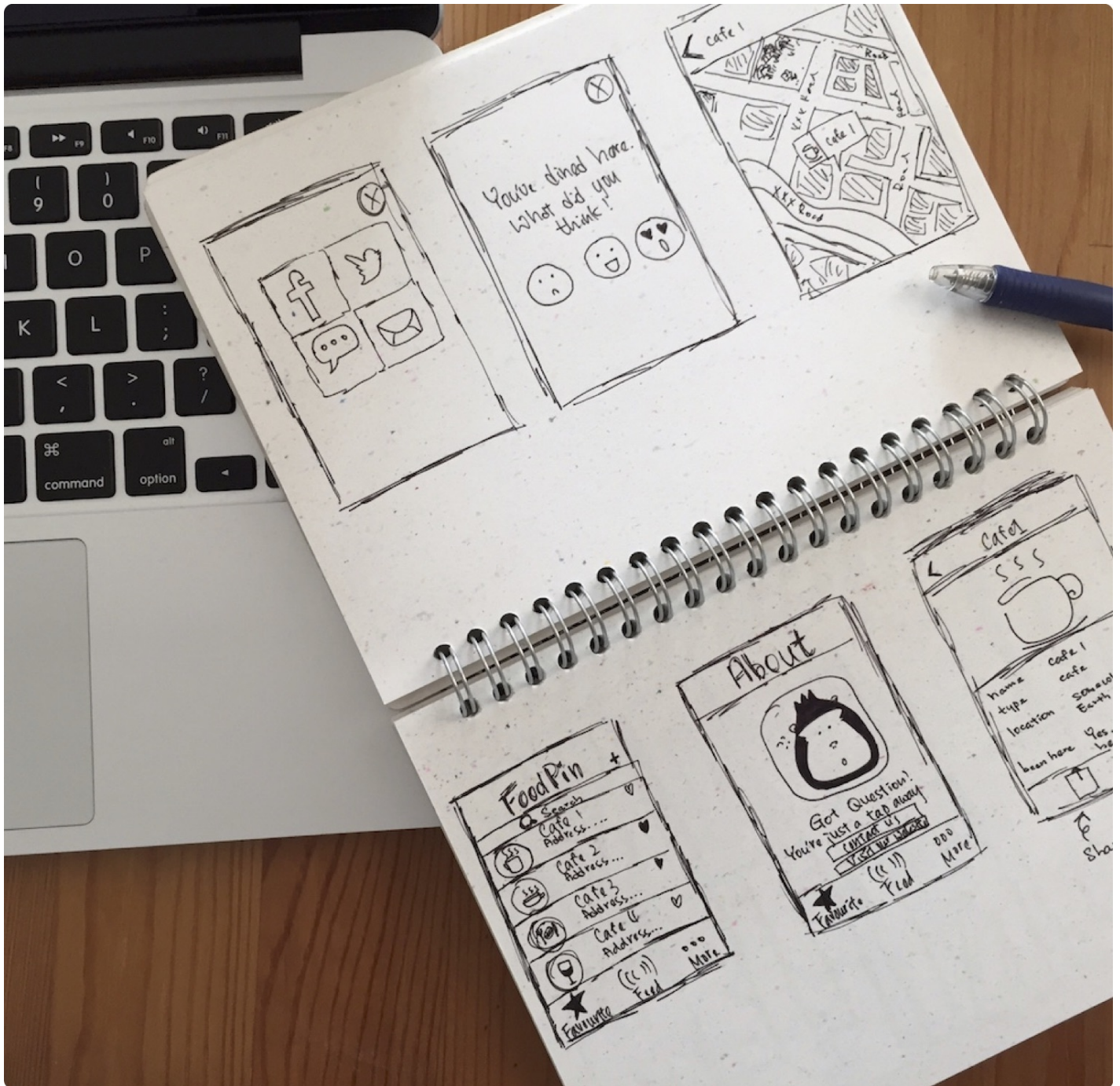


Chapter 7

Introduction to Prototyping



If a picture is worth 1000 words, a prototype is worth 1000 meetings.

Now that you have some basic concepts of iOS programming and Interface Builder. As I always said, there is no better way to learn app development than actually creating an app. We will create a real app together in this book. However, we will not rush out to write code. Instead we will build a prototype first.

