Swift Coding Club

Xcode

App Development Projects

Projects

Welcome to the Swift Coding Club!

By joining this coding club, you're already on your way to building your first apps. No worries if you're just learning how to code. The projects here will guide you through the basics of both coding concepts and app development. Each project builds on the last, focusing on different aspects of apps, so that by the end you have the skills to build your very own app.

You'll need the Intro to App Development with Swift course to do these projects. Make sure you complete the prerequisites for each one.

Everyone Can Code

Intro to App Development with Swift

Xcode

SinglePhoto

Prerequisites: None

Time: 1.5 hours

Go there: Lesson 5: First App

See how easy it is to build your very first app. With SinglePhoto, you'll build an app that not only shows something — like a photo — but also reacts when a user taps the screen. This simple app interaction is the basis of many apps, so it will come in handy as you expand your coding and app development skills. With this project, you'll also familiarise yourself with Xcode, Interface Builder and Simulator, and learn how to use them together to build your own apps.
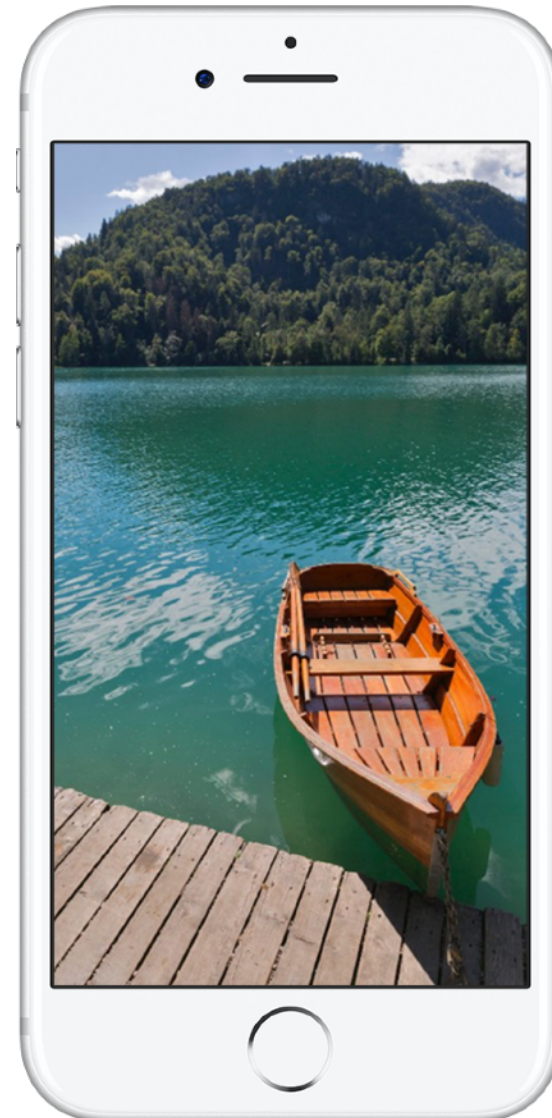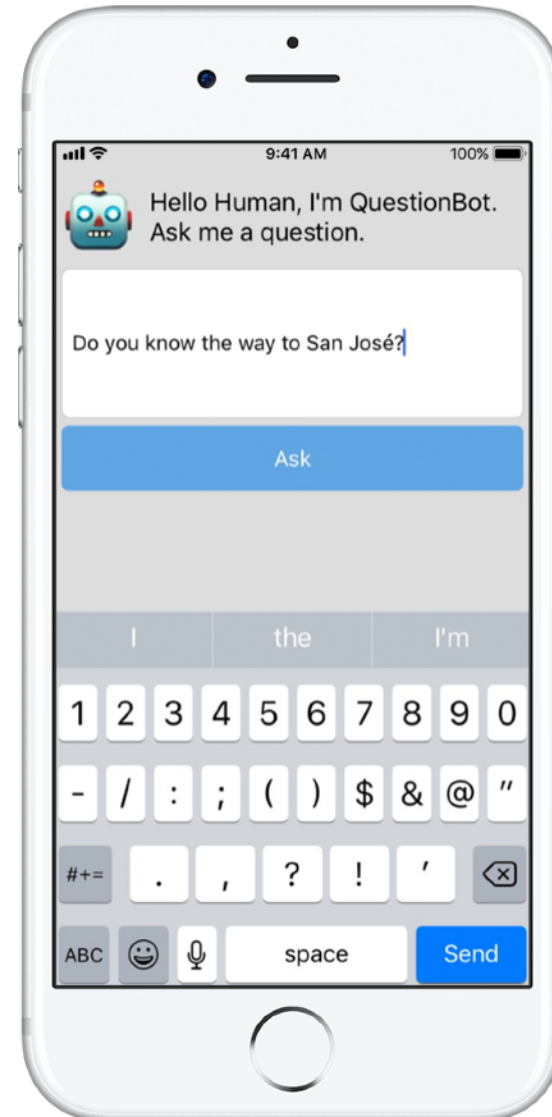
QuestionBot

