

I02060-18

# INTERACTION & ELECTRONICS



FROM PRESCAUTER.COM (AUGUST, 2013)

## DIGITAL PROTOTYPING

MANUAL 2019

# INTRODUCTION

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## MAKE SURE TO ALLOCATE TIME IN YOUR SCHEDULE TO GO THROUGH THIS TUTORIAL BEFORE THE WORKSHOP IN WEEK 3.4

Interactive prototypes can be used to get feedback from other designers, clients or actual users in various stages of the design process. Axure RP Pro is a software tool that helps designers develop interactive prototypes. It is widely used in IxD agencies, and recognised worldwide as a basic skill a good interaction designer should have. It has a relative high learning curve compared to InVision for example, yet it's a powerful tool when the focus is on 'prototyping interactions'.

For this course, we offer you a wide support to gain the necessary skills to use Axure by means of self-guided tutorials (this document), a workshop and assistance hours. For all these reasons, we highly suggest you to use Axure RP as your prototyping tool in this course. Yet, if you want to use another tool, feel free to do so, but make sure it supports a) creating hi-fi prototype interactions such as animations, user actions (swipe, tap, pinch, etc.) and system actions (pops up, carousel, transition effects, etc.), and b) that you can export the source code (which should be handed in as a deliverable in this course).

Axure RP gives you the wireframing, prototyping and documentation tools needed to make informed design choices, persuade any skeptics, and document your design without coding. It combines a presentation environment and a programming environment. In the presentation environment dynamic presentations can be made relatively simple, while the programming environment offers the possibility to add interactivity and control to these presentations.

In this guided tutorial we have selected articles and self-tutorials from the Axure website we think are most useful for you during the course. On the page 6 you'll find a set of tutorials and reference articles from the [Axure support repository](#). It shows the relevant materials in a specific order to help you explore the basics elements of the 6 main features offered by Axure: Dynamic content; Condition flow; Animations; Data driven; Adaptive views and Math functions (see page 5). We suggest you to go through this guided tutorial in preparation of the more advanced workshop given in week 3.4. This guide starts by providing you with the basic knowledge you need to know regarding the Axure environment, flow diagrams, wireframes and collaboration. The next set is dedicated to the main elements that you need to master to use the main features offered by Axure RP by means of hands-on tutorials and some reference articles. The last set consists of reference articles for advanced prototyping/programming and can be used to gain a deeper, and/or more advanced knowledge and skills. We suggest you to go through these materials in the indicated order.

After completing the recommended tutorials, and reading the reference articles on the Axure website you'll be able to:

- > Prototype design aspects like layout, look & feel, and interactivity of a touchscreen interface.
- > Provide users with innovative interactive alternatives, using features like movement, (micro)animation, scaling and colour.

### SOFTWARE

Axure RP is available on all IDE computers (virtual application). You can find it under 'All programmes/informatica' or just search for it. For use on your own computer you can request a free one-year subscription license (<https://www.axure.com/edu>). To get started right away you can download and install a 30 day free trial while waiting for the license. **Don't postpone applying for the license, processing might take a while and you don't want Axure to stop working during the course.**

We also have arranged the use of **Invision** with a free-license for students by registering with your TUD email account using this [link](#) and this code: 56-73-13-19. In addition, the company has provided us with a [video demo](#) to help you get familiar with the tool.

