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DEPARTMENT OF COMPUTER APPLICATIONS

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COURSE NAME : DESIGNING PROTOTYPE IN SKETCH APP

COURSE CODE :21PCA205

CLASS&SECTION : I- MCA

SEMESTER : II

MCA-Dr.SNSRCAS

Why Sketch?

Congratulations! You've made the decision to start using Sketch to design for iOS. This is a big decision. You may or may not be aware of the controversy currently brewing in the design community. What controversy you ask? **The one of whether to use what has been the industry standard for years, Adobe Photoshop, or a new, smaller, and faster alternative called Sketch.**

Lately, many designers have opted for Sketch, which was once a little-known graphics software program by Bohemian Coding, a Dutch software development firm from The Hague. Many have incorporated the app into their design workflow. These designers include Khoi Vihn, the internationally known graphic designer and former Design Director of the *New York Times*, design consultancies, and companies such as BuzzFeed, SEGA, and Google, plus startups like Pinterest and Groupon. Sketch seems to be taking the design world by storm. The app, which is available for Mac OS only, is less expensive at \$99, faster, and smaller in size (about 40MB) than Photoshop. Add to this the fact that it was specifically created for designers working in UI design for mobile apps and the Web in mind, and you have a compelling argument for Sketch.

This book is not about convincing you to use Sketch over Photoshop. Since you are reading this, I am making the assumption that you have already made a decision to explore how Sketch can be incorporated into your design workflow. And to be fair, Photoshop has its uses. You will still need to use it, as its name implies, to edit photos and raster files and other tasks. Photoshop has been the de facto "go-to" software program for graphic designers for decades because there are some things that it does better than any other software on the market.

This book's primary purpose is to introduce you to Sketch and why it is a great program for anyone considering interface design for iOS devices. I will, in places, point out areas where Sketch and Photoshop differ, but what I don't want to do is to say that Photoshop is bad and Sketch is good. Any search on Sketch vs. Photoshop will yield plenty of articles on why designers feel that one program is better than the other. Some of those points will be repeated here, but only as they pertain to the overall purpose of the book; that is, designing great interfaces for iOS.

A Bit of History

While Photoshop has been on the market for approximately 25 years—its initial release was in February of 1990—Sketch is relatively new on the design scene. Its initial versions failed to make a huge ripple in the design community. While some designers took notice, at the outset it was not adopted as widely as compared to today. Adobe's suite of design software, previously known as Creative Suite, was still the industry standard. Indeed, many designers and agencies still swear by it.

Then, in 2013, in a move that proved to be a shift for their business, Adobe announced that its Creative Suite would only be available via a cloud-based subscription plan. The old DVD versions would no longer be offered, and users would need to sign up for a \$40 monthly subscription plan to use the software. Creative Suite included some of Adobe's top programs used by design professionals worldwide—Photoshop, InDesign, Premiere Pro, AfterEffects, Dreamweaver, Illustrator, and other Adobe products would now be moving to the cloud. The product was renamed Adobe Creative Cloud.

To be clear, users would see no clear difference while using the software via Creative Cloud, and it still needed to be downloaded and installed on their machines. The main difference with the cloud-based model was that every so often (usually every 30 days or so) an Internet connection would be required to ensure that the version of the software is valid. If the validation check against Adobe's servers found that the subscription is no longer valid, then the software would be deemed invalid and could no longer be used.

The new subscription model offered varying price points—one for students at \$19.99 a month and regular pricing for \$49.99. Considering that a full version of the Adobe Creative Suite could run in the \$2,500 range, some saw this as a good deal. But there were some in the designer community that found the change to be disruptive. Today, Creative Cloud allows access to the entire stack of Adobe's suite of programs, and many designers have signed onto the new service. Recent reports show that Adobe now has 4.61 million paying Creative Cloud customers, and it is looking to increase that to 6 million by the end of 2015.

The latest update to Creative Cloud will be artboards in Photoshop (a key Sketch feature that we will discuss later). Notably, it also includes Adobe Design Space, a new HTML-based design tool with a scaled-down interface that appears remarkably Sketch-like.

Photoshop has long maintained its position as the de facto standard for graphic designers creating interfaces for the Web and mobile applications. For years, it stood unchallenged, but privately, many designers were fed up with Photoshop's and Illustrator's bloat. The programs were huge and required significant RAM resources to run. Photoshop alone requires at least 2GB of RAM with 8GB recommended.

Some designers, this one included, felt that with the changes taking place on the Web, and with the growing popularity of mobile phones and tablets, Adobe wasn't doing the best job of keeping Photoshop up to date, and that it was trying to do too much and to be too many things to too many people. Its rendering style wasn't very efficient, and anyone who has ever created a Photoshop file was aware of the program's propensity for creating HUGE files in the program's proprietary format (PSD). UI designers had special needs and many felt that those needs were not being met.

Still, the ability for any newcomer to challenge Adobe’s dominance in the design space remained virtually impossible for quite some time. Companies invested in Creative Suite for their teams, and designers dealt with their frustrations hoping for better options to come.

Enter Sketch 2

Sketch first made its way onto my radar in late 2013, well before its current iteration (v3.3.3). Version 2 was already out, and some friends of mine were discussing the program. I took a look at the interface and thought that it seemed very simple. Maybe too simple, as shown in Figure 1-1. At that time, I was still a fan of Fireworks for interface design, mostly because it offered very focused tools and wasn’t as overwhelming as Photoshop. At the time, I didn’t care enough to dive deeper or to get a better understanding of what Bohemian Coding was trying to accomplish with Sketch.



Figure 1-1. The Sketch 2 interface

However, like the little engine that could, the scrappy software studio made steady and consistent improvements to the program. From the beginning, they have been listening and paying close attention to the feedback from designers in their growing community. This is apparent in every Sketch release.

First off, it’s important to note that Sketch is a Mac OS X app. This means that Sketch was created initially to run solely and exclusively on the Mac operating system. As such, releases were timed and optimized to work with various releases of the OS by Apple. Starting with Sketch version 2.3, it was known as the “Snow Leopard” release. The team added features such as Boolean operations, background blur, and the ability to import PDF and EPS files into designs.

The developers also focused on improving the program's responsiveness and speed. Features like background blur were important for iOS designers, as this feature was prominent in Apple's revamp of iOS. With the new look being prominently displayed on iPhones everywhere, the Sketch development team had the foresight to add this feature to the program. This is the kind of thinking that made designers take notice of Sketch.

Sketch Mirror

Another feature for which Bohemian Coding showed a lot of foresight was the addition of Sketch Mirror (see Figure 1-2). This handy feature allowed designers to preview their work in all its glory on their iPhones or iPad. Distributed as a standalone iPhone app and available via the App Store, Sketch Mirror scales your designs up or down depending on resolution, and it allowed you to preview your designs directly on an iPhone or iPad. This small change demonstrated Bohemian Coding's commitment, not only to designers working on mobile apps, but to iOS itself; that is, Sketch gave a nod to the dominant mobile platform at the time.

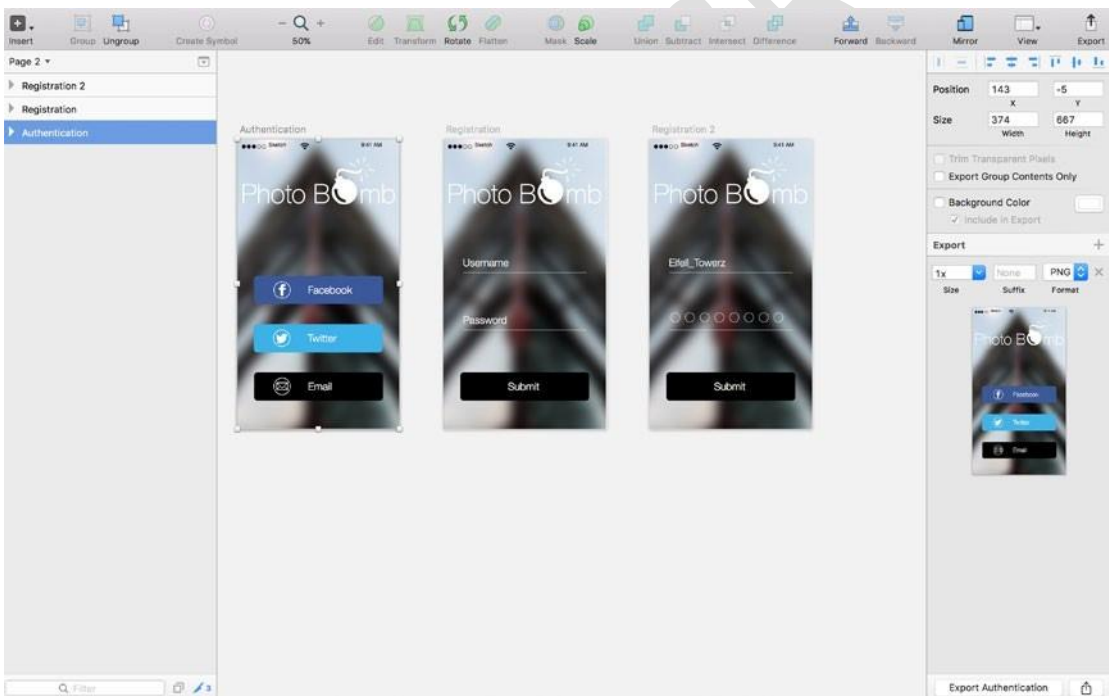


Figure 1-2. Sketch Mirror allows designers to preview designs on an iPhone

Not satisfied to sit back on their laurels, the team at Bohemian Coding kept improving the program. Sketch 2.4 brought enhancements to masking, greatly improved speed when grouping, resizing, moving, and ungrouping large amounts of layers, multiple bug fixes, as well as improved color accuracy, something that is of critical importance to all designers.

Bye, Bye Fontcase . . .

A critical move that proved that Bohemian Coding had the needs and desires of designers everywhere at heart was the retiring of Fontcase. For those who are unaware, Fontcase was a font management system that allowed designers and graphic designers to store, manage, and preview their fonts. While this might sound superfluous and unnecessary, for designers, something like Font Manager is incredibly important. Designers need to know which apps are installed on their system and what they look like, and Font Manager makes it very easy to browse for fonts. The program was built directly into iOS for a while. Citing issues with font activation in Fontcase and sandboxing, the team at Bohemian Coding wisely made the decision to retire Fontcase. Apparently, there were major issues, and Fontcase wasn't working properly. Moreover, designers were having a hard time understanding just why it was needed in the first place. From the Bohemian Coding blog:

“We’ve come to the realization that Fontcase’s main features are just not needed or appropriate in this day and age, and the time has come to retire it. Therefore, we’ve made the difficult decision to remove the app from the store. We will offer non-sandboxed copies to anyone who’s experiencing problems, but this will be the last Fontcase release.”

With Fontcase out of the way, the team continued to perfect the program. Minor releases followed after that, which showed that the team was paying attention to goings-on in the design world while working diligently to address the bugs in the software. It is important to note as well that releases, fixes, and updates of Sketch were timelier than those in Photoshop. Designers often bemoaned the fact that major updates and releases of Photoshop were spaced roughly two years apart. Sketch, on the other hand, shipped updates and releases at a clip of about every month or so. This speaks volumes about the advantages of having a leaner and more agile development team.

So, Sketch had gotten the attention of the design community. Nevertheless, only the more daring designers would ditch Photoshop and make a complete transition to Sketch. Many others were watching and waiting to see how the software would evolve and whether it would become a true contender.

