 0)
    var body: some View {
        VStack {
            Text(creature.emoji)
                .resizableFont()
                .colorMultiply(color)
                .shadow(color: color, radius: shadowRadius * 40)
                .rotation3DEffect(isScaled ? Angle(degrees: 0) : Angle(degrees:
360), axis: (x: 5, y: 2, z: 1))
                .scaleEffect(isScaled ? 1.5 : 1)
                .animation(.spring(response: 0.5, dampingFraction: 0.5,
blendDuration: 0.5), value: isScaled)
            Button("Scale") {
                isScaled.toggle()
            ColorPicker("Choose a Color", selection: $color)
            HStack {
               Text("Shadow")
                Slider(value: $shadowRadius)
        .padding()
struct CreatureDetail_Previews: PreviewProvider {
    static var previews: some View {
        CreatureDetail(creature: CreatureZoo().creatures.randomElement() ??
Creature(name: "Panda", emoji: "🍇 ")).assess()
```

ContentView - Add a CreatureDetail View

```
import SwiftUI
import Guide

struct ContentView: View {
// @StateObject var data = CreatureZoo()
    @EnvironmentObject var data : CreatureZoo
```

```
var body: some View {
    SPCAssessableGroup(view: self) {
        List {
            Text("ContentView")
            Section("Dance") {
                NavigationLink {
                    DancingCreatures()
                        .navigationTitle("Dancing Creatures")
                } label: {
                    Text("Make some creatures dance around")
            ForEach(data.creatures) { creature in
                NavigationLink {
                    CreatureDetail(creature: creature)
                        .navigationTitle(creature.name)
                } label: {
                    CreatureRow(creature: creature)
            .onDelete { indexSet in
                data.creatures.remove(atOffsets: indexSet)
        .toolbar {
            ToolbarItem {
                NavigationLink("Add") {
                    CreatureEditor()
                        .navigationTitle("Add Creature")
```

Playgrounds Keep Going with Apps (files)

```
import SwiftUI
struct Bindings: View {
    @State var is0n = false
    @State var color = Color.primary
    var body: some View {
        VStack {
            Toggle("Press Me", isOn: $isOn)
            ColorPicker("Pick", selection: $color)
            Image(systemName: isOn ? "battery.100" : "battery.25")
                .font(.system(size: 150))
                .foregroundColor(color)
            Text("test text")
                .font(.largeTitle)
                .foregroundColor(color)
                .padding()
        .padding()
struct Bindings_Previews: PreviewProvider {
    static var previews: some View {
        Bindings().assess()
```

ConditionalCircle - Keep Going with Apps

```
struct SwiftUIView_Previews: PreviewProvider {
    static var previews: some View {
        ConditionalCircle().assess()
    }
}
```

ConditionalViews - Keep Going with Apps

```
import SwiftUI
struct ConditionalViews: View {
    @State var is0n = false
    @State var isReady = false
    var body: some View {
        VStack {
            Button("Toggle Ready") {
                isReady.toggle()
            if isReady {
                Text("Ready!")
            } else {
                Text("Not Ready")
            if isOn {
                Circle()
                    .frame(maxHeight: 200)
                    .foregroundColor(.yellow)
                Text("0n")
            } else {
                Circle()
                    .frame(maxHeight: 200)
                    .foregroundColor(.green)
                Text("0ff")
            Button("Press Me") {
                isOn.toggle()
struct ConditionalViews_Previews: PreviewProvider {
    static var previews: some View {
        VStack {
            ConditionalViews().assess()
```

```
import SwiftUI
import Guide
struct ContentView: View {
    @EnvironmentObject var data : CreatureZoo
    var body: some View {
        SPCAssessableGroup(view: self) {
            List {
                Text("ContentView")
                Section("Dance") {
                    NavigationLink {
                        DancingCreatures()
                            .navigationTitle("Dancing Creatures")
                    } label: {
                        Text("Make some creatures dance around")
                ForEach(data.creatures) { creature in
                    NavigationLink {
                        CreatureDetail(creature: creature)
                            .navigationTitle(creature.name)
                    } label: {
                        CreatureRow(creature: creature)
                .onDelete { indexSet in
                    data.creatures.remove(atOffsets: indexSet)
            .toolbar {
                ToolbarItem {
                    NavigationLink("Add") {
                        CreatureEditor()
                            .navigationTitle("Add Creature")
```

.

CreatureDetail - Keep Going with Apps

```
import SwiftUI
struct CreatureDetail: View {
    let creature : Creature
    @State var isScaled = false
    @State var color = Color.white
    @State var shadowRadius : CGFloat = 0.5
    @State var angle = Angle(degrees: 0)
    var body: some View {
        VStack {
            Text(creature.emoji)
                .resizableFont()
                .colorMultiply(color)
                .shadow(color: color, radius: shadowRadius * 40)
                .rotation3DEffect(isScaled ? Angle(degrees: 0) : Angle(degrees:
360), axis: (x: 5, y: 2, z: 1))
                .scaleEffect(isScaled ? 1.5 : 1)
                .animation(.spring(response: 0.5, dampingFraction: 0.5,
blendDuration: 0.5), value: isScaled)
            Button("Scale") {
                isScaled.toggle()
            ColorPicker("Choose a Color", selection: $color)
            HStack {
                Text("Shadow")
                Slider(value: $shadowRadius)
        .padding()
struct CreatureDetail_Previews: PreviewProvider {
    static var previews: some View {
        CreatureDetail(creature: CreatureZoo().creatures.randomElement() ??
Creature(name: "Panda", emoji: "...")).assess()
```

CreatureEditor - Keep Going with Apps