### EXECUTION

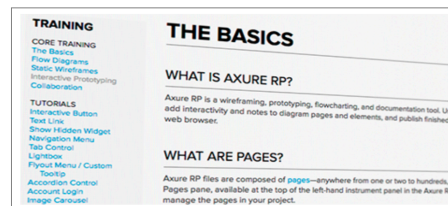
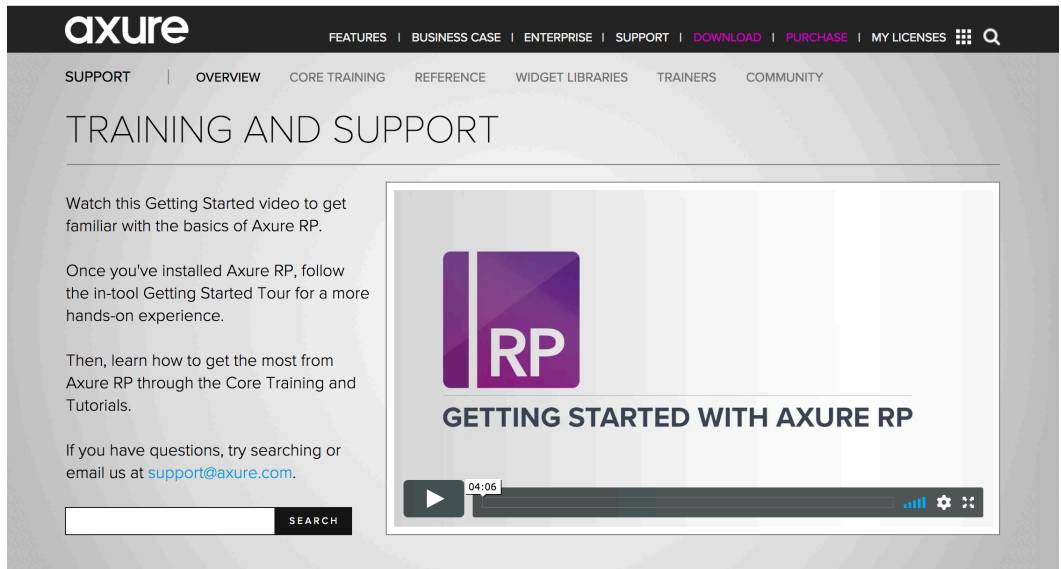
This activity is carried out individually. However, you can choose to team up with a team member to go through the tutorials. On **Wednesday week 3.4** a mandatory **Digital Prototyping workshop** is scheduled (see course manual and schedule for details). This workshop needs to be completed by each student individually before the workshop.

**NOTE** There is no time allocated in the schedule to finish the tutorial and/or finish the workshop assignment. Which means it's your own responsibility to find the time to do this in weeks 1 through 3. In weeks 5 through 8, Axure assistance will be provided, on a first come- first serve basis on **Fridays (SHIFT - 10:00-12:00 and 14:00-16:00)**. Please don't underestimate this part of the course, not only the Touchscreen prototyping individual grade is influenced by it, also the team's final presentation of the Design project depends on your Axure skills!

**FOR THE MANDATORY PROTOTYPING WOKSHOP IN WEEK 3.4 EVERY STUDENT IS EXPECTED TO HAVE CREATED AN AXURE SHARE ACCOUNT. SEE THE REFERENCE ARTICLE ON AXURE SHARE FOR INFO AND INSTRUCTIONS.**

# GETTING STARTED

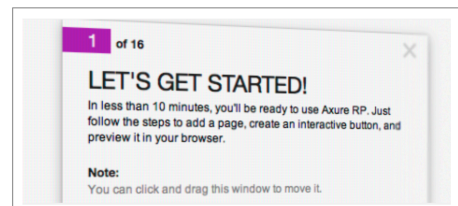
You'll learn the ropes by watching videos, reading documentation and doing hands-on tutorials on/from the Axure web-site: <https://www.axure.com/support> which look like this.



## CORE TRAINING AND TUTORIALS

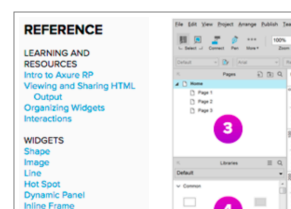
When you are ready to dive deeper into Axure RP, the Core Training and Tutorials will teach you the ins and outs and give you example-based learning into specific techniques and common design patterns.

[GO TO CORE TRAINING](#)



## IN AXURE RP: GETTING STARTED TOUR

Once you've installed Axure RP, the easiest way to get up to speed is to follow the in-tool tour. In less than 10 minutes you will have hands-on experience with the core features. Open Axure RP on your computer and begin the tour from the Welcome Screen or from "Help > Getting Started Tour..." in the main menu.



## REFERENCE GUIDE

Visit the Reference Guide for comprehensive documentation of Axure RP features and capabilities.