Apple Design Award

Every year since 1996, Apple announces the winner of its prestigious Design Awards at its annual Worldwide Developers Conference (WWDC). The Design Awards are distributed to best-in-class apps that exhibit the best in design and development. It is a high honor that Apple bestows on developers who have achieved the highest standards in design using the company's software products. These are the apps that set the standard for the user experience that Apple expects on its platform. They are altogether innovative and inspiring.

When selecting apps for the Apple Design Awards, Apple looks for apps that are: delightful, innovative, state of the art, engaging, enabling, and well designed. The awards celebrate what the company believes to be the best apps created by independent developers from all over the world.

Sketch was among the Design Award winners in 2012. For designers who are attracted to Apple's software and hardware products because of their high standard of design, this was a pretty big deal. It meant not only that Sketch's developers had gotten the attention of the design community for creating an app that would make their collective lives easier, but also that they had done so while creating a beautiful app. Typically, software's functionality often overshadows what it looks like and how it *feels* to use it. By winning the prestigious Design Award from Apple, Bohemian Coding had firmly established itself as a leading design and software development company. Moreover, with design becoming more of a focus for many companies, Sketch was the one to watch.

Sketch 3

By 2014, the team at Bohemian Coding had been working on Sketch for over two years and had increased from a paltry two members handling development and design to about five. They had also learned the value of outsourcing and used third-party developers to help to create a brand new Sketch website and a helpful video highlighting all of the latest features.

However, it wasn't until the release of Sketch 3.0 in April that more people in the design community began to take notice. Two years after the release of Sketch 2.0, Sketch 3.0 arrived. The company had a new expanded team and a suite of new and improved features.

As mentioned, adding team members and outsourcing some key elements helped the team to focus on just the product. They rebooted, redesigned their website, and listened to the very vocal designer community who were interested in seeing changes and updates, particularly in symbols, exporting, and the fledgling inspector feature.

By this time, mobile apps were well on their way to leading the world, and designers were heavily embracing mobile paradigms that weren't just device specific. The Web was quickly becoming mobile-first as well. Designers wanted and needed software whose developers understood that design was changing as a discipline. They'd been using Photoshop for years, and it seemed that Adobe wasn't listening to the complaints of the designer community.

When Sketch 3 was released, Bohemian Coding offered it as a free upgrade to those who'd purchased and owned Sketch 2. For one week in April, Sketch 3 was available in the Mac OS App Store for \$49.99. This is when I first bought my own copy. After April 21, 2014, the app's price increased to \$79.99 and then later to its current price of \$99.99. Based on its price alone, Sketch has a huge advantage over the incredibly expensive Adobe Photoshop, Illustrator, or Creative Cloud. At \$49.99 a month, this comes out to roughly \$600 a year.

Given its robust feature set, Sketch is a bargain considering the power it packs. Those who still aren't sold on the software can download a free 30-day trial version.

After Sketch 3 was released to the designer community, more frequent updates followed. Each subsequent update raised the bar in terms of performance improvements, new features, and bug fixes. As of this writing, the latest version of Sketch is Version 3.3.3. The Bohemian Coding team not only seems to be listening to the needs to designers and taking their needs into account, they also seem to be following one of the most notable startup edicts—listen and pay close attention to your customers, and iterate your product quickly.

With a growing community of designers providing quality feedback, the team at Bohemian Coding made multiple changes and improvements to the program. They focused on making Sketch the dream “designer toolbox,” with everything a designer needs to make great websites and apps right at their fingertips.

To be fair, it is important to point out that Sketch isn’t for everyone or every design. If you’re working with bitmaps in particular, then you likely won’t find a better editor than Photoshop. However, many designers have found that once they pick up Sketch, they can do most things that relate to UI design easily with it.

In addition to the amazing improvements being made to the program, the developer community began to rally around the app, and a vibrant community of plug-ins was created to supplement what the app could not do. Bohemian Coding encouraged this third-party development and understood this as a way to build support in the development community. With the line between coding and design quickly being blurred, it was important to get developers on board as well. I cover some of the more helpful plug-ins later in this book.

The Sketch 3 Interface

The Sketch 3 interface is intentionally simple, minimalistic, and streamlined, as you can see in Figure 1-3. There is a toolbar across the top that allows for easy customization, and users can add or remove tools from this toolbar according to their personal preferences.

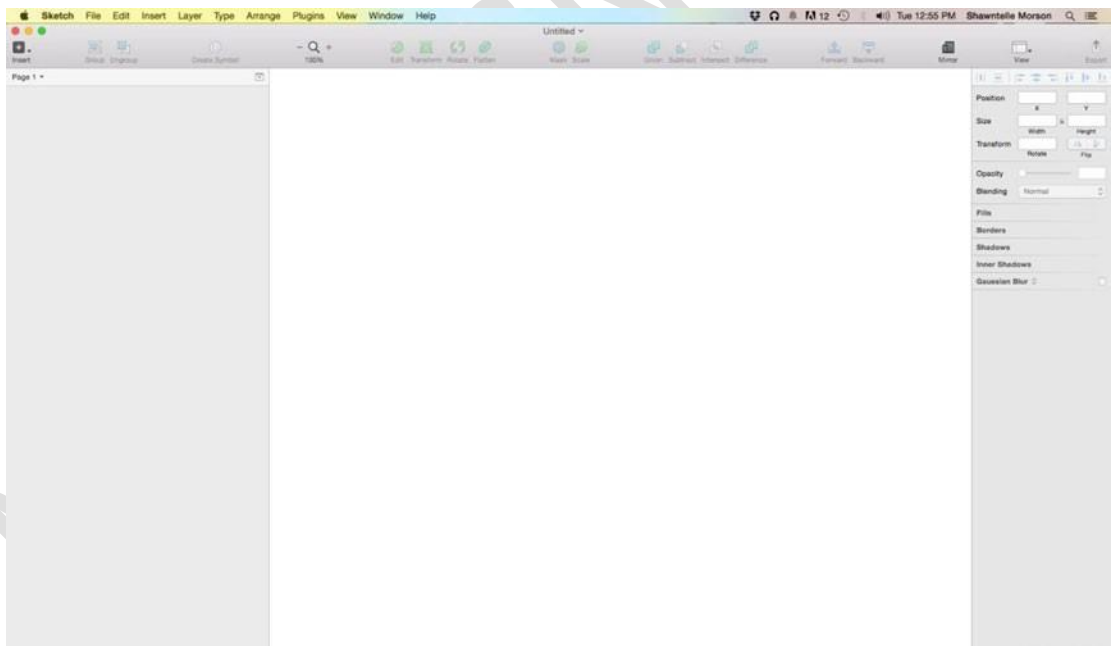


Figure 1-3. The Sketch 3 interface

The layers list on the left lets you name and find the layers on your design.

The right side of the screen features the inspector, which offers you the tools to change the properties of items currently displayed on the screen. Every item on the screen can be changed or altered using the inspector.

As you can see in Figure 1-4, compared to Photoshop with its massive list of tools and many windows, Sketch is barely there. Even after I became more comfortable with Photoshop, I was always daunted by the sheer number of features and tools it offered—some of which I’ve never used. With Sketch, virtually every feature will come in handy at some point. I find the interface to be welcoming. It’s bright, light, and not at all overwhelming—especially for a beginner. But don’t let the simplicity of the interface fool you. The simplicity is by design. Sketch is powerful graphic design software that allows you to create beautiful designs.

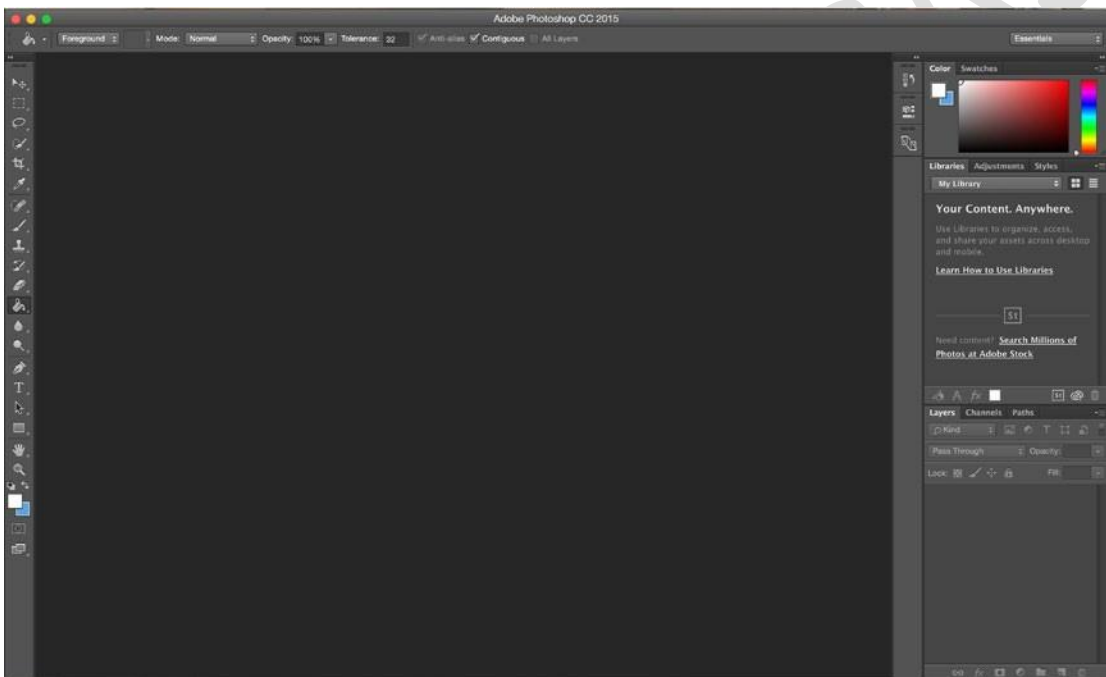


Figure 1-4. Adobe Photoshop 6 interface

Raster vs. Vector

You might be asking yourself, “So, aside from price and the user interface, how exactly does Sketch differ from Photoshop?” It’s important to know and understand the differences between the two. To be clear, there are some things that Photoshop can do that Sketch simply cannot and it wasn’t meant to do them. Where Sketch really shines is in interface design. In fact, it seems to be have been built specifically for this purpose. As such, it allows UI designers a greater feature set that is tailor-made for their needs.

One of the main differences, however, is that Sketch is a vector-based tool and Photoshop is not. Photoshop is a photoediting tool and was not intended as an optimal Web or mobile

Development, Apress, 2014) Fireworks came the closest as a reasonable alternative for UI design. But the app failed to catch on and, as a result, Adobe stopped supporting it in 2013.

Arguably, in Photoshop, the percentage of its features that are really useful for UI design is estimated to be roughly 20 percent. This means that designers were downloading and using a program of almost 1GB the last time I checked in which 80 percent of the features were not useful to them or even created with them in mind. Indeed, Photoshop as its name implies, was intended to be a tool for the editing and manipulation of photos. Hence, it is raster-based, meaning that each image is made up of pixels that are then arranged to display an image.