Prerequisites:
- SinglePhoto app
- Lesson 2: Naming and Identifiers
- Lesson 3: Strings
- Lesson 6: Functions
- Lesson 10: Parameters and Results
- Lesson 11: Making Decisions

Time: 6.5 hours

Go there: Lesson 13: QuestionBot

Have you ever used a quiz app or wondered how Siri works? Many apps seem to have a "brain" of their own. With QuestionBot, you'll build an app containing the brains of a bot that responds differently to different questions. To do that, you'll learn how to store values in constants, represent text in code, define inputs and outputs, and more. This project helps you focus on understanding how the app works and the logic that's needed to make your app appear to have a "brain".

ChatBot

Prerequisites:
- QuestionBot app
- Lesson 14: Arrays and Loops
- Lesson 15: Defining Structures

Time: 3.5 hours

Go there: Lesson 16: QuestionBot 2

Now let's make QuestionBot even smarter. You want to use your app over and over again, and it would be helpful if it could "remember" your past interactions. With ChatBot, you'll build an upgraded version of QuestionBot that retains a history of the messages between the user and the bot. ChatBot is already partially built, so you can concentrate on learning the various skills needed to build the part of the app that keeps track of the conversation.
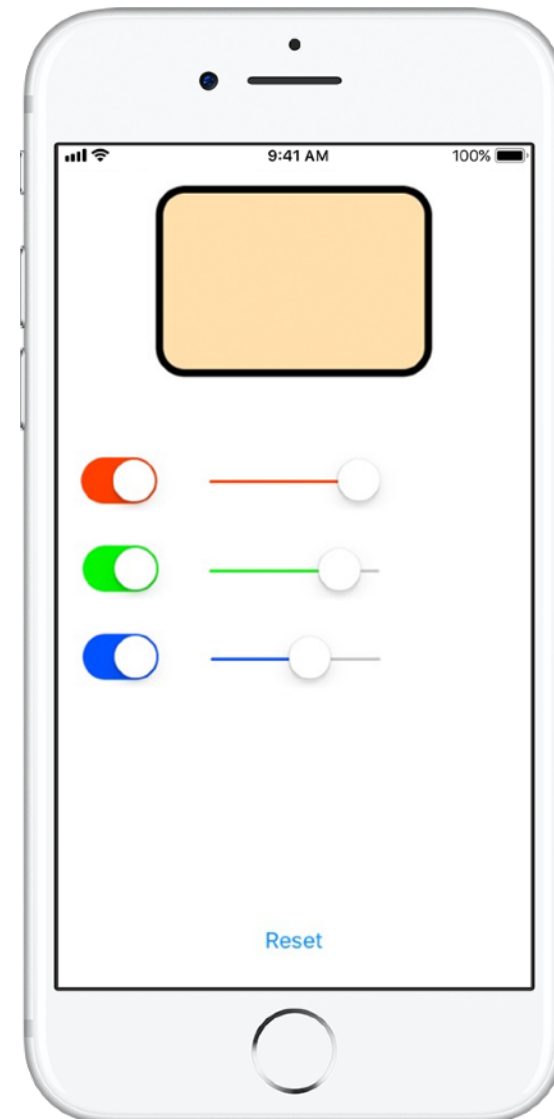
ColorMix