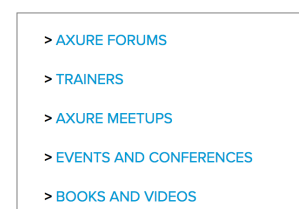
[GO TO REFERENCE GUIDE](#)



## WIDGET LIBRARIES

A collection of widget libraries and templates (free and paid) to load into your copy of Axure RP and get a jump on your next project.

[DOWNLOAD WIDGET LIBRARIES](#)



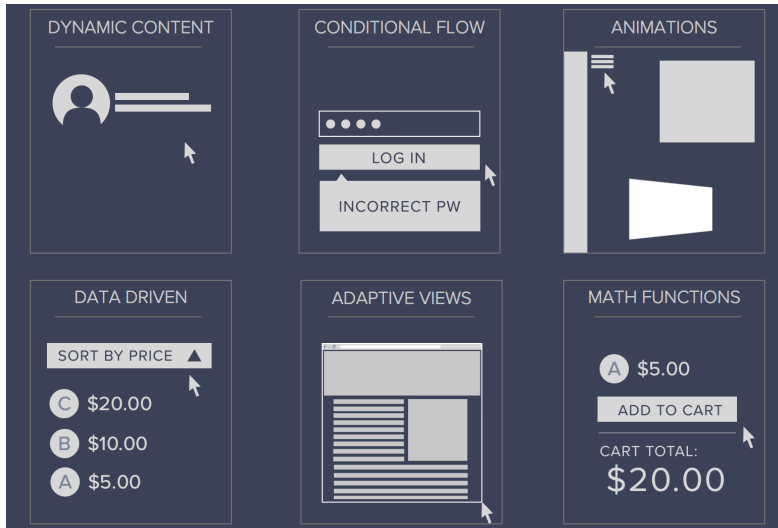
## THE AXURE COMMUNITY

You are not alone! Join the Axure Forums or attend a Meetup to get to know other Axure RP customers. Find a trainer or complete an online course and become an Axure expert.

After watching the video on this page you can either do the 'GETTING STARTED TOUR' within the application, or move on to the documentation and training by clicking 'GO TO REFERENCE GUIDE' or 'CORE TRAINING AND TUTORIALS'. On page 6 is an overview of which articles and tutorials we want you to do, in the order we suggest.

# OVERVIEW OF FEATURES IN AXURE RP PRO

We often talk about the 6 features of Axure and that we want you to implement at least two of them (Dynamic content and Animations) in your pre-assignment. On this page we introduce an overview with information and references on these 6 features. Following this introduction to each feature is a compilation of training articles and tutorials that relate to these features.



## DYNAMIC PANEL

A dynamic panel is a container that holds other widgets in layers, or “states”. A dynamic panel can have one state or many, with only one state visible at a time. Dynamic panels are useful when a portion of your diagram has several different possible contents, such as an image slideshow or auto-rotating carousel.

Dynamic panels are the only type of widget that can be dragged with a mouse movement. Place a draggable widget in a dynamic panel to prototype this effect.

Dynamic panels fixed in place using the “Pin to Browser” feature will not scroll with the rest of the page in the HTML output, making them good for always-visible content like sticky headers, sidebars, and corner banners.  
<https://www.axure.com/support/reference/dynamic-panel-widgets>

## CONDITIONAL LOGIC

Design and user testing processes can sometimes be helped by building functionality into your Axure RP project, just as it would be in the final team application. For example, let’s say we want to show a picture of a fruit based on the value selected in a droplist. You could create a dynamic panel with states containing the images of fruit. When the value of the droplist is changed (OnChange) you can define conditional logic in the cases to evaluate the value in the droplist (if selected option of “Fruit Droplist” equals “apple”) and set the dynamic panel state accordingly.

## ANIMATIONS

Animations: set boundaries, simultaneous animations, rotate, set size, flip animations.