One great thing about raster images is that they can display lots of colors and allow editors to get beautiful lighting and shading effects using the raster format. Unfortunately, they can't be displayed larger than they are without losing some quality. As such, they yield pretty huge files. Try blowing up a raster image, and you'll lose quality fast. Zooming in will reveal each individual pixel that makes up the image. Designers have understood for years that Photoshop was initially developed as a raster-editing tool. Indeed, Photoshop was created by some amateur photographers and programmers for the purpose of displaying their photography. Some would say that a more worthy comparison would be between Fireworks and Sketch. However, this became a moot point when Adobe stopped supporting Fireworks in 2013. The program is still being offered as a part of Creative Cloud, but Adobe has no plans to continue offering fixes for the program.

Sketch is a 100-percent vector-based tool. A *vector* is made up of points, lines, curves, and, most importantly, math. In Chapter 3, we'll see how Sketch allows designers to edit numerical values to change the way a shape appears on the screen. When viewing raster and vector images with the naked eye, they may look the same. But zooming in, you will see that, as mentioned previously, a raster image, because it is made up of pixels, loses its quality the further you enlarge it. Curves in particular will appear blurred on raster images. Zooming in on a vector image yields a different view. Regardless of how much you zoom in, a vector image will maintain its quality and will remain crisp and clear regardless of size on a curve.

Why is this important? Because more and more, designers are being asked to design for a variety of screen sizes and resolutions, especially when it comes to mobile devices. With vectors created in Sketch, you save yourself the hassle of designing at @2x as you would in Photoshop to accommodate the growing number of screen sizes and resolutions now available on the market. Also, Sketch allows you to design in pixels, which is what most interfaces are measured in these days.

Figure 1-5 shows the difference when zoomed in on how raster and vector images appear. This has huge ramifications for designers who must design across platforms and for Retina screens, which are quickly becoming the norm in mobile displays, particularly for iOS.

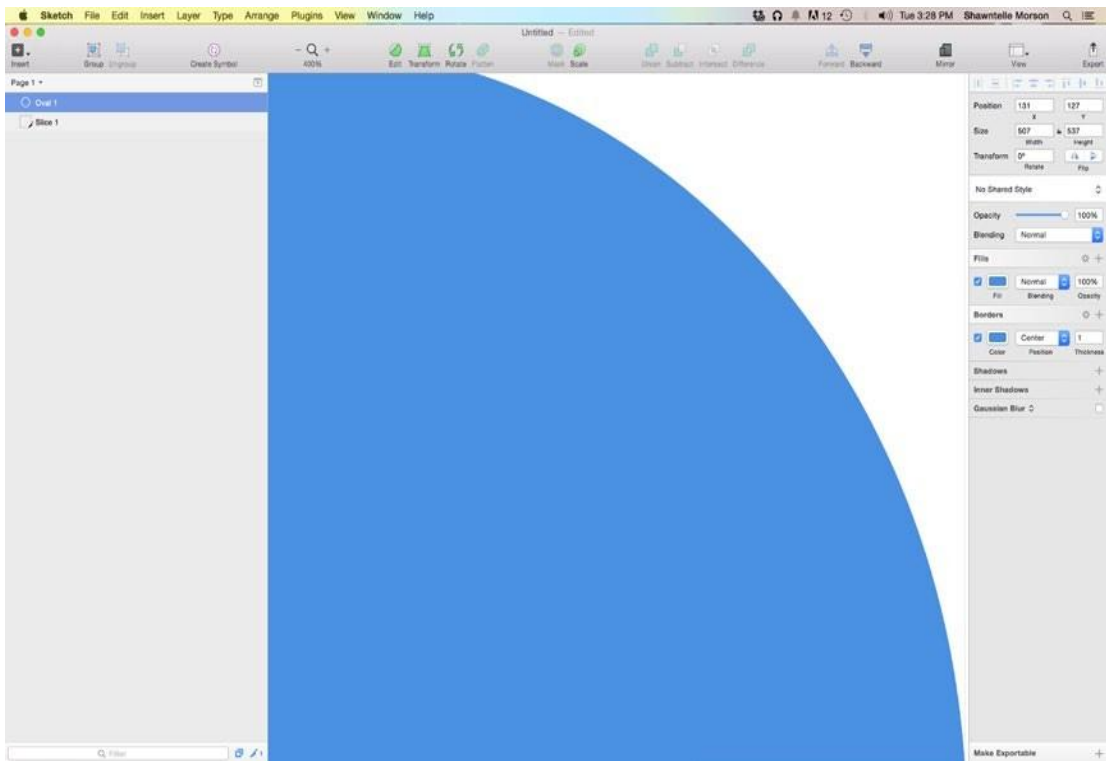


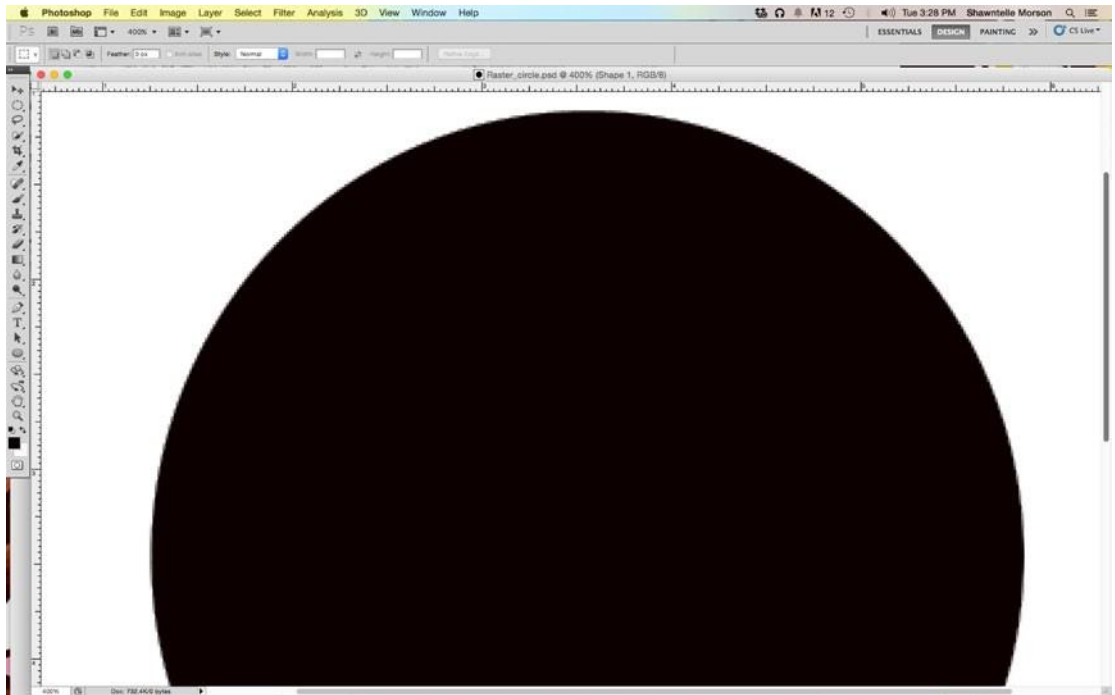
Figure 1-5. A vector shape viewed at 400 percent in Sketch 3

Note in Figure 1-5 the smoothness of the curve of the circle shape created in Sketch. When not zoomed in, vectors and rasters look more or less the same, and it may be hard to tell them apart. Once you zoom in, however, you will see that the curve of the circle that is a vector will be razor sharp.

In graphics, vector shapes are created using Bezier curves. Typically, vector shapes have two points that are controlled by handles. Each point allows the user to manipulate the curve. The final result is drawn based on the positions of the points. We will discuss Bezier curves in Chapter 3 when we move onto shapes, but this is the gist of working with vectors and how they maintain their sharpness. Vectors can be scaled to any size regardless of how much you zoom in or how large the image becomes. This is critical for designers, and it has become one of the flagship features of Sketch.

Figure 1-6 shows a circle shape created in Adobe Photoshop. Note the jagged, rounded edges of the circle. The raster is made up of pixels, and once zoomed in, or if the image size is increased, you will see that pixelation is especially evident at the circle's border.

Figure 1-6. A raster shape viewed at 200 percent in Adobe Photoshop



Because Sketch is vector graphic tool, any shapes created within the application will retain their quality when scaling.

As a designer, it is important to have options, and having access to a tool created specifically with designers in mind is essential. Also, it is important to note that using Sketch does not bar one from continuing to use Photoshop and Creative Cloud. It is entirely possible to use both, and I believe that some designers, in fact, do use both. What Sketch brings to the table for designers is a new level of flexibility and a more refined workflow. If, as a designer, your focus is on user interface or icon design, then you must consider that for some, the cost of Adobe Creative cloud can be prohibitive.

The vast majority of designers have long opted for Macs over PCs for work, and indeed Apple's focus on design and creativity has been touted for years. Johnny Ive is a modern-day hero for creative designers worldwide. His partnership with Steve Jobs led to the creation of some of the most iconic products that the world had ever seen. Among them, the candy-colored iMac, sleek white MacBooks, and eventually the iPhone and iPad. Designers have idolized Ive for years, and since Steve Jobs' passing, Ive has helped to keep the company at the forefront of design. Sketch caters specifically to designers, and its price point made it immediately attractive for those who were interested in giving it a try. Its close alignment with Apple made it easy for designers to explore the new tool.

A major feature of Sketch 3 is its speed. Coming in at only 32MB, the program is fast, as it takes up less processing power on newer, Intel-based Macs with Retina screens. Version 3 was also rebuilt especially for Macs and optimized for OS X and it responds well to users' needs. It allows designers to create and view an entire project using its artboard system and

still maintain a relatively small footprint. Anyone using Photoshop is aware that PSDs can run well into multiple-gigabyte sizes for complex projects with lots of screens.

By being built exclusively for Mac OS X, it allows the program to adapt some features for free. For example, I mentioned the removal of Fontcase previously. Sketch now is able to use Mac OS's built-in font rendering engine. Add auto-save to that, and you've got an enviable combination. A direct download from the Mac OS App Store doesn't hurt either.

Community

Another major benefit of Sketch is that it listens to a large community which often drives program updates. There are Twitter lists, Facebook groups, and even a curated list of articles on Medium, the online blogging platform (see Figure 1-7). Releases address a combination of concerns that are important to community members, as well as issues that are important to the developers, which build on the solid base that they have created with the program.