Every time I mentioned prototype to beginners, two questions pop up:

- What's a prototype?
- Why prototyping?

A prototype is an early model of a product used for testing a concept or visualizing an idea. Prototyping has been used in many industries. Before constructing a building, an architect needs to draw a plan of the building and make a model of the building. An aircraft company builds a prototype of an aircraft to test any design flaws before building and assembling an aeroplane. Software companies also build software prototypes to explore an idea before creating the actual application. In the context of app development, a prototype can be an early sample of an app which is not fully functional and contains basic UI or even sketches.

Prototyping is the process of developing a prototype and offers many advantages. First, it helps you visualize your idea and better communicate your idea to your team members and users. If you're the only developer and the only user, you may not need prototyping as you define the requirements and how the app works. Everything is in your head and you know exactly what you want and what you need to build.

However, app development rarely happens like that. You may work in a team of programmers or build an app for a client. Even if you're an indie developer, you're probably developing an app that targets for a particular group of users or all users around the globe. You have to find some ways to communicate your idea or test your idea. You can explain your idea in words, but no one wants to see another boring presentation of ideas. There is no better way than showing your users a working demo.

By creating a prototype, you can involve your users earlier and they will better understand how the app works and figure out what's missing at the early development stage.

Prototyping also allows you to test an idea without building an actual app. You can show your prototype to your potential users and get early feedback before an app is built. This saves you both time and money. Figure 7-1 illustrates the benefits of prototyping.