<https://www.axure.com/blog/coming-in-axure-rp-8-new-animations-and-interactions/>

## DATA DRIVEN

The “repeater” widget is an advanced widget type, used to display repeating patterns of text and images. The big idea with repeaters is that, because they are data-driven, they can show “true” dynamic sorting and filtering. Reach for a repeater when you really need to demonstrate a dynamically sortable or filterable design (think of an Amazon search results page). But repeaters are more work to set up, so skip the repeater and use regular widgets if you don’t need the sorting and filtering. Possible applications: dynamic data table behaviors (adding/removing rows, sorting, filtering, etc.) or product list (list with product information and images that you want to sort or filter)

[repeater widgets](https://www.axure.com/support/reference/repeater-widgets) <https://www.axure.com/support/reference/repeater-widgets>

## ADAPTIVE VIEWS

Set up and edit multiple screens for the same page. Adaptive Views allow you to design for different screen sizes similar to responsive design. Define the breakpoints where you want your pages to switch to a different layout or style.

<https://www.axure.com/support/reference/adaptive-views>

## MATH FUNCTIONS

Axure RP can perform math functions on your widget text and variable values. This is useful when you want to prototype a design with a computational component, like a shopping cart, shipping calculator, scheduling app, or advanced animation.

<https://www.axure.com/support/reference/math-functions-and-expressions>

## FORUM: TIPS & TRICKS EXAMPLES

There is an active forum in which information and ready-to-use solutions to user’s questions is provided.

<https://www.axure.com/c/forum/tips-tricks-examples/>  
There is also a blog for Axure users with interesting/helpful content <https://www.axure.com/blog>

# WHAT YOU ARE EXPECTED TO DO?

Below an overview of the selected reference articles and tutorials in the order we think they benefit you most. The arrows indicate under which web page you can find them; Reference or Core training. The necessary tutorial files are combined into two .rp files available for download on Brightspace under 'Content/Materials/Digital prototyping'..

## REFERENCE

### LEARNING AND RESOURCES

[Intro to Axure RP](#)  
[Viewing and Sharing HTML Output](#)  
[Organizing Widgets](#)  
[Interactions](#)

### WIDGETS

[Shape](#)  
[Image](#)  
[Line](#)  
[Hot Spot](#)  
[Dynamic Panel](#)  
[Inline Frame](#)  
[Repeater](#)  
[Text Field and Text Area](#)  
[Droplist](#)  
[List Box](#)  
[Checkbox](#)  
[Radio Button](#)  
[HTML Button](#)  
[Tree](#)  
[Table](#)  
[Menu](#)  
[Snapshot](#)  
[Groups](#)  
[Connectors](#)  
[Vector Drawing](#)

### LIBRARIES

[Widget Libraries](#)

### PAGES

[Pages](#)  
[Grids, Guides, and Snapping](#)

### MASTERS

[Masters](#)  
[Raised Events](#)

### STYLES

[Page and Widget Styles](#)

### DOCUMENTATION

[Flow Diagramming](#)  
[Widget and Page Notes](#)  
[Word Specification](#)  
[Print Settings](#)

### GENERATED HTML

[HTML Generator](#)  
[Sidebar](#)  
[Web Fonts and Font Mapping](#)

### AXURE SHARE

[Basics](#)  
[Security](#)  
[Troubleshooting](#)  
[Connection Issues](#)  
[Mobile App](#)  
[Mobile Settings](#)  
[Slack App](#)  
[Hipchat Integration](#)  
[Microsoft Teams Connector](#)

### AXURE SHARE ENTERPRISE

[User Guide](#)  
[Installation Guide](#)  
[Accounts and Permissions](#)

### TEAM PROJECTS

[Creating and Sharing](#)  
[Working with Team Projects](#)  
[Moving and Upgrading](#)  
[SVN Troubleshooting](#)

### ADVANCED INTERACTIONS

[Variables](#)  
[Conditional Logic](#)  
[Math, Functions, and Expressions](#)  
[Adaptive Views](#)

### INSTALLATION GUIDES

[Mac](#)  
[Windows](#)

### ATTRIBUTIONS

## PROTOTYPING BASICS

← [INTRO TO AXURE RP](#)