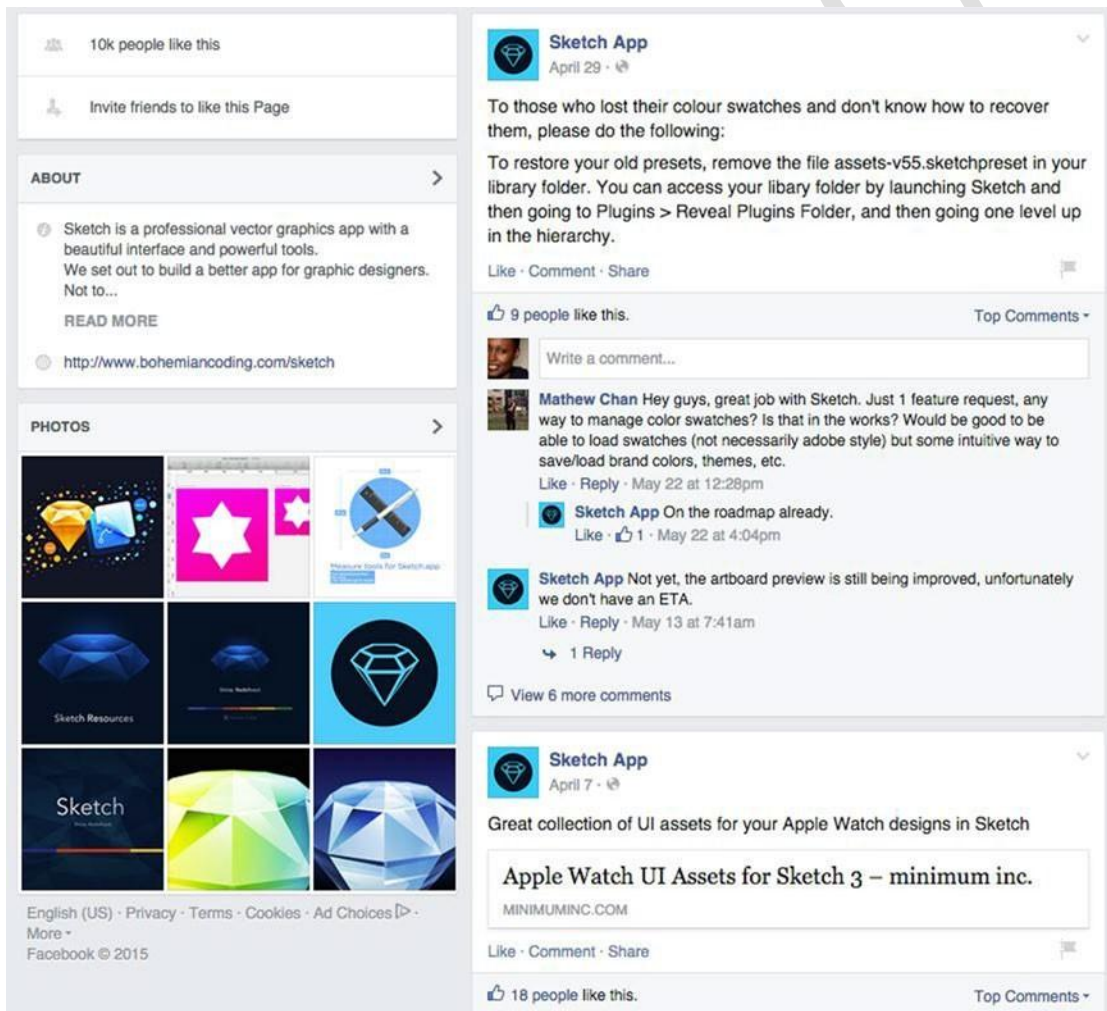


Figure 1-7. Sketch community on Facebook

The Bohemian Coding website proudly lists other apps that integrate with Sketch, groups and sites that focus on the program, as well as resources for anyone wanting to learn the program. They also offer a subscription-based newsletter that directly addresses questions from the community, offers help on common issues, and features plug-ins to help users with their workflow. All in all, the Sketch community is fairly resourceful. In addition to the free resources, there are paid courses on Udemy and even a Sketch class on TreeHouse taught by Sketch designer Christopher Downer.

Meng To created one of the most popular of these independent courses. Meng is a designer and a strong proponent of the growing school of thought that designers should also code. He wrote *Design & Code*, which is an electronic book that teaches designers the finer points of designing for iOS with some basic coding using Xcode. In it, he raves about the ease of using Sketch and an online prototyping tool called Flint for making easy prototypes. Meng now travels the world offering live classes that teach designers how to design apps using Sketch and build them using Swift, Apple's new development language. *Design & Code* prompted me to take another, closer look at Sketch—and I'm glad that I did.

I've always found Photoshop's UI to be daunting. The sheer number of tools available was a barrier to me even wanting to learn how to use it. I've heard similar stories from some first-time designers. Sketch has a pared-down interface, and it is more similar to Fireworks, another Adobe tool. I liked Fireworks because it seemed to be created, like Sketch, with designers in mind; specifically, designers who were more focused on user interface design for the Web and mobile apps. When I opened Sketch for the first time, I immediately felt comfortable. I was able to customize the toolbar to include those tools that I would use most often. It allowed me to spend more time designing with fewer distractions, which led me to try out the specific tools that I needed.

Photoshop isn't the only comparison to make. Surely there are other design tools on the market. There are other niche graphics programs on the market that could appeal to designers who are looking for an alternative to Photoshop. Apps like Skala come to mind as worthy alternatives for designers who are looking for something different and built with them in mind.

Effects are another reason that designers will appreciate Sketch. Moreover, being able to add more than one effect to a layer at a time is a great addition to the feature set of Sketch. This includes blurs, reflections, borders, and inner and outer shadows.

Exporting with Sketch is as easy as making a few selections and clicking a few buttons. It is possible to export an entire artboard at multiple resolutions. You will appreciate this feature if you've tried to export your designs in other programs.

iOS9

iOS9 is the latest version of the iPhone operating system. Much has been said of the “under-the-hood” changes that have been made, while some have claimed that they changes are largely minor. Nevertheless, though iOS9 offers optimizations that may not be apparent to the eye, it is still a significant update.

You might recall that in 2013, Apple overhauled the user interface of iOS, changing the look for the first time since the original iPhone release in 2007. iOS7 introduced an entirely

different look and feel to iPhone and iPad users. It moved away from skeuomorphism and towards the trend of flat design. It also introduced new tools like the Control Center, a panel that rises with a swipe from the bottom of the screen to reveal a frosted panel offering easy access to airplane mode, Bluetooth, and other options. The new OS also introduced a brand-new “Flat Design” language for Apple. Designers had to get on board, and they did. Indeed new apps featured an iOS7-specific look and feel.

iOS8 further refined the UI with the addition of frameworks like HealthKit and HomeKit. But neither of these represented huge shifts in the design language or presented major issues for designers.

Released in the fall of 2015, iOS9 will be the latest iteration of the operating system for mobile devices by Apple. So, you might be asking yourself what to expect and how to manage these changes while designing using Sketch. The good news is that from a design standpoint, there haven't been many changes that designers need to worry about. iOS9, at its core, offers more stability and fixes to the mobile device operating system and more changes to iOS's core stable of applications. The changes will offer users a more a consistent experience across devices, bug fixes, a considerable boost in performance, and, most notably, a significant reduction in the size of the OS. Users can expect new features like multitasking, a new keyboard, new apps like Apple News, and the addition of public transit information to Apple Maps.

While the changes aren't significant from a design standpoint, there are a few features of which designers will need to be aware; not only will these features change how users interact with not only their devices, but they could also affect interaction with apps.

App Switcher

Switching between apps is still possible by double-clicking the Home button; however, doing so will now reveal a newer vertical view of all of the programs currently open. Users are able to swipe through as before.

New Navigation for Photos

Now when going through photos in your Camera Roll, you can simply swipe along a list of photos to view one in greater detail. You no longer have to tap each photo individually.

New Back Button

The addition of a Back button that allows users to go back to a previous program marks a new navigational element in iOS9. The button allows users to navigate back to a previous program without hitting the Home button.

New System Font: San Francisco

The system font for iOS has been updated. Some of you might remember that iOS made heavy use of Helvetica as its official system font. This has been updated to a custom font Apple calls San Francisco. Those with a keen eye will notice a subtle difference between the two fonts, but most will agree that it is not significant (see Figure 1-8). There has been some debate in the design community as to whether San Francisco is more “readable.” Apple surely thinks so.



Figure 1-8. San Francisco and Helvetica Neue fonts

San Francisco is from the San Serif family tree, and it consists of two different fonts: the SF and the SF Compact fonts. The SF font ships on iOS and OS X, and SF Compact ships with the Apple Watch. The two are related, but there are slight differences in the round states and slightly more space between letters to improve readability in the San Francisco font. The font also covers a variety of languages like Greek, Vietnamese, and Polish. The typeface was created by the Apple team.

The Apple Watch

While WWDC is typically when new operating systems are announced, during a special September event in 2014, Apple announced a new product—the Apple Watch. Naturally, this had the designer world buzzing. It also presented a new design challenge for those who work on iOS. Surely the new watch would run on a version of iOS, and it did.

To date, quite a few Apple Watch apps have made it into the Apple App store since its official launch in April 2015. Some major retailers, including Target, Starbucks, eBay, and Nike have released Apple Watch apps in the store and some not-so-major ones have as well.

The Apple Watch arrived with a fair amount of excitement from pretty much everyone working in tech. Apple was making a long-rumored venture into the world of wearables, and with their penchant for design, the world was waiting to see not only what the watch looked like but how it would work and what challenges, if any, it would present for designers.

As shown in Figure 1-9, the Apple Watch comes in two sizes; 38mm and 42mm (measured by height). Thus the screens are roughly 340px by 272px for the 38mm version and 390px by 312px for the 42mm version.

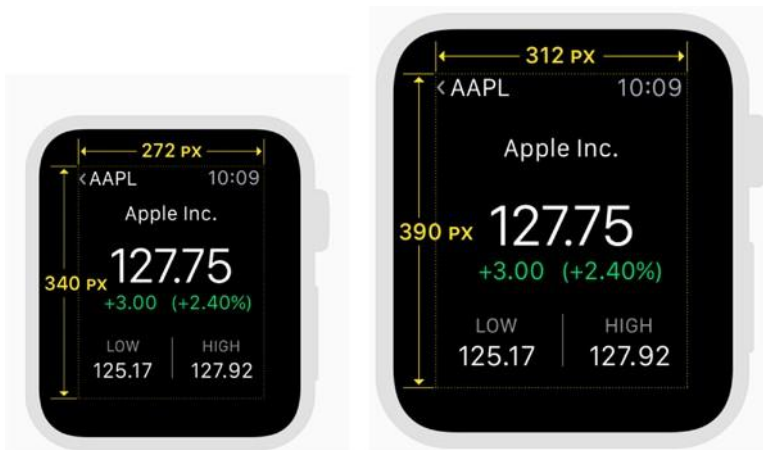


Figure 1-9. The Apple Watch comes in two sizes, 38mm and 42mm

Both Apple Watch sizes show the same content and use Dynamic Type to make sure that items shift to fit in the available space.

As with every other Apple product, the Apple watch has its own Human Interface Guidelines. If you're interested in designing for the Apple Watch, you should study and read these guidelines. The Apple Watch has very specific design principles when it comes to typography, color, customization, icons, and animation.

The Apple Watch runs on its own software called watchOS. Now in version 2, it is a modified version of iOS, and it runs only on the Apple Watch.

I won't go into specifics on designing for the Apple Watch in this book, but suffice it to say that the watch presents not only a new frontier, but new challenges for designers. And, as usual, there are Sketch Apple Watch templates available for your download and use.

Other changes to iOS9 include new apps, like News, and new features and improvements to the Maps and Notes apps. While there may not be any specific changes to the overall design language of the operating system in iOS9, it is important to note some of these apps, especially the new ones, offer a new way of presenting information. In them, you can find clues as to where Apple is going with their design language. Designers who are new to designing for iOS are encouraged to peruse these new apps to understand best design practices for their products. For example, if you're just starting out and you are curious about the best way to implement a segmented control, aside from the Human Interface Guidelines, Apple's built-in apps are the best way to learn how to be a great iOS designer (see Figure 1-10).



Summary

While Sketch was originally created for the Mac and OSX, Sketch and iOS make a great combination for designers interested in creating apps. With Sketch, designers who design for iOS, watchOS, and even MacOS now have a tool specifically developed for them. The makers of Sketch have said repeatedly that they have no intention of producing a Windows version of the program. This means that the program will continue to evolve with Mac users in mind. Designing for iOS with Sketch makes sense for anyone willing to take the time to learn the program and dive into properly designing apps for iPhones and iPads. Learning Sketch is a great first step.