Prerequisites: ChatBot app

Time: 1.5 hours

Go there: Lesson 17: Actions and Outlets

Think about the user interface (UI). So far, you've built apps where a user can tap buttons and enter text. With ColorMix, you'll also learn how to add switches and sliders to the UI. More importantly, you'll learn how to connect those visual UI elements to Swift code so they work the way you want them to. In the end, you'll have ColorMix, an app that generates colours by mixing red, green and blue.
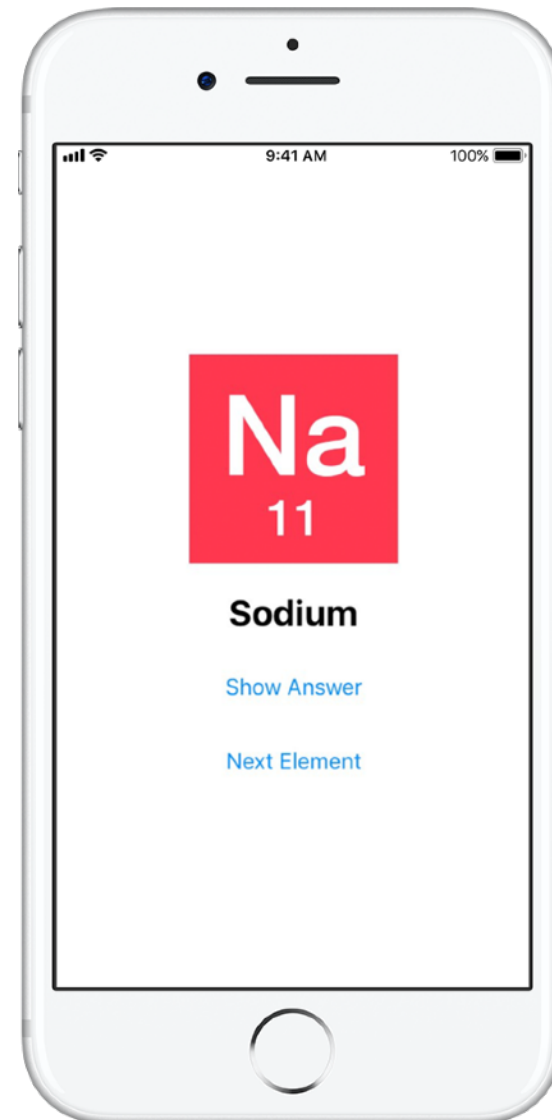
ElementsQuiz

Prerequisites: ColorMix app

Time: 2 hours

Go there: Lesson 18: Adaptive User Interfaces

Most people download apps to solve a particular problem —
to help them get organised, calculate their finances or get
directions, for example. In ElementsQuiz, you'll build an app
that helps students memorise elements of the periodic table.
You'll use Stack Views to easily position multiple views on
the screen at once, and the positions will adjust to fit a wide
variety of screen dimensions.