[GETTING STARTED](#) →

[FLOW DIAGRAMS](#) →

[STATIC WIREFRAMES](#) →

[INTERACTIVE PROTOTYPING](#) →

[COLLABORATION](#) →

## TUTORIALS AND REFERENCE ARTICLES

← [INTERACTIVE BUTTON](#) →

[TEXT LINK](#) →

[SHOW HIDDEN WIDGET](#) →

[NAVIGATION MENU](#) →

[FLYOUT MENU OR CUSTOM TOOLTIP](#) →

← [DYNAMIC PANEL WIDGETS](#)

[IMAGE CAROUSEL](#) →

[TAB CONTROL](#) →

[ACCORDIAN CONTROL](#) →

[LIGHTBOX](#) →

← [CONDITIONAL LOGIC](#)

[AUTO-TAB FIELDS](#) →

[DYNAMICALLY SET DROPLIST OPTIONS](#) →

[SET TEXT WITH A DROPLIST](#) →

[PASS TEXT TO NEXT PAGE](#) →

[FULL-WIDTH IMAGE OR BANNER](#) →

[SCROLL-ACTIVATED STICKY HEADER](#) →

[SLIDER](#) →

[EMBED MEDIA](#) →

[DRAG AND DROP](#) →

## MOBILE TUTORIALS

[SWIPING SLIDESHOW](#) →

[SCROLLING CONTENT](#) →

[SLIDING MENU](#) →

[TOGGLE SWITCH](#) →

[ANIMATED SCREEN TRANSITION](#) →

## REFERENCE MATERIALS

← [FLOW DIAGRAMMING](#)

← [VECTOR DRAWING](#)

← [WIDGET AND PAGE STYLES](#)

← [MASTERS](#)

← [RAISED EVENTS](#)

← [VARIABLES](#)

← [AXURE SHARE BASICS](#)

← [THE HTML GENERATOR](#)

← [WEB FONTS AND FONT MAPPING](#)

[IMPLEMENTING WEB FONTS WITH](#)

[GOOGLE FONTS IN AXURE RP](#)

(article, also included in this manual)

## CORE TRAINING

### Getting Started

[Flow Diagrams](#)  
[Static Wireframes](#)  
[Interactive Prototyping](#)  
[Collaboration](#)

## TUTORIALS

[Interactive Button](#)  
[Text Link](#)  
[Show Hidden Widget](#)  
[Navigation Menu](#)  
[Tab Control](#)  
[Lightbox](#)  
[Flyout Menu / Custom Tooltip](#)  
[Accordion Control](#)  
[Account Login](#)  
[Image Carousel](#)  
[Auto-Tab Fields](#)  
[Required Fields](#)  
[Dynamically Set Droplist Options](#)  
[Set Text with Droplist](#)  
[Pass Text to Next Page](#)  
[Full-Width Image or Banner](#)  
[Scroll-Activated Sticky Header](#)  
[Slider](#)  
[Drag and Drop](#)  
[Embed Media](#)  
[Scrollable Table](#)  
[Set Dynamic Panel State on Next Page](#)  
[Table with Images](#)  
[Terms and Conditions](#)  
[Custom Icon Button](#)  
[Custom Text Field](#)  
[Custom Checkbox and Radio Button](#)  
[Custom Droplist](#)  
[Custom Datepicker](#)

## MOBILE TUTORIALS

[Swiping Slideshow](#)  
[Scrolling Content](#)  
[Sliding Menu](#)  
[Toggle Switch](#)  
[Animated Screen Transition](#)

## REPEATER TUTORIALS

[Basic Repeater - Dynamic Table](#)  
[Sorting Rows](#)  
[Filtering Rows](#)  
[Adding, Deleting, and Updating Rows](#)  
[Marking Rows](#)  
[Advanced Repeater - Product Listing](#)  
[Reference Pages](#)  
[Advanced Filtering](#)  
[Pagination](#)