In the next chapter, we walk you through installing Sketch and introduce you to the interface and other features that you will need to know as you begin your journey of designing for iOS with Sketch.

Getting Started with Sketch

The latest version of Sketch is Sketch 3 (version 3.3.3 to be exact), and this book assumes that you are running this version. If you have an older version, you will need to update it. As mentioned, Sketch is a Mac-only application, and it requires OS X (Mavericks) or later to run. If you are running an older version of Mac OS X, you will also need to update that.

Installation

To install Sketch, you must download it from the Bohemian Coding site directly. On December 1, Sketch announced that it was pulling the app from the Mac OS store. Citing issues with delays in timely approvals of updates and technical limitations imposed by the App Store guidelines, in a post on their website, Bohemian Coding outlined to users how they could continue to enjoy Sketch and what the changes would mean. Mostly the Sketch community was behind the decision as it likely means quicker updates and more improvements to the program. The program will take you through the registration process by asking for your license key. Sketch costs \$99.00.

To install the app that you purchased from Bohemian Coding, download it and move the program from the Downloads folder to the Applications folder. You can also just double-click the downloaded .DMG file and follow the directions. Either way, the file must be added to your Applications folder.

Once it's there, you can then double-click to start the program. That should be it! You've now installed the exciting new design program Sketch, and you are ready to learn more about designing for iOS!

Opening Sketch

Once you open the program, you will see that the Sketch interface is fairly simple. It was created to be as streamlined and as minimalistic as possible in order to allow you to focus completely on your work. There are no floating panels, and everything you need is easily accessible from the three main areas within the interface. These areas are as follows:

1. The toolbar along the top
2. The Layer panel on the left

Figure 2-1. You can purchase Sketch 3 directly from the Bohemian

3. The Inspector panel on the right
4. The canvas in the center of the screen where your actual design work will take place

Sketch offers infinite scrolling. This gives you a great deal of control over what you see on screen. With this feature, you can scroll infinitely in any direction and add as much content as you'd like to your canvas, which is shown in Figure 2-2.

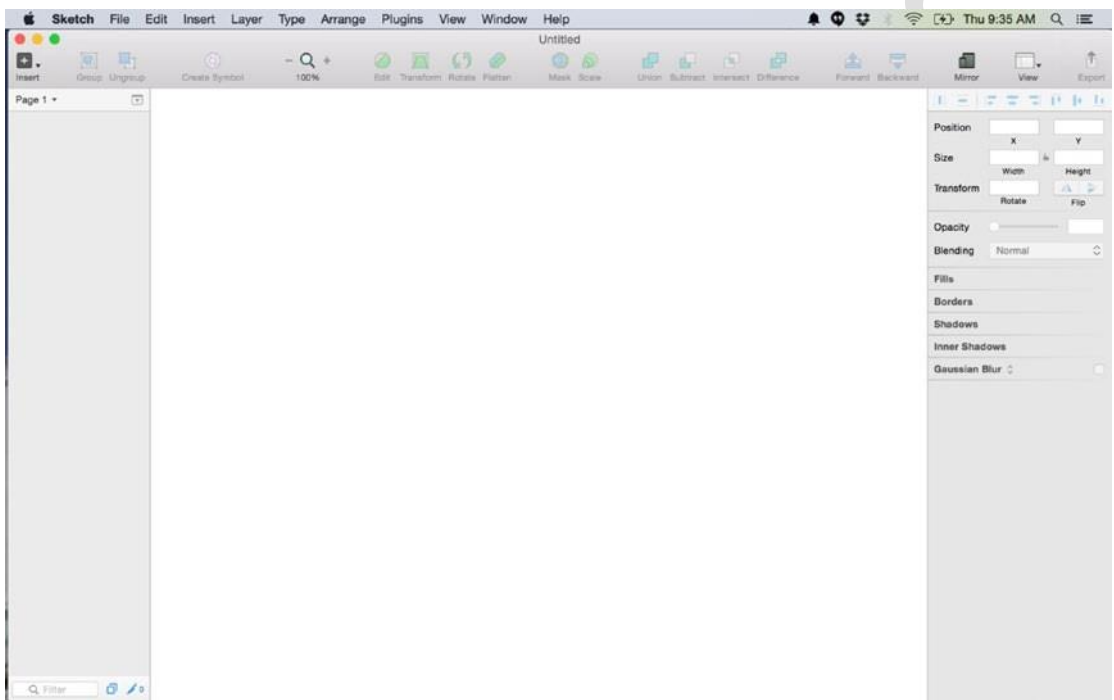


Figure 2-2. The Sketch interface in version 3.3.3

The Canvas

The middle area of the screen is called the *canvas*. This is where you will spend your time, as your design will actually live in this space. Adjustments that you make in the Inspector will manifest themselves in your canvas area.

When you are beginning your design, you must have the correct dimensions for the iPhone handy. As you know, the iOS UI design consists of many unique elements, each with Apple's own unique touch. These elements are an integral part of the iOS design language. You may have already installed the San Francisco font, but what about the other elements that give iOS its iconic look and feel, making it unique and allowing it to stand out when compared to other mobile operating systems? This includes elements such as the iOS keyboard, thesegmented controls, and the Control Center that effortlessly slides up from the bottom of your iPhone. You may ask yourself, do we need to design all of these elements from scratch? Well no, of course.

In March 2014, it was announced that Sketch would ship with an iOS8 GUI created by the popular design studio Teehan+Lax. The Sketch team had previously released iOS templates for Adobe

Photoshop, so the designers were already familiar with their detailed work.

The template contains an exquisitely detailed, layered file containing multiple shapes and layers. All of these shapes and layers were painstakingly recreated in Sketch's native format, the vector. More exciting was the fact that these shapes and layers were editable. Designers were free to use them to create new designs, providing they followed Sketch's terms. For designers who were interested in designing for iOS using Sketch, this was a blessing.

The great thing about the GUI shipping within Sketch was that designers would no longer need to search the Internet to find it and then import it into the program. It would now be easily accessible with the click of just a few buttons. To access the GUI, go to File in the menu above the toolbar and select New From Template, as shown in Figure 2-3. Select the appropriate template for which you are designing. You should see the templates for iOS app icon and iOS UI Design Mac App icon among others. Select the iOS UI Design Template, and you should be ready to go.

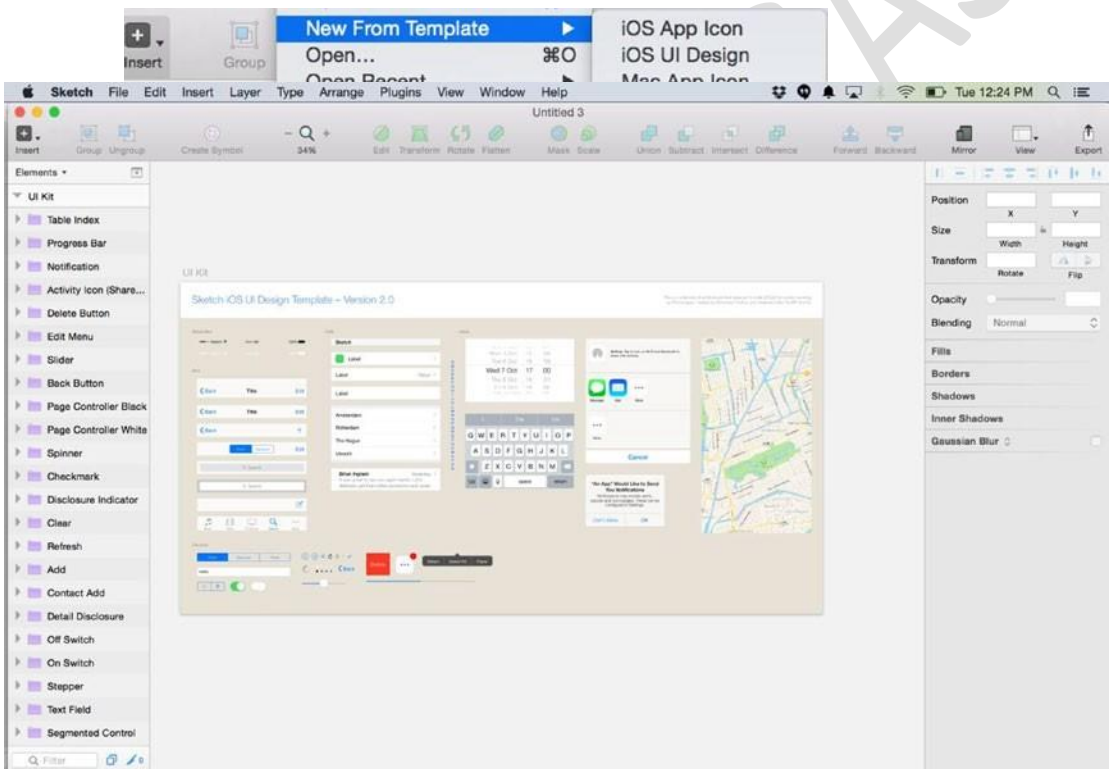


Figure 2-3. Accessing the Teehan+Lax iOS GUI from within Sketch 3 the drop-down, Sketch will open a new window with the template and all of the elements, layers, groups, and vectors, as shown in Figure 2-4. Layers and groups have been titled according to their corresponding elements on the canvas. Hovering your mouse over an element in the Layers list will highlight the corresponding element on the canvas. Here you have all of the UI elements that you'll need to design an app for i

If you're starting a new design or mockup for iOS, you can easily jump right in by adding any of these elements onto your artboard, right from your toolbar. Simply open the template and go to: **Insert > Symbols** and select an individual symbol that you'd like to add to your design.

Because the canvas is completely unconstrained, when designing for particular devices, screen sizes, and resolutions, this could present issues. How do you design for a small screen versus a larger one, an iPhone as opposed to an iPad, or even for a monitor on which a website will be displayed? This brings us to our discussion and exploration of artboards.

Toolbar

The *toolbar*, shown in Figure 2-5, contains all of the tools that you need to make your designs. You'll be using the toolbar to create shapes and to add layers. As you examine the toolbar, the Insert menu on the far left is the first button you'll see. The Insert menu will be used for creating shapes, adding text, images, artboards, and so forth. All of these elements will become building blocks of any design that you create with Sketch.

From left to right, the additional elements in the toolbar are as follows. We will discuss each in more detail later in the book:

Group and Ungroup: These tools are used for keeping your document organized by combining selected layers into groups.

Create Symbol: This is used to flatten layers to create symbols, which can then be reused across pages or artboards.

Zoom: This allows you to zoom in or out on your canvas as indicated by the percentage sign. Clicking the plus or minus button next to the magnifying glass in the toolbar will adjust your canvas accordingly.

Edit, Transform, Rotate & Flatten: You can use this tool to manipulate your shapes in a variety of ways.

Mask & Scale: This tool lets you clip layers to shapes and also to resize them.

Union, Subtract, Intersect & Difference: These are Boolean tools.

Forward & Backward: This allows you to organize your designs even further by bringing various layers to the foreground and moving others to the background.

Mirror: This tool allows you view your designs on your iPhone using the Sketch Mirror app.

View: This lets you show and hide various visual aids such as rulers, grids, and layout guides. You can also adjust grid and layout settings here.

