



# Longbox

A Web Application for Tracking Weekly Comic Releases

<http://extendedcontainer.com>

## **Project Description and Goals**

The comic industry, by nature, is unpredictable. There are a number of collaborators working on each issue that a publisher releases, from writers and pencilers to inkers, colorists, letterers, and editors. At any point in the process of creating an issue problems can arise, delaying the release by weeks or even months. Some comics are released as each issue is completed, avoiding keeping a regular schedule at all. Because of these realities, collecting comics on a weekly basis can sometimes be a headache. Unless you keep a close eye on weekly release lists, it can be easy to miss an issue simply because you were unaware it was hitting the stands. Conversely, collectors can be left confused when an issue they were expecting to see in their local comic shop is missing. Most collectors don't get every comic on the shelf, preferring to pick up only those series in which they're interested. Scanning through a list of every new comic release every week can be time consuming, and unless you're careful it's easy for some issues to slip through the cracks there as well.

My capstone aims to address these problems with the currently weekly comic collecting process by providing a list of weekly releases while allowing users to maintain their own list of series they're interested in collecting. This provides a way for collectors to keep track of weekly releases while automatically filtering out the comics they don't care about, saving time and avoiding potential missed issues. Much of the project focuses on user interface and user experience design, creating an application that designed with simplicity and ease-of-use in mind. Along with these design aspects comes a focus on the web application development required to create a functional, pleasant front-end interface alongside a well-structured back-end database system. The end result is a responsive web application that provides user account creation, weekly comic release information, and subscription list management. The application is responsive, and features a custom interface when run as a web application saved on iOS devices through Mobile Safari

## **Target Audience**

The primary audience for this web application is comic readers who follow a number of series (anywhere greater than 10) each month and are regular shoppers at their local comic shop. Generally tech-savvy young adults between the ages of 20 and 30, these are users who follow enough series on a weekly basis that they could be considered "collectors". Regardless of whether they're purchasing comic books for the stories or to put them directly into their

ever-growing collection, this audience will benefit most from the application. They procure enough comics every week that keeping track of what is coming out becomes a chore.

The secondary audience for this web application is customers new to the comic scene. Whether they were brought in by an event or a relaunch from one of the big two publishers, Marvel and DC, they're getting their feet wet and starting to explore the vast, interconnected world of comics. Since they're just discovering how many different stories comics have to offer, these users tend to be on the lookout for new series to start reading. The application's ability to allow users to explore new releases outside of the filtered pull list provides these users a way to discover new series without taking on the daunting task of talking to comic shop employees, an act which can sometimes be intimidating when you're new to the scene.

Parents and loved ones of the secondary and primary audiences make up the tertiary audience for Longbox. This especially pertains to parents of younger readers who purchase comics for their children but don't have the time or the desire to keep track of when they need to go to the store or what they need to pick up. This application would allow them to track that information in a hassle-free way.

## User Personas



**Persona:** Comic Book Newcomer

**Name:** Troy Barnes

**Job Title:** Student

**Demographics:**

- 19
- Male
- single
- no children
- Working on a degree in Business Administration at UNCG

### Goals and Tasks

Recently starting college, Troy finds himself with a lot of free time on his hands. When he was younger, he got Archie comics mailed to his house, but has long since cancelled that subscription. He notices several comic shops in the area, but is too intimidated to ask questions of the employees. Needing a way to know if he needs to go to the comic shop on any given

week and tired of sifting through long lists of weekly releases, he turns to the internet to help keep track of when the next issue of the series he's interested in will be released. He finds Longbox, a service that helps him keep track of the series he cares about as well find new ones to consider reading.

## Environment

Troy is relatively comfortable using a wide range of electronic devices, from smartphones to tablets to laptops and desktops. He most often uses his phone however, and he sometimes finds himself taking it out to check Twitter even when he's sitting in front of his desktop. He's almost always connected to the Internet, using it to keep in touch with friends and keep up to date on the latest news about popular culture.

**Quote:** "Is this issue a good jumping on point?"



**Persona:** Seasoned Comic Book Collector

**Name:** Annie Edison

**Job Title:** Senior Software Engineer

**Demographics:**

- 29
- Female
- engaged
- no children
- BS in Computer Engineering & Computer Science from USC

## Goals and Tasks

When Annie isn't programming or performing code reviews for the engineers at her startup, she likes to relax by reading comics. Her mother got her into reading them when she was young and she's kept up the habit since then. She likes the storytelling and escapism she finds in the 60 different series she buys on a monthly basis, but also enjoys seeing her collection grow.