## REFERENCE GUIDE



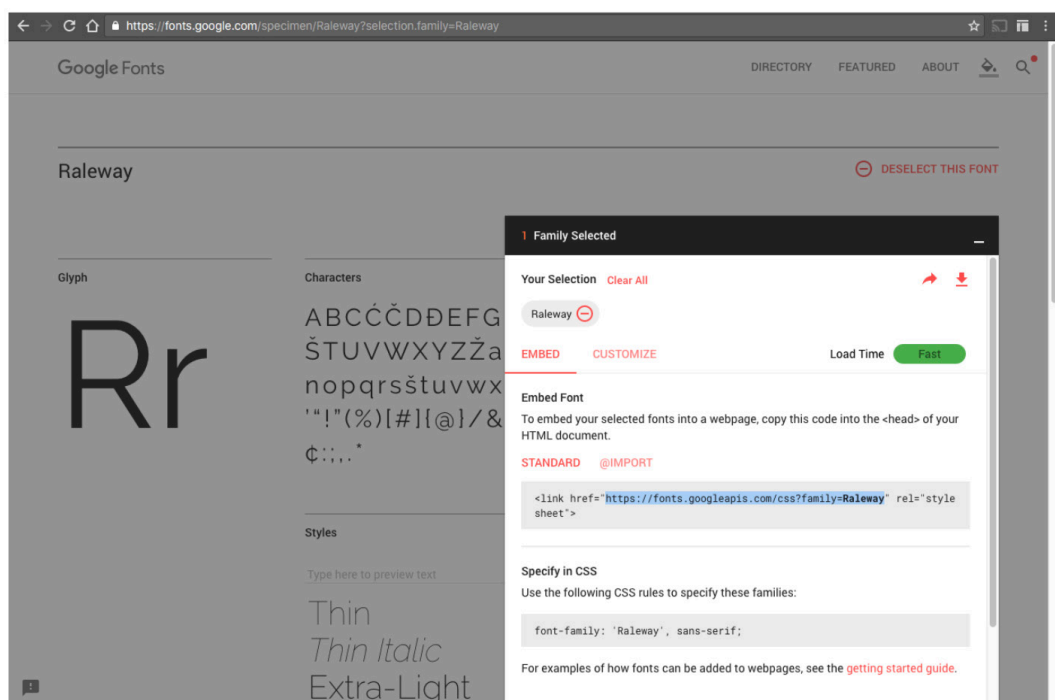
# IMPLEMENTING WEB FONTS WITH GOOGLE FONTS IN AXURE RP

BY KIP MITCHELL  
SEP 21, 2016  
LEARN BY EXAMPLE

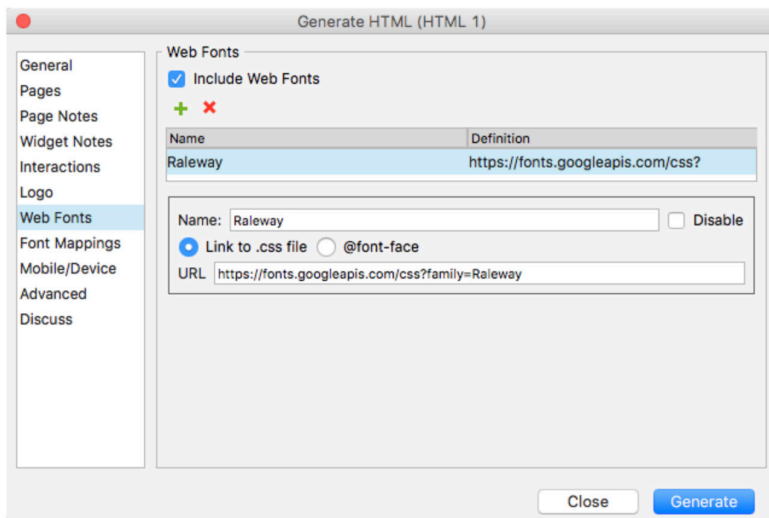
source:  
<https://www.axure.com/blog/implementing-web-fonts-with-google-fonts-in-axure-rp/>