Export: This tool allows you to export your designs in a variety of different sizes.

Customizing the Toolbar

The toolbar can also be customized depending on your taste and workflow. Customizing the toolbar is helpful once you know which tools you use more often than others. It makes specific tools easy to access.

To customize the toolbar, go to the View menu and select Customize Toolbar. A window with all of the icons representing actions will slide down. You may add any of these icons to your toolbar simply by selecting the icon from the drop-down panel and dragging it into the empty spaces in your toolbar, as shown in Figure 2-6. Once you drag it into the space, it will snap into place. When you have selected all of the icons that you want, click Done and the drawer will roll up. For the remainder of this book, however, we will assume the existing default toolbar.

Layers

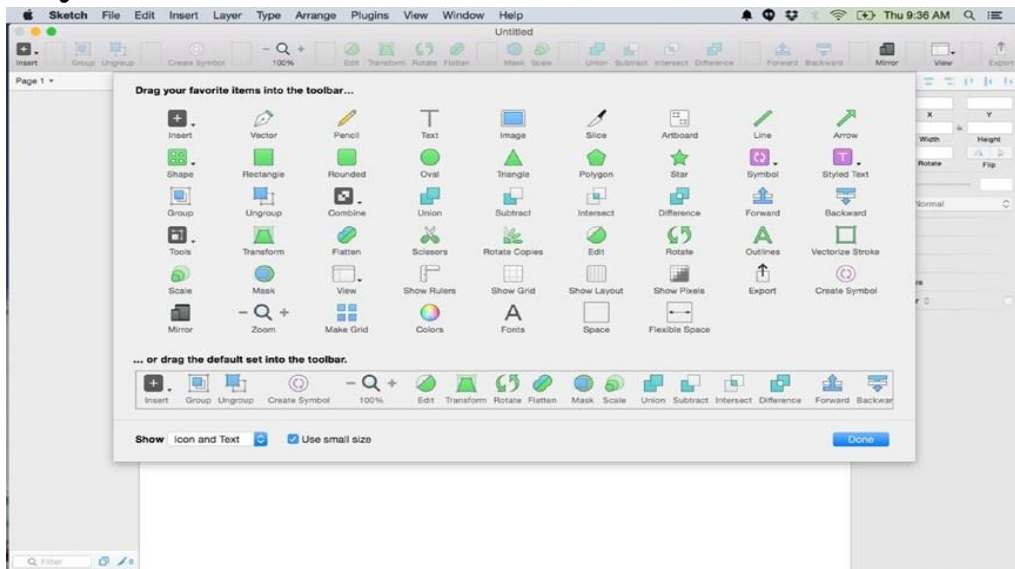
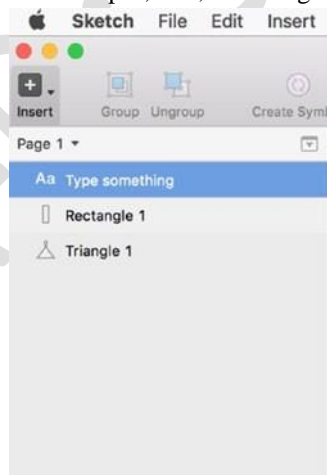


Figure 2-7. The Layers list shows all of the elements on your canvas

There are a few different types of *layers* in Sketch. Layers are the building blocks of your apps. You will add various elements to your layers to create the different views in your applications. Typically, a layer will consist of a combination of shapes, text, and images. Sketch will tell you what kind of



element is included in each layer by showing you a tiny symbol next to each. Shape layers will have a shape, text layers will show a small AA, and layers with images in them will contain a small image of a picture. These icons will allow you to identify easily what each layer consists of. The Layers list shown in Figure 2-7 displays all of the layers in the canvas, and you can organize them there. Any layer can be selected and moved around the canvas. The list will populate as you add more layers. If you add a new shape onto your canvas, you will see that a new layer will be created on top. Sketch will automatically name the layer according to the shape that you have created. Layers can overlap each other, and you can manipulate which layer appears on top or behind each other directly from the Layers list. You can also do this by using the Forward and Backward buttons in the toolbar.

Selecting and Moving Layers

Layers are fairly flexible, and they can be moved around your canvas at any time. To select a layer, you can either choose the layer's name in the Layers list or select the specific layer on the canvas. Once you have selected a layer, you can move it around the canvas. You will know that a layer is selected by the appearance of white *handles*. These handles allow you to change the shape and the properties of the shape in that layer. Once you have selected a layer, you can use either the Inspector position properties, as shown in Figure 2-8, to move it around, or you can use your mouse to drag it around your canvas.

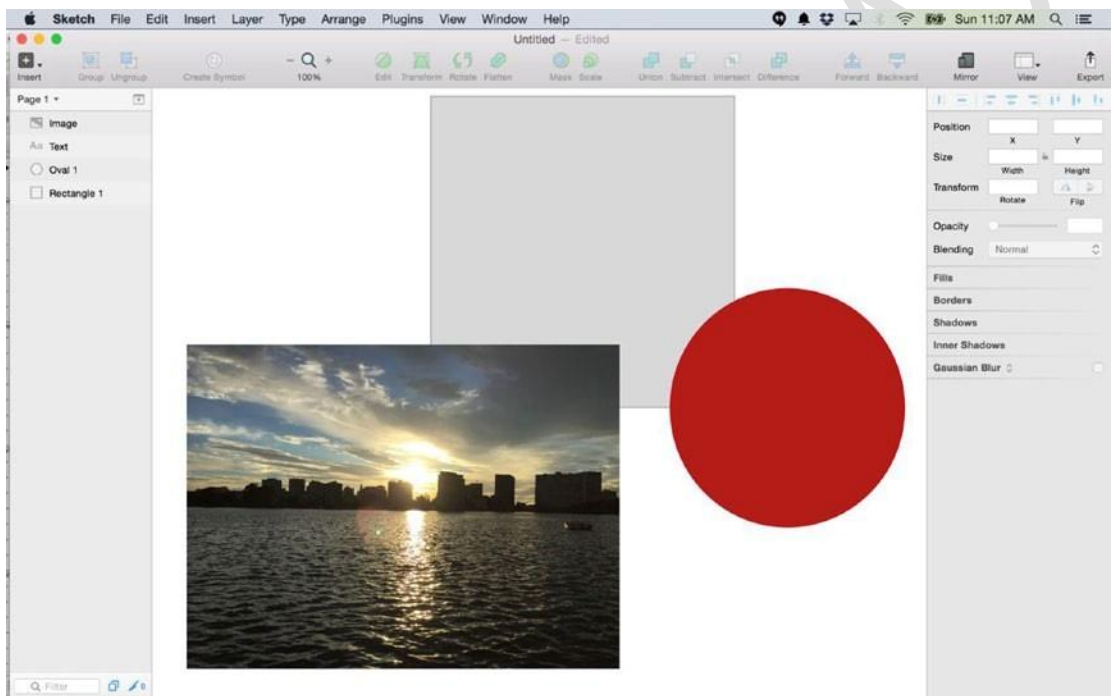


Figure 2-8. An image and two shapes on the Sketch canvas. Note that each object has a corresponding layer in the Layers list on the left

Duplicating a Layer

There are a number of ways that layers can be duplicated in Sketch. Right-click the layer in the canvas to reveal a new menu list, and select duplicate from that list. With this done, you will see that a new layer has appeared in the Layers list. The new shape will appear on top of the duplicated shape in the canvas. All you need to do is to move it. Alternatively, you can create a new layer by holding down the Option key and clicking and dragging the layer to duplicate it.

Hiding and Locking Layers

When designing, it sometimes becomes necessary to hide layers so that you can effectively work on a given layer without being distracted or obstructed by others. Sketch allows you to do this easily. To hide a layer, hover your mouse over the right side of the cell in the Layers list. A small “eye” will appear. When it does, click it. You will see that the corresponding shape will disappear from the canvas. However, it will remain in the Layers list. Any layer that has been hidden will have greyed-out text and an icon of an eye next to it.

You might have a need to lock a layer for similar reasons. Sometimes, designers will lock their background layer to prevent it from interfering with the work they are doing on other layers. Since it is unlikely that the background will change, it can sometimes be locked but still remain visible to prevent accidental editing. To lock a layer, right-click and select Lock

Layer from the menu. You will see that a Lock icon will appear next to the corresponding layer in the Layers list. This icon denotes that the layer is locked from editing. Simply clicking the lock again will unlock the layer and allow it to be edited. Figure 2-9 shows a hidden image layer and a locked text layer.

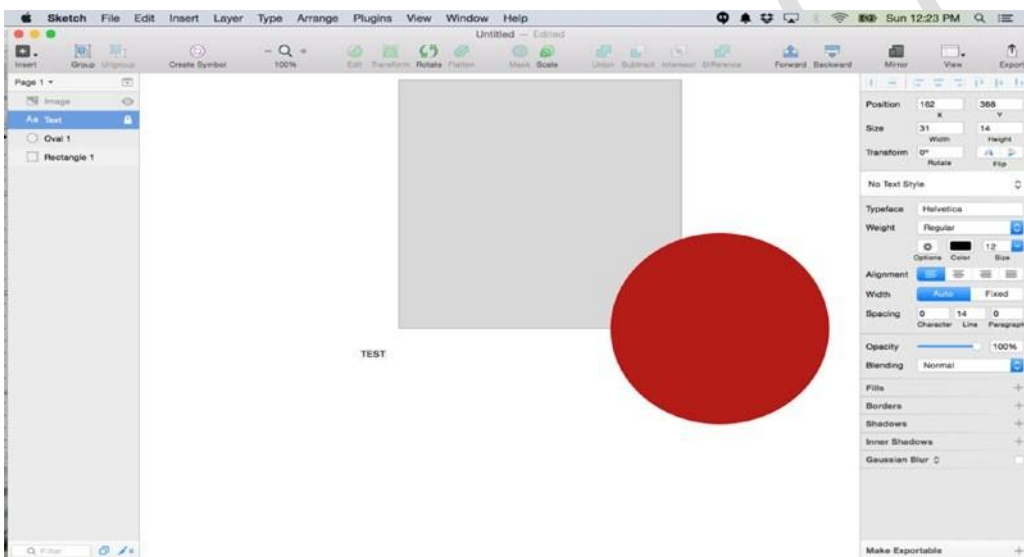


Figure 2-9. The canvas with the image layer hidden and the text layer locked

Groups

Within your layers, you can also create *groups*. Groups are a great way to organize your designs. For instance, if you have multiple layers that make up the tab bar in your app, you might want to group all of the elements.

To create a group, select all of the layers that you want to group. You can select multiple layers by selecting and dragging a box around all of the elements that you would like to group. Alternatively, you can hold down the Shift key and select all of the layers in the Layers list that you would like to group. With all of the layers selected, click the Group button in the toolbar. You will notice that a folder has been created in the Layers list. Clicking the folder will reveal the various layers that make up the group.

Groups can also be nested. That is to say, there can be groups of layers within other groups. For example, if in your Tab Bar group you have five icons, you may want to create a group of icons within that group. The icon group folder will then be located within the Tab Bar group folder.

Inspector

The *Inspector*, located on the far right of the user interface, as seen in Figure 2-10, shows you various properties of the selected layer on your canvas. Depending on what you have selected, it will show you information such as size, color, and styles. The Inspector contains the tools that allow you to view properties of selected objects on the screen. If you select an image, you will see properties pertaining to that image. If you select text, you will see properties pertaining to that body of text. If you change anything in your document, you will notice that the properties in the Inspector can and will change. To edit a shape, you can work directly within the Inspector to change values. These include position and size.