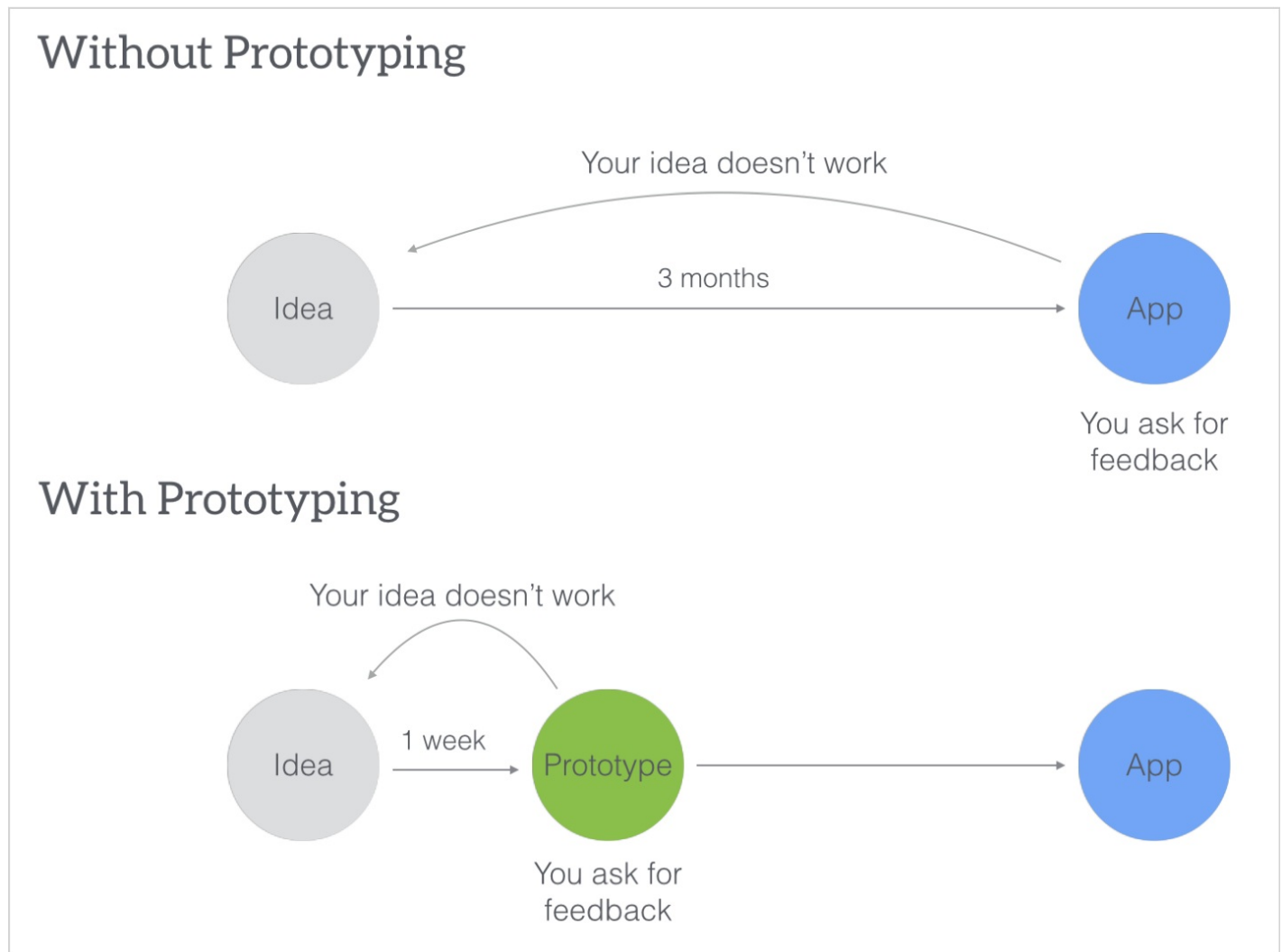


Figure 7-1. Prototyping saves you money and time

Sketching Your App Ideas on Paper

Now you have an app idea how can you create a prototype for your app?

A prototype can take many forms. It can be paper-based or digital-based. I always start from hand drawn concepts and highly recommend you use paper to sketch out your app design. It's

the simplest way to create an app prototype. And paper is still the best way to quickly record all the ideas in your head. For example, I have an idea for building a food app that allows me to save my favourite restaurants. While Yelp is good, I want to build an app for me to create a personal food guide. The app will have these features:

- List the favorite restaurant at home screen
- Create a restaurant record and import a photo from photo album as the restaurant image
- Save the restaurant locally and share it with other foodies in the world
- Show the location of a restaurant on maps
- View restaurants shared by other foodies

I think people may like this idea too. In order to test my idea, I first draw my design on paper. Some people said they're not good at drawing. You don't have to be an artist to draw your app design. The sketches that are shown in figure 7-2 are good enough to visualize your ideas and explain your app to your friends.



Figure 7-2. Draw your app on paper

Prototyping Your App Using POP

You can illustrate your app on paper. But wouldn't it be great if you can create some screen transitions so that your potential users can interact with the app prototype? There are a number of tools for developers to prototype their apps. [POP app](#), [Proto.io](#), [Flinto](#), [Principle](#) and [InvisionApp](#) are some of the examples. I will use POP to create the app prototype but the other tools work pretty much the same.

POP app turns your hand drawings into a working prototype. It lets you capture your drawings using camera or import them from your photo album. To interact with the images, the app offers various transitions for you to link your screens up. You'll see what I mean in a while. First, install POP app on your iPhone and download the app prototype from <https://www.dropbox.com/s/x6v8xlnbr7zusid/sketches.zip?dl=0>. You can unzip the images and import them to your iPhone.

POP app is very easy to use. When you launch it the first time, you will see your project listing. Click the + icon to create a new project. Give your project a name (e.g. Food Pin). Select the project when it's created. By default, the project is empty. Now click the camera icon and use camera option to capture your sketches. Alternatively, you can import the sketches from your photo album. Figure 7-3 shows a sample POP project.