Unfortunately, the comic shops in her area aren't very well staffed, and at times comics that she wants to buy fall through the cracks. Since she only keeps a subscription box and doesn't have time to read the news sites for delays or browse through long lists of weekly releases, she sometimes doesn't even know when she's missing an issue. She finds Longbox, a service which can help her track of her extensive list of monthly comic series while keeping her informed of which new issues are coming out on any given Wednesday.

## Environment

Annie carries her laptop with her wherever she goes, always connected to her work and able to set up wherever she needs to be. She uses a smartphone for quick tasks, communication, and competitor research, but prefers to use the larger screen that a full computer allows for. She picks up new technology quickly and is constantly on the lookout for the latest applications coming from her peers in the Silicon Valley.

**Quote:** “Did you already run out of copies of Saga? It’s only 11 AM!”



**Persona:** Parent Who Buys Comics for their Kids

**Name:** Abed Nadir

**Job Title:** Ruby Tuesday Owner and Manager

**Demographics:**

- 54
- Male
- divorced
- father of three children
- BA in English with a Minor in Creative Writing from UNC-CH

## Goals and Tasks

Abed’s never enjoyed comics, but he knows the importance of getting kids to read from an early age. He uses comic books as a way of getting his children interested in reading, hoping it leads to a lifetime of learning. He doesn’t know or care about the superheroes that take center stage in the stories he buys, and he doesn’t have the time to constantly look at long lists of releases every week to see if the next issue of the two or three series his kids read are coming out. Taking a trip to the comic shop is time consuming, so he only wants to go there when he knows that he can quickly pick up what he needs. He turns to the internet for a solution to his problem and finds Longbox, a service which allows him to keep track of the release dates for only a few series without needing to worry about wasting time.

## Environment

Abed has a smartphone, but he uses it very rarely, mostly to keep track of his to-do lists and email. He has a desktop computer at home that he uses from time to time, but he mostly avoids

using technology if he can. He's comfortable with what he needs for his job however, relying on email and digital calendars to keep track of his life.

**Quote:** "Is this age-appropriate for my seven-year-old?"

## **Project Value and Relevance**

Creating an application for tracking comic subscription lists isn't a new idea. There are a few products in the market that already perform this task. However these products are either poorly maintained to the point of being nearly unusable or they try to take on too many aspects of the comic collecting community, resulting in a poor user experience. Instead of trying to integrate extraneous features like social networking or full collection management, Longbox sets itself apart from its competitors by keeping things simple and easy to navigate. Many people collect a wide variety of things, but one of the largest and most well-known realms of collection is comic books. This project aims to improve the collecting experience by aiding weekly comic purchasers through the use of technology. Instead of needing to buy issues of Previews magazine or looking up release lists from Diamond Comic Distributors to track what is coming out in the future, customers can instead see what will be coming out any given week by glancing at the website on their desktop or smartphone.

Entering the Interactive Media program, I already possessed a decent knowledge of programming, having come from a background in computer science. My goal for my time in the program was to allow my creative skills to progress, particularly in the realm of user interfaces and web development. This project has allowed me to stretch what I have learned thus far and demonstrates both my knowledge of user experience and user interface design, as well as showcases my front-end development capabilities.

## **Project Production Schedule**

February 21 - February 27

- Complete proposal (**due February 24th**)

February 28 - March 5 - *Research and Concept Development*

- Begin working on interface wireframes and research what technologies and libraries will be most useful

March 6 - March 12 - *Research and Concept Development* - **Due March 14th**

- Continue working on wireframes and basic database structure

March 13 - March 19 - Production

- Begin implementing wireframes and create full UI mockup designs based on wireframes
- Continue refining database structure (this will be a continuous process as development proceeds)
- Build database back-end into web application

March 20 - March 26 - Production

- Build database back-end into web application

March 27 - April 2 - Production

- Build database back-end into web application
- Use back-end to populate interface with data
- Continue developing front-end

April 3 - April 9 - Production

- Continue developing front-end (including responsive designs)

April 10 - April 16 - Production

- Continue developing front-end (including responsive designs)

April 17 - April 23 - Production - Due April 25th

- Continue developing front-end

April 24 - April 30 - Post-production

- User testing and code cleanup
- Bug fixing
- Refine mockups for native mobile application