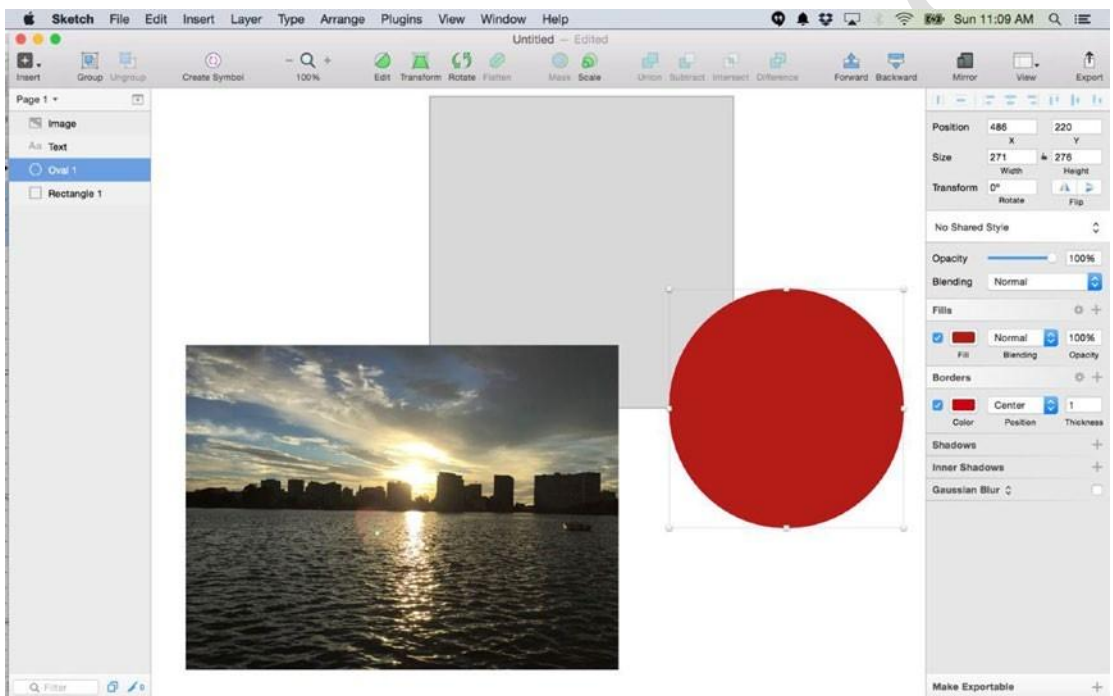


Figure 2-10. Sketch canvas with a selected shape and properties appearing in the Inspector panel on the right

Styles

You can adjust the *styles* associated with your layers in the Inspector. Take the circle in the Figure 2-9. Note that it is a solid red color. That color is associated with a Fill setting in the Inspector. The check box next to Fill setting has been selected. The color in that window is directly associated with the color of the circle. Clicking the red square next to fill will bring up a pop-over with a number of different fill options for the layer. Clicking anywhere in the area on the pop-over allows you to change the shade of the color of the layer. You can use the sliders below the color area to change the color, or to make it more or less opaque. The color picker allows you to sample any color on your screen inside or outside of Sketch.

Below the color picker, you can edit the RGB or hexadecimal codes as well.

The icons along the top of the pop-over represent different options for the texture of the fill. The options range from left to right from solid fill, radial gradient, angular gradient, pattern fill, and noise fill.

Border color can also be edited and changed for thickness as well as other settings. There is also an option to add a shadow (outer or inner) to your shape by making selections in the Inspector panel.

Smart Guides

When moving shapes around on your canvas, you may notice some red lines with a number on them that appears from time to time. These lines are called *smart guides*. They are Sketch's way of helping you to measure and align elements in your layers. The number will tell you how far apart two layers are from each other, as shown in Figure 2-11, and the guides will help you to align one layer with another.

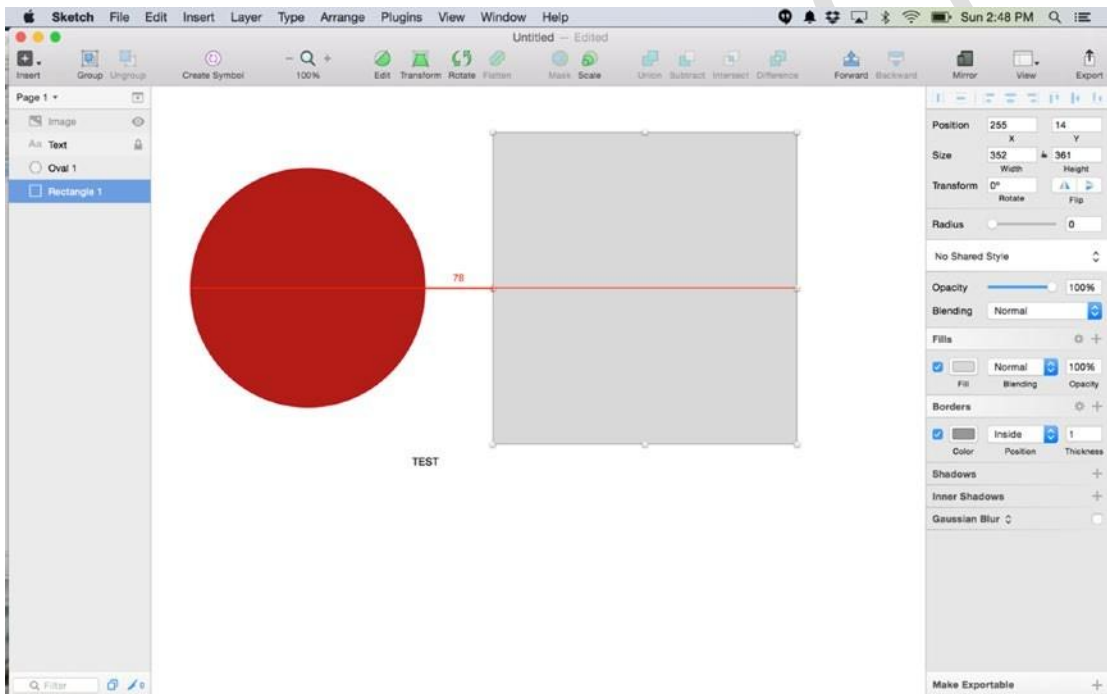


Figure 2-11. Smart Guides show the distance between two layers

Tip Holding the Option key down while you hover your mouse over two layers will show you the distance between two layers and whether or not they are aligned.

Artboards

If you've used Adobe Illustrator, you are probably familiar with concept of the artboard. An artboard allows you to define boundaries for your Sketch infinite canvas. It will create set dimensions that map to a specific device or screen for you to work within.

You can create an artboard in Sketch by going to the Insert button at the top left and selecting Artboard from the menu. You can create your own artboard or, luckily for those designing for iOS, Sketch comes with pre-sized templates, which make it easy to jump right in. This way, all you need to do is to select the appropriate size for your design and go.

You can create an entire application in one artboard in Sketch, which is very helpful. It's a handy way to see how your entire app will look without moving through a number of different files for each screen. It also adds some constraints to Sketch's infinite canvas. An artboard will create a boundary that is the correct size, depending on the device you are targeting.

After you've selected Artboard from the Insert button menu, the various templates will appear on the left side of your Sketch window. Sketch provides templates for the iPad (portrait, landscape, and Retina) and iPhone (portrait, landscape, and Retina), as shown in Figure 2-12. There are also templates for iOS icons.

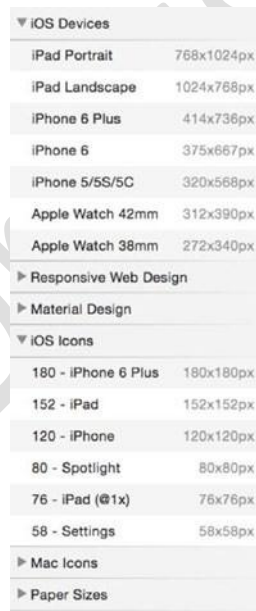


Figure 2-12. Preset artboard templates in Sketch 3

You will note that selecting an artboard template will add the appropriate artboard on your canvas and also place a layer in the left layer panel. The titles of the layer will correspond to the template. To change the name of the layer, you can double-click it and rename it as you would any other file.

If you select a template for say, the iPhone, Sketch will create an artboard in the appropriate size for this device. You can also have multiple kinds of artboards in one canvas. This is helpful if you are creating, for instance, a universal app that will need to run on the iPhone and the iPad. In this case, you can add the template for an iPhone and an iPad and show how the app will appear on both devices. It's a nice way to present your work.

You can rearrange, duplicate, and even export your artboards in order to accommodate your designs. With Sketch, there are a few ways to duplicate artboards. You can copy and paste your artboard and line it up manually using the guides, or you can use Sketch's handy Make Grid feature. This feature allows you to duplicate your artboards with a few clicks.

Simply select Arrange from the menu and choose Make Grid from the drop-down, as shown in Figure 2-13. Select the number of artboards that you want to duplicate by changing the numbers in the Rows and Columns fields, and select Make Grid when done. Sketch will automatically duplicate the artboard according to your selections and align them on your canvas.

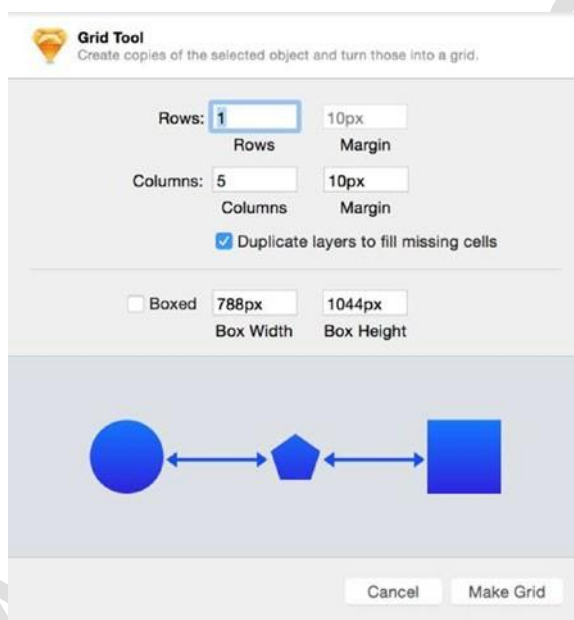


Figure 2-13. The Make Grid feature in Sketch 3 will help you to duplicate and align your artboards

Your artboards on your canvas make up the overall anatomy of your design. Sometimes, however, you will want or need to separate artboards. For example, if your design is incredibly complex and you want multiple artboards to represent a particular flow, it might be beneficial to break your design out into multiple pages, which Sketch supports. In the upper-left corner of your canvas and above the Layers list, you will see that you are currently working on Page 1. To add a page, simply click the button to the right that looks like a downward-facing arrow. Once you click that, the button will turn into a plus (+) sign, and this will allow you to add subsequent pages to your design.

Rulers and Guides

Upon first opening Sketch, you won't see any rulers or guides. This is because they are hidden by default. You can access the rulers by going to the View icon in your toolbar. This will reveal a drop-down menu that allows you to choose from a selection of rulers, grids, and other layout options, as shown in Figure 2-14. The option to show pixels is also in this menu. The purpose of these tools is to help you to align the elements in your design properly.