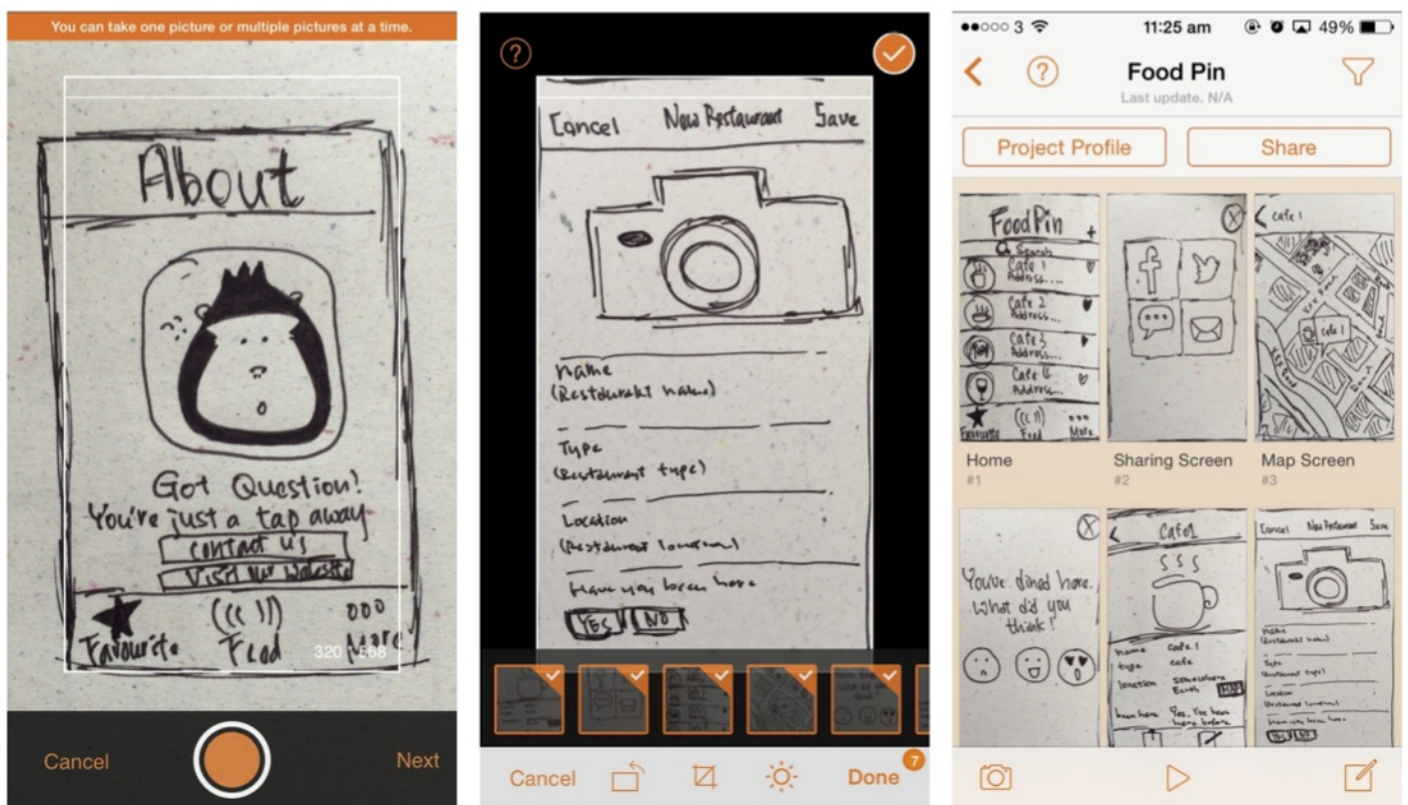


Figure 7-3. Capture your sketches using camera and create a POP project

Start with the home screen of the app and define the screen transition. POP lets you highlight a specific area of the image and specify the target page when that area is tapped. Then define the

transition type including fade, next, back, rise and dismiss. Say, for the home screen, the app should navigate to the detail screen when tapping any of the records. So we highlight the records, set the transition to “next” and link it to the detail screen. Once you have made the change, tap the Play button to interact with the prototype. The app will transit to the detail screen when any of the records are tapped.