AnimalSounds

Prerequisites: ElementsQuiz app

Time: 1 hour

Go there: Lesson 18: Adaptive User Interfaces

As the apps you build become more complex, you may wonder, "Do I have to write all this code myself? Hasn't someone written this code before?" In AnimalSounds, you'll use some previously created code that does all the hard work of playing audio, and learn how to integrate it into your app. Then you'll use Stack Views inside other Stack Views to create your most advanced user interface yet.
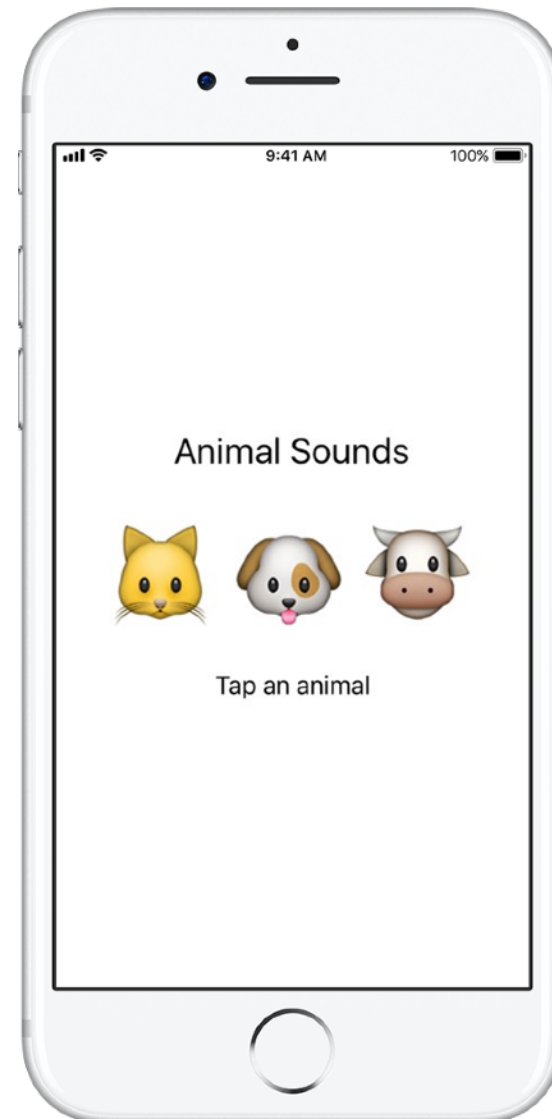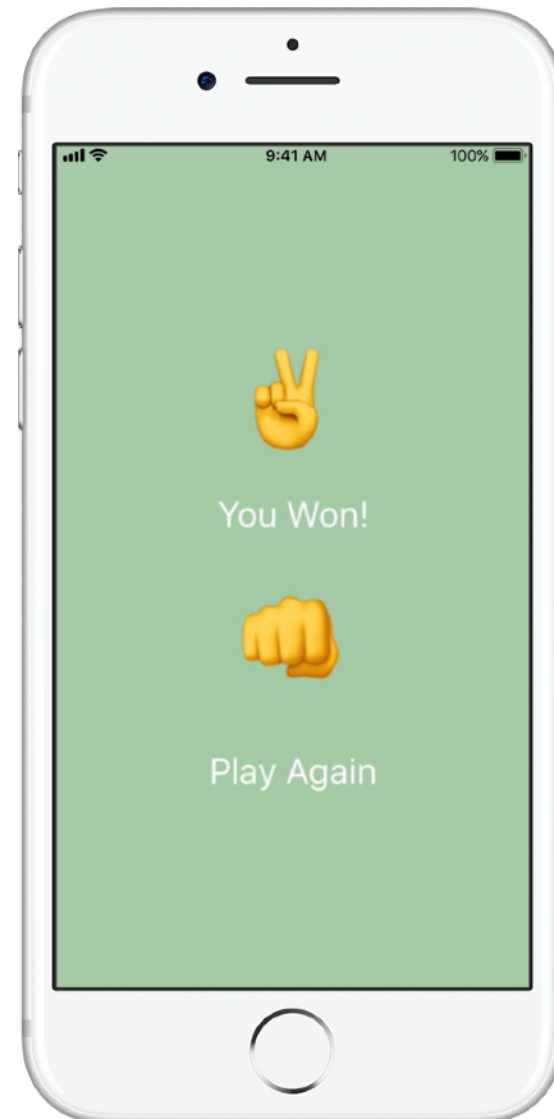
RockPaperScissors

Prerequisites:
- AnimalSounds app
- Lesson 19: Enumerations

Time: 1.5 hours

Go there: Lesson 20: Final Project

You'll often need to present the user with a list of choices, such as a direction to travel or a type of cuisine. In this project, you'll learn how to create the three unique options for a game of Rock, Paper, Scissors so the user can play against the computer endlessly. Along the way, you'll learn how to generate random numbers so the computer selects a random choice.

MemeMaker

Prerequisites:
- AnimalSounds app
- Lesson 19: Enumerations

Time: 1.5 hours

Go there: Lesson 20: Final Project

An Internet meme is typically a still image with text at the top and bottom. In MemeMaker, you'll learn to use Segmented Controls to display different captions above and below an image. Since the controls are independent, you can mix and match the text to create custom combinations.