```
import SwiftUI
import Guide
```

```
struct CreatureEditor: View {
   @State var newCreature : Creature = Creature(name: "", emoji: "")
   @EnvironmentObject var data : CreatureZoo
   @Environment(\.dismiss) var dismiss
   var body: some View {
       SPCAssessableGroup(view: self) {
            VStack(alignment: .leading) {
                Form {
                    Section("Name") {
                        TextField("Name", text: $newCreature.name)
                    Section("Emoji") {
                        TextField("Emoji", text: $newCreature.emoji)
                    Section("Creature Preview") {
                        CreatureRow(creature: newCreature)
            .toolbar {
                ToolbarItem {
                    Button("Add") {
                        data.creatures.append(newCreature)
                        dismiss()
struct CreatureEditor_Previews: PreviewProvider {
    static var previews: some View {
       NavigationStack() {
            CreatureEditor().environmentObject(CreatureZoo())
```

CreatureRow - Keep Going with Apps

```
import SwiftUI

struct CreatureRow: View {
    var creature : Creature

    var body: some View {
        HStack {
```

CreatureZoo - Keep Going with Apps

CreatureZooExtension - Keep Going with Apps

```
import SwiftUI

extension CreatureZoo {
    func randomizeOffsets() {
        for index in creatures.indices {
            creatures[index].offset = CGSize(width: CGFloat.random(in: -200...200),
        height: CGFloat.random(in: -200...200))
```

```
creatures[index].rotation = Angle(degrees: Double.random(in: 0...720))
}

func synchronizeOffsets() {
    let randomOffset = CGSize(width: CGFloat.random(in: -200...200), height:
CGFloat.random(in: -200...200))
    for index in creatures.indices {
        creatures[index].offset = randomOffset
    }
}

func indexFor(_ creature: Creature) -> Double {
    if let index = creatures.firstIndex(where: { $0.id == creature.id }) {
        return Double(index)
    }
    return 0.0
}
```

DancingCreatures - Keep Going with Apps

```
import SwiftUI
import Guide
struct DancingCreatures: View {
    @EnvironmentObject var data : CreatureZoo
    var body: some View {
        SPCAssessableGroup(view: self) {
            VStack {
                ZStack {
                    ForEach(data.creatures) { creature in
                        Text(creature.emoji)
                            .resizableFont()
                            .offset(creature.offset)
                            .rotationEffect(creature.rotation)
                            .animation(.spring(response: 0.5, dampingFraction:
0.5), value: creature.rotation)
                            .animation(.default, value: creature.offset)
                            .animation(.default.delay(data.indexFor(creature) /
10), value: creature.offset)
                .onTapGesture {
                    data.randomizeOffsets()
struct DancingCreatures_Previews: PreviewProvider {
    static var previews: some View {
```

```
DancingCreatures().environmentObject(CreatureZoo())
}
}
```

MyApp - Keep Going with Apps

NavigationExperiment - Keep Going with Apps

NavigationSplitViewExperiment - Keep Going with Apps

```
import SwiftUI
struct NavigationSplitViewExperiment: View {
    var body: some View {
        VStack {
            NavigationSplitView {
                List {
                    NavigationLink{
                        SlidingRectangle()
                            .navigationTitle("Sliding rectangle")
                    } label: {
                        HStack {
                            Text("Tap to navigate")
                            Spacer()
                            Image(systemName: "arrow.forward.circle")
                                 .font(.largeTitle)
                    NavigationLink("Second link") {
                        Text("2")
                    NavigationLink {
                        Image(systemName: "arrow.forward.circle")
                    } label: {
                        Text("New navigation link")
            } detail: {
                Text("a")
struct NavigationSplitViewExperiment_Previews: PreviewProvider {
    static var previews: some View {
        NavigationSplitViewExperiment().assess()
```

ResizableFont - Keep Going with Apps

```
import SwiftUI

extension View {
    func resizableFont(maximumFontSize: Double = 125, minimumScaleFactor: Double = 0.01) -> some View {
        self.modifier(FlexibleFontModifier(maximumFontSize: maximumFontSize, minimumScaleFactor: minimumScaleFactor))
    }
}
```

SlidingRectangle - Keep Going with Apps

StoryEditor - Keep Going with Apps

```
import SwiftUI

struct StoryEditor: View {
    @State var name: String = ""
    @State var hobby: String = ""
    @State var favoriteFood: String = ""

var body: some View {
    VStack {
        Text("Hello, my name is \(name), my favorite hobby is \(hobby) and I)
    can't stop eating \(favoriteFood)!")

        TextField("Enter name", text: $name)
```

```
TextField("Enter hobby", text: $hobby)
    TextField("Enter favorite food", text: $favoriteFood)

}
    .padding()
}
struct StoryEditor_Previews: PreviewProvider {
    static var previews: some View {
        StoryEditor()
    }
}
```

TestView - Keep Going with Apps

```
import SwiftUI
struct TestView: View {
    @State var is0n = false
    var body: some View {
        VStack {
            Button("Press Me") {
                isOn.toggle()
            Circle()
                .frame(maxHeight: 200)
                .foregroundColor(isOn ? .yellow : .black)
                .shadow(color: isOn ? .red : .green, radius: 8)
                .animation(.default, value: is0n)
struct TestView_Previews: PreviewProvider {
    static var previews: some View {
        TestView()
```