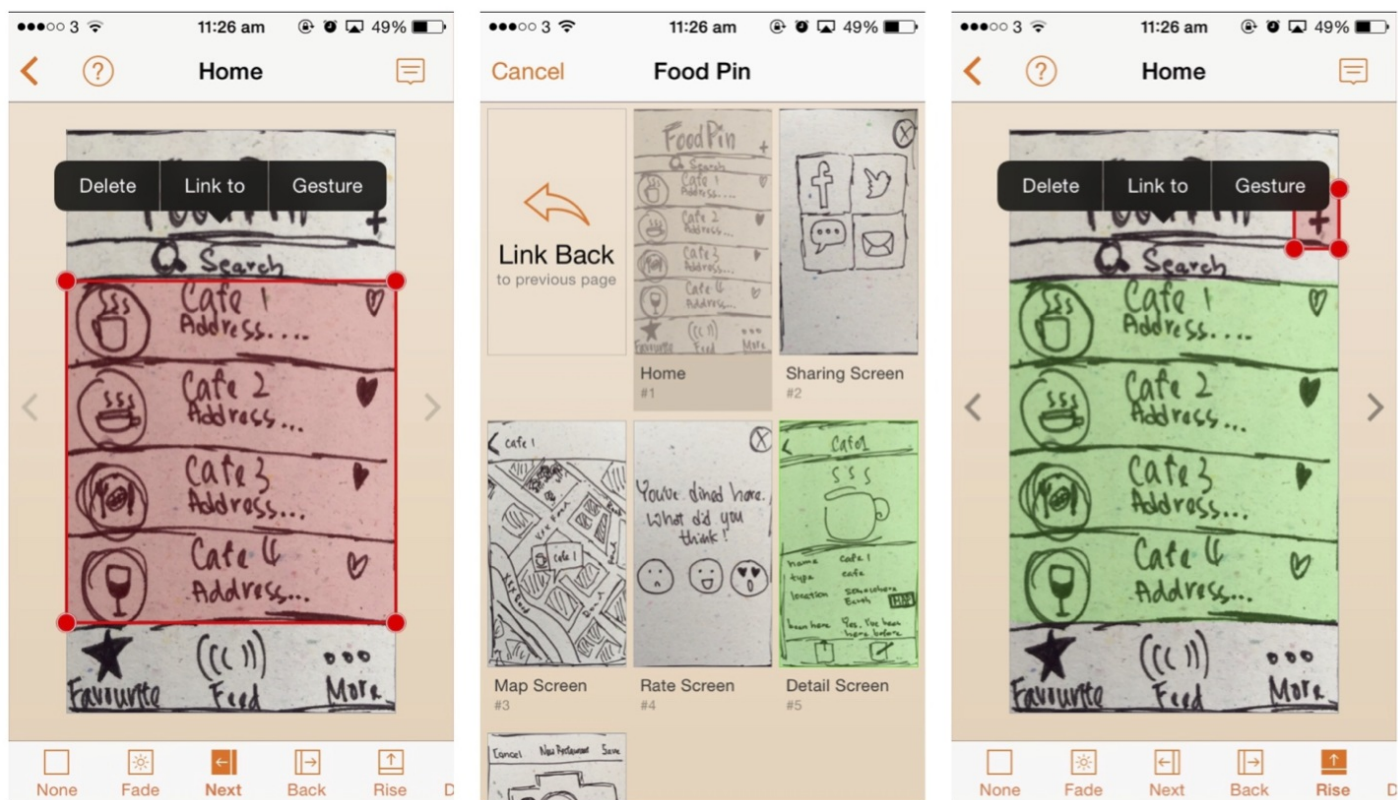


Figure 7-4. Defining screen transitions in POP

You just need to repeat the procedures to define the rest of the screen transitions. When the prototype is finished, you can share it with your team members and potential users using the Share option. Your users can try out the prototype using a web link:

<https://popapp.in/projects/542b9b22dfa026132c03b74/preview>

This is how you lay out your idea and that allows you to solicit users' feedback as early as

possible. If your users don't like the idea or the screen design, this is not a big deal. They're just sketches. We can throw away the sketches and re-create another set. Or you can fine tune some of the areas that don't work and make the prototype better. As you can see, this saves you time and money.

As said before, an app prototype can take many forms. Hand drawing is one of the many ways to create a prototype. If you're a designer, you may use Photoshop or Sketch to design an app prototype. Apple's Keynote can also be used to make quick prototypes. Its built-in drawing tools allow you to design a simple app UI. [Keynotpia](#) offers mock templates to streamline your sketches in Keynote. Figure 7-5 shows a sample screen created using Keynote.