May 1 - May 7 - Post-production - Due May 9th

- Further testing and debugging

**May 16th - Internal Review**

## **Project Documentation**

# Logo Design

## Research



<u>Iterations</u>	1	2	3	4
5	6	7	8	9
		<b>Decision</b>		
		Color Scheme		
		Font: Avenir Next		
		<ul style="list-style-type: none"> <li>Header/Icon Background</li> <li>Header Current Page Link</li> <li>Logo Color/Header Link</li> </ul>		

Rough designs for Longbox logo







final logo designs



App Icon with grid

# LONGBOX APP ICON

## App Store



1024 Retina App Icon for App Store

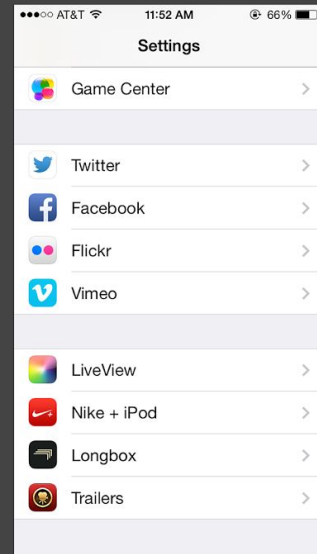
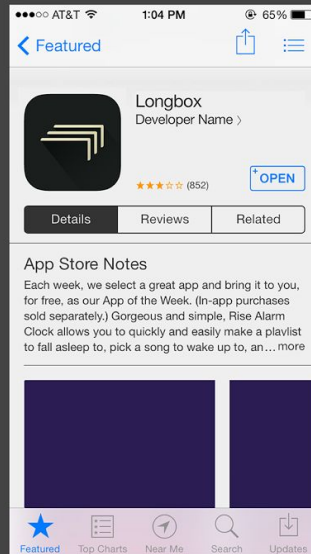
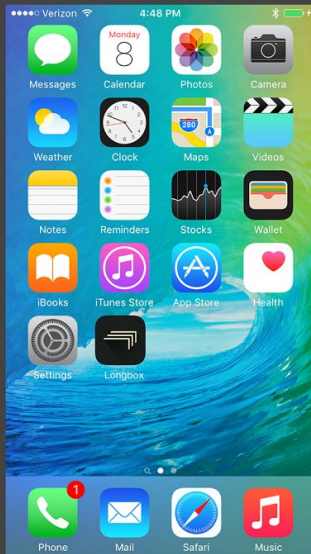
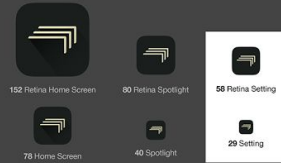