The term “web fonts”, in the general sense, refers to the web development technique of using font files hosted on a remote server—instead of on your computer’s local hard drive—to render the letterforms you see when you browse the web. In the world of Axure RP, the term has a second, related meaning: it’s a feature that allows you to use web fonts in your diagrams by configuring your Axure RP project file to point to the fonts’ hosted locations out there on the internet. Web-based font-hosting has been prevalent since about 2010. (The Axure RP feature has been around since version 7, released in 2013.) The year 2010 was a big one for web fonts in large part because it was when Google, in their inscrutable benevolence, debuted Google Fonts. Competitor Typekit had begun selling access to web fonts in 2009 (before being acquired by Adobe in 2011), but no one before Google had offered a high-quality library of web fonts that were free to use. (These days there are some pretty good free-to-use alternatives to Google Fonts, such as Brick.) Speculation has simmered over the years as to why Google maintains the service, but the Google Fonts site was given a Material Design makeover this past June, which I think we can take as a fairly positive sign of Google’s ongoing commitment to it. Using Google Fonts is the easiest way to implement web fonts in your Axure prototypes. Read on for a step-by-step walkthrough of how it works. (Also, if you prefer to learn by example, download this .rp file that’s already set up with links to three different Google Fonts web fonts.)

1. Head over to [fonts.google.com](https://fonts.google.com) and browse or search for a font you’d like to use. If you want to follow along with the screenshots in this article, you can search for the “Raleway” font.
2. Click a font name to go to its profile page. Once there, **click the big red “plus” icon** to select the font; you’ll then see a popup notification bar at the bottom of the window.
3. **Click the notification bar** to expand it, and then **click the “Download” icon** in the top-right corner to download a zip archive of your selected fonts. Keep the Google Fonts webpage handy though, because we’ll need it again in a minute.
4. Go ahead and **install the font files** you downloaded and then restart Axure RP if it was already running. You’ll now be able to use your new typeface to style text as you work on your diagrams. That’s half the battle! (If you’re not sure how to install fonts on your computer, try these articles for Windows users and Mac users.)
5. Back on the Google Fonts webpage, highlight your font’s “embed URL”. **You want just the piece inside the first set of quote marks, starting with “https” and ending with the font name**, as shown below. Once you’ve got just that piece selected, copy it to your clipboard.



6. Fire up Axure RP and open your project's Generate HTML dialog ("Publish > Generate HTML Files..."), and then go to the "Web Fonts" tab. Add a new entry to the web fonts table using the green "plus" button, name it after the font you downloaded, and then paste the URL you copied into the "URL" field, as shown below.



Click either "Close" or "Generate", depending on whether you want to continue editing or generate your HTML output right away.

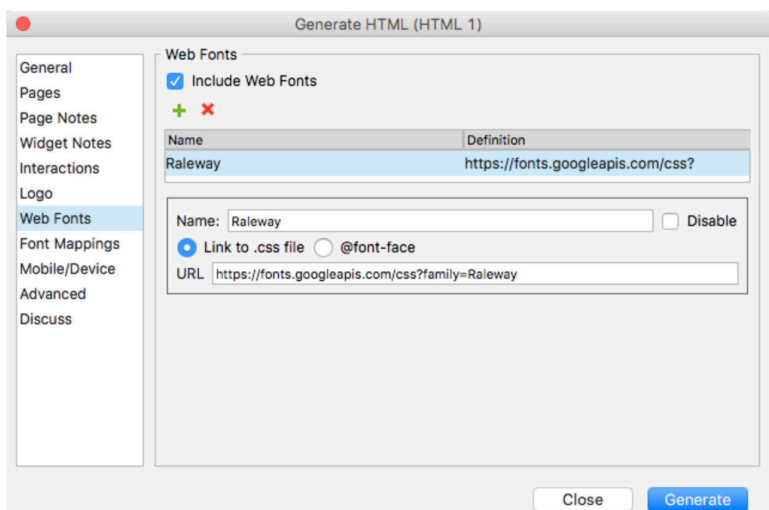
The Google Fonts service is convenient to use, but of course it has its limitations—the main one being that it doesn't offer every font under the sun. If you absolutely need to use a particular font in your project, and if it's offered via another font hosting service or if you're planning to self-host, the process of getting set up may present a few extra hurdles.

1. **Other font hosting services.** If you're the spendy type, there are a half-dozen sites out there offering fonts

and web font hosting for a price. Axure customers seem to prefer MyFonts and Monotype's Fonts.com, both of which are tried, tested, and fully compatible with Axure RP. Adobe's Typekit will also work for pointing to web fonts, but Axure RP users who run Windows should take note: Typekit's digital rights management (DRM) scheme makes its local fonts incompatible with Axure RP on Windows (but there's no conflict on OS X / macOS). So if the typeface you absolutely need is only available via Typekit, you'll want to take advantage of Axure RP's font mappings feature (read on) so that you can use it in your prototype.