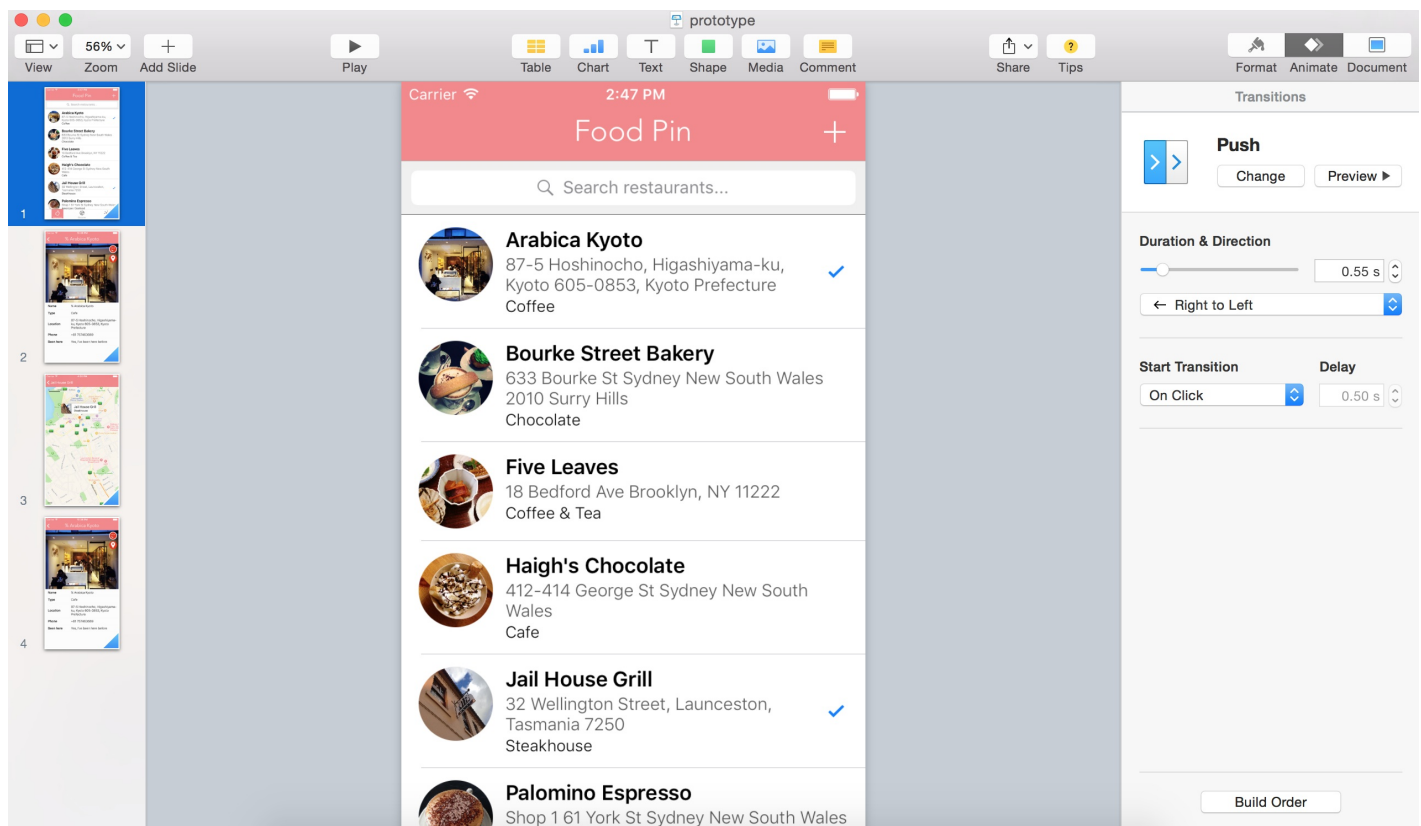


Figure 7-5. Design an app prototype using Keynote

Reference: To learn more about how to prototype using Keynote, you can check out [this article](#)).

Again, you can import the app screens into POP app and define the screen transitions. You can check out this link to play around with the app prototype, which is the app we're going to build

in this book.

Summary

Prototyping is a common process in app development. It allows you to quickly build something workable and show users. Prototyping is used to test an idea and get feedback as early as possible. If you're building an app for a client, building a prototype lets your client clearly understand the app design. So, no matter if you are a solo developer or a member of a development team, I want you to start prototyping today. Rather than jump right in to build your app, lay out your idea on paper first and build a simple demo using POP or other prototyping tools. This will save you a lot of time and money creating a product with no appeal.