Here are the various selections and what they mean:

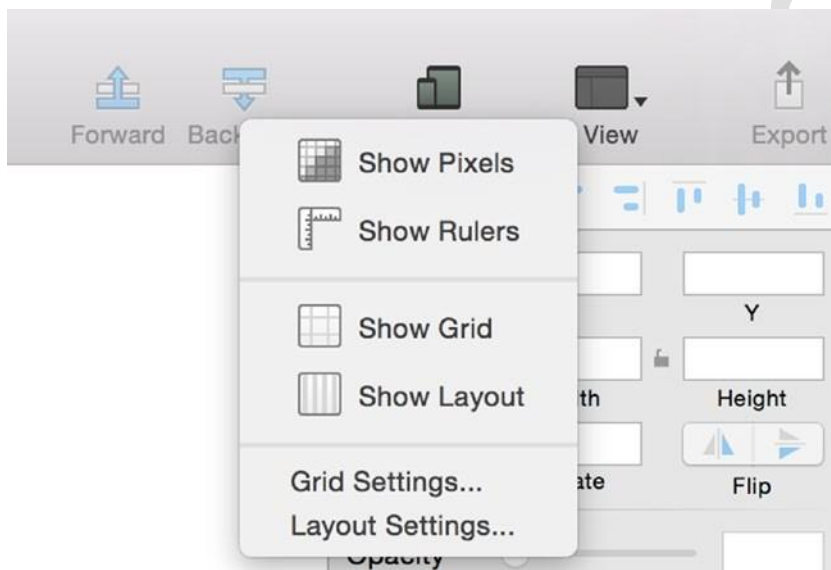


Figure 2-14. The View menu drop-down after expansion from the toolbar

Show Pixels

The *Show Pixels* option will show your element on the screen in pixel mode. This is helpful if you want to see how vector-based design will appear in pixels, such as in a browser.

Show Rulers and Guides

Because of Sketch's infinite canvas, the rulers are not fixed as in other graphic design programs. This means that you can move them around to accommodate your designs. For example, if you are designing for a screen not included in the preset artboard templates, you can create the dimensions on your canvas and use them as a guide in your design. Naturally, if you move the zero point in Sketch's ruler, anything before it will be shown in negative numbers. Figure 2-14 shows a Sketch canvas that has its rulers adjusted. If for some reason you need to reset the ruler, simply click the space where the horizontal and vertical ruler lines intersect. This should revert the rulers back to their original measurements.

You can add a guide to your canvas by clicking anywhere on the ruler. The guides will appear as red lines, and they will remain there until you remove the ruler. Figure 2-14 has guides and rulers activated. The zero point has also been adjusted on both the horizontal and vertical rulers.

Show Grid

When activated, the *Show Grid* function will create gridlines on your canvas. This is a typical grid with squares drawn by intersecting lines as is customary in most graphic programs. By default, the grid size will show a thick black line every 10 squares. The default size of the grid is 20 pixels. Figure 2-15 has the grid function activated. It is also possible to adjust this setting. You will need to return to the View menu and select Grid Settings from the menu.

This will open a window that will allow you to change the block size and colors, as well as the frequency with which the thick lines appear.

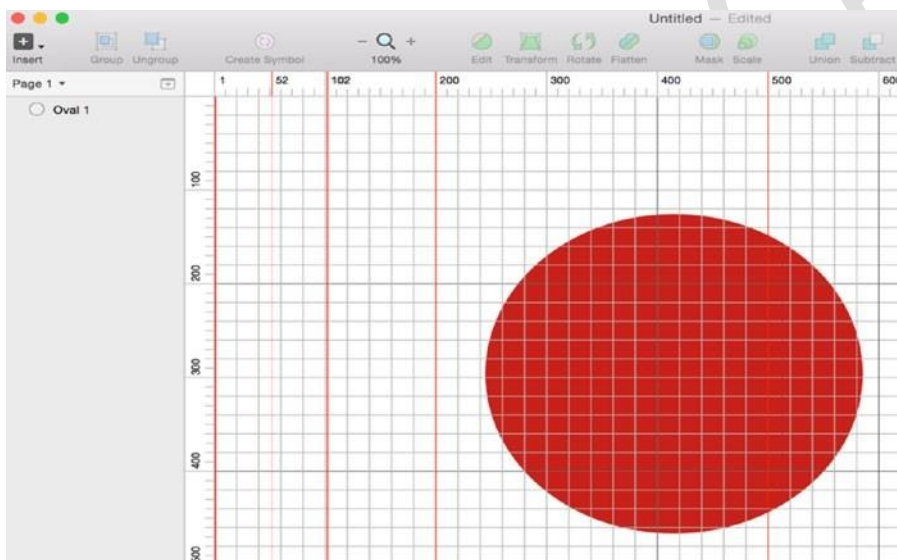


Figure 2-15. Gridlines on a canvas in Sketch

Show Layout

The *Layout* grid is another kind of grid available in Sketch. It allows you to define columns and rows. If you are using Sketch for Web design, your grid settings will be different and you might need to use the layout grid instead. These grids can also be modified to suit your needs.

Shortcuts

Before we dive deeper into Sketch, you will want to learn at least some of its *shortcuts*. They will greatly improve your workflow and reduce the amount of time it takes for you to perform certain actions. As a Mac user, you are likely already familiar with general shortcuts such as copy and paste. The following is a comprehensive list of Sketch shortcuts gathered from around the Web. In addition to the ones that are listed in the menu, you can use this as a reference until some of the more frequently used shortcuts become familiar to you.

General Sketch Shortcuts

^L	Toggle layout
^G	Toggle Grid
Enter	Edit currently selected layer
□2	Zoom to selected layers
□3	Center selected layer on canvas
□+	Zoom in
□-	Zoom out
□1	Center canvas
□2	Zoom selection
Z	To zoom, hold down and click or drag area with mouse
— Z	To reverse zoom, hold down and click
Esc	Exits current tool or mode
Space	Hand tool
Tab	Cycles through layers in the current group
Shift + Tab	Reverse cycle

Layer Shortcuts (Insert)

R	Rectangle
O	Oval
L	Line
U	Rounded rectangle
T	Text layer
V	Vector

P	Pencil
A	Artboard
S	Slice

Moving, Hiding, and Resizing Layer Shortcuts

⌘+ Drag	Duplicate layer
⌘+ Hover	Show distance between layers
⌘+ Resize	Resize from both ends
⌘+ ⌘+ Resize	Preserve aspect ratio
⌘ Shift L	Lock or unlock layer
⌘ Shift H	Hide or show layer
⋮→	Move
⌘⋮→	Resize

Text and Type Shortcuts

Cmd + B	Bold
Cmd + I	Italic
Cmd + U	Underline
Alt + CMD (+) +	Increase font size
Alt + CMD (+) -	Decrease font size

Custom Shortcuts

As a Mac user, you also may be familiar with custom shortcuts.

Control R	Toggle Rulers on and off
Control G	Toggle Grids on and off
Control P	Toggles between pixel and vectors
Control L	Toggles alignment guides

You can also create custom shortcuts for those actions that don't have them. Because Sketch is designed to work within the Mac OS, you can easily create your own shortcuts. For example, you may or may not notice that Insert Image has no shortcut in Sketch. You can easily create a shortcut consisting of your own keyboard combination. To create a custom shortcut, go to System Preferences and select Keyboard. From the tab at the top of the window, select App Shortcuts, as shown in Figure 2-16.

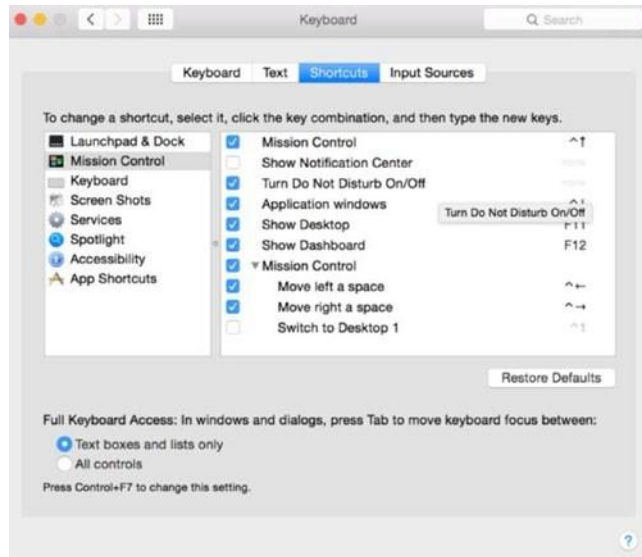


Figure 2-16. You can create a custom shortcut from within your computer's System Preferences

Once you have made these selections, click the “+” button near the bottom of the window. A new drop-down should appear with a list of all of the applications on your computer. Scroll down and find Sketch in that list. In the field entitled Menu Title, type the exact title of the menu item for which you would like to create a shortcut, as shown in Figure 2-17. Finally, in the field called Keyboard Shortcut, enter the appropriate keys for your new shortcut and click the Add button. Your shortcut will not work if typed incorrectly.

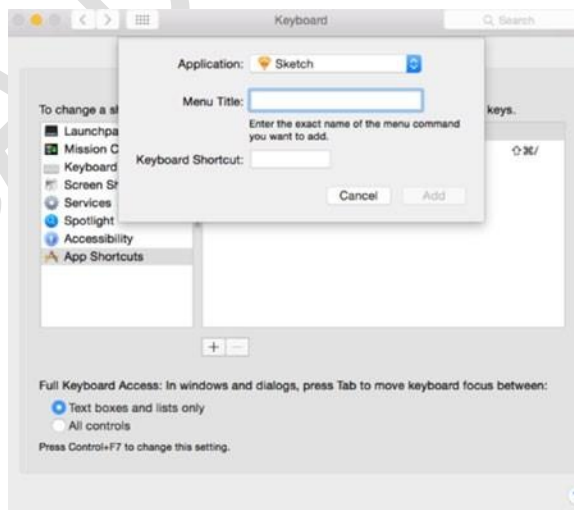


Figure 2-17. Creating a menu title for your keyboard shortcut

Once it has been added, you will see your newly created shortcut in the list of shortcuts for that program, as shown in Figure 2-18. Your shortcut should now be ready for use in Sketch. You will be able to access it from the drop-down menu in the toolbar.

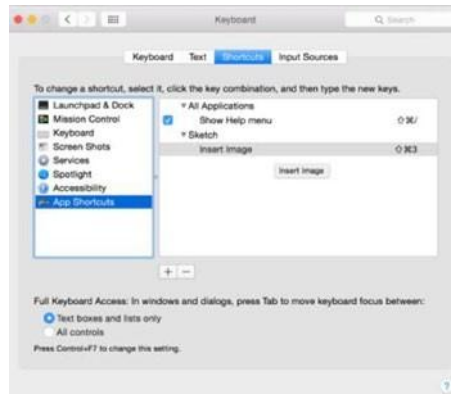


Figure 2-18. Creating a custom keyboard shortcut

We've now been through the entire Sketch interface. Thus you should be fairly comfortable with the essential functions of everything that you see on the screen when you open the program and with customizing your toolbar to your liking. As you can see, though the interface is simple, Sketch is a powerful graphics program that will make designing your iOSapp a pleasurable experience.