512 App Icon for App Store

## iPhone

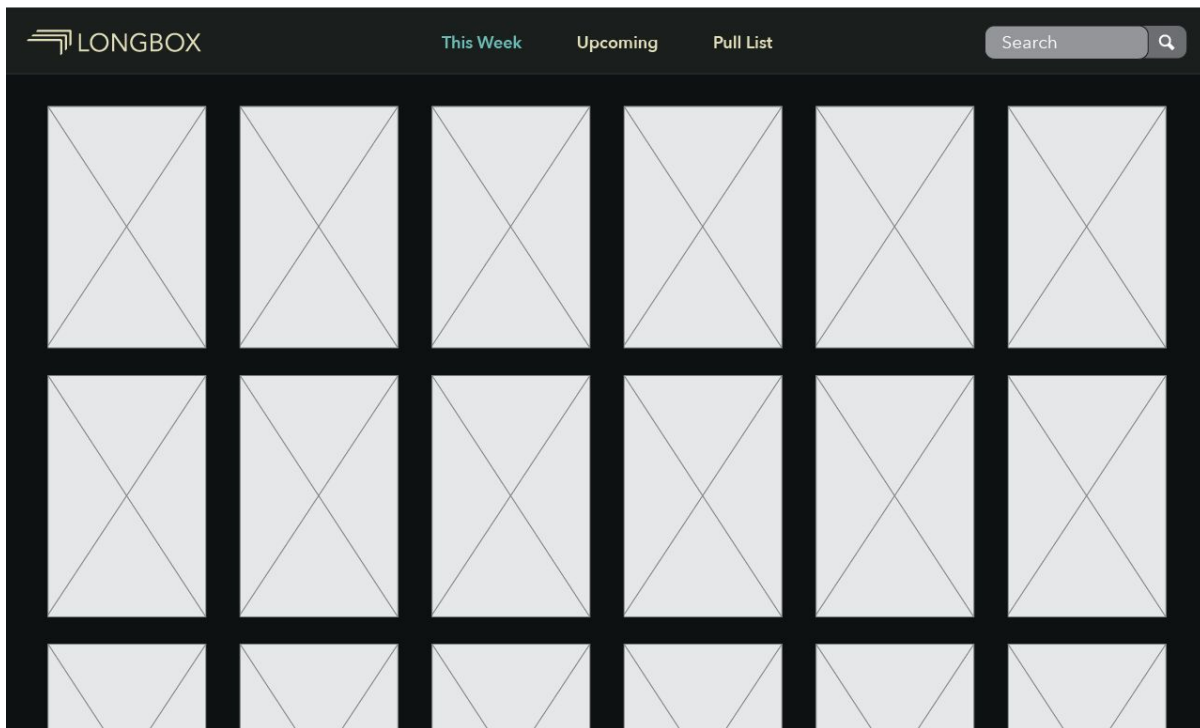


## iPad

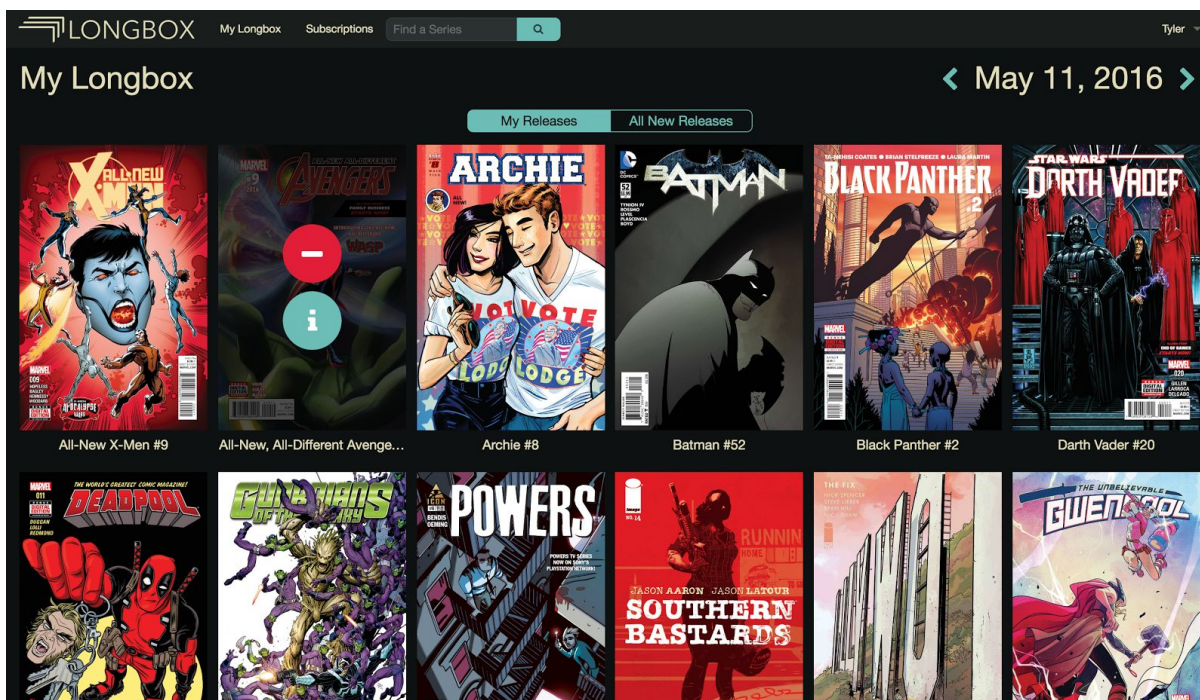


App Icon design doc

## Website Layout



Page layout wireframe



Page layout in final product

## Process

I approached this project with the aim of learning more about web development while being able to stretch my design skills in ways I hadn't before. I started by researching and learning about both my competition and which APIs would be most useful to access to display release information to the end user. After settling on Marvel's API, I started working on a prototype to ensure that I would be able to use the API in the ways that I needed to for the project to be a success.

Upon confirming that utilizing Marvel's API would be useful, I started over from scratch, choosing which libraries and platforms I thought would be most useful in developing Longbox. For my model layer I chose Firebase, since the data I needed to store was not particularly complex. I also needed to get up and running quickly, and Firebase's front-facing JSON storage was an appealing solution since I've had past experience working with data in that format. I at first thought I would go with Material Angular for my view layer, wanting to round out the application with a full Google-based stack with AngularJS as my controller layer. I later on decided to switch to Angular Foundation, since it allowed for more UI