2. **Font mappings.** If you'd like to use a particular web font in your prototype but don't have that font installed on your local computer, you can still make it work by using a feature called "font mappings". This feature works by swapping out a font in your prototype for a designated web font when the project's HTML is generated. You'll see the local font on the Axure RP canvas, but you'll see the web font when you view the prototype in your web browser.

To create a font mapping, head to the next tab down in the Generate HTML dialog and map any font that you already have on your computer to the web font you just configured. Here's an example:



So in this particular example you'd design all of your text using the Gill Sans font while you worked in Axure RP, but then the text would appear in the Raleway font to you and to others visiting your hosted prototype after you published it to the web (e.g., to Axure Share).

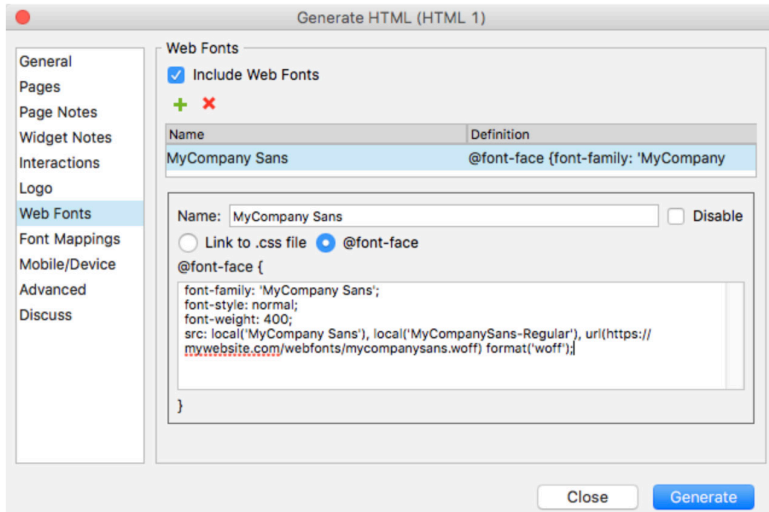
3. **Icon fonts.** The popular icon set Font Awesome is included in Axure RP as of version 8; you can access it by switching to the "Icons" widget library in Libraries pane's dropdown menu. No web fonts configuration required! If you'd like to use a different icon set, and if it has been hosted online somewhere as a web font, the steps to get it working in Axure RP should be the same as with any other web font. Keep in mind, though, that many font icon

sets have not been hosted online by their creators; they expect you to do the hosting part yourself.

If you're having trouble getting a particular icon font working in Axure RP, try searching the forum for that particular icon font, or feel free to email the Axure product support team at [support@axure.com](mailto:support@axure.com) for assistance.



**4. The “@font-face” method.** If you’re using any major web fonts service, you’ll be provided with a link to a .css file as a quick and easy way to point to the hosted location of the web font you want to use. (This link is called the “embed URL” in Google Fonts, but may be called something different by the other services.) On the other hand, if you or your company has self-hosted a font, you probably won’t have a tidy CSS file to point to. If this is the case, you’ll need to use the “@font-face” method instead of the CSS method to point to your web font when you’re configuring your Axure RP project. The @font-face method can be tricky to implement and is not the recommended method for using web fonts in Axure RP. But if you need to do it, here’s an example of how it might look:



#### 5. Enabling cross-origin resource sharing (CORS).

Self-hosting a web font is not for the faint of heart; it’s leaving “Axure RP user” territory and entering “web administrator” territory. The Axure support team probably will not be able to help you if you run into trouble with self-hosting a web font, but we have learned one useful trick from experience: you need to enable what’s called “cross-origin resource sharing”, or “CORS”, on your web server. This is pretty much the number one problem web font self-hosters run into.

But how can you enable CORS on your particular server? Fortunately, the good people over at Enable CORS are passionate about enabling CORS, will tell you when and why you’d want to, and have technical details about how to do it for a long list of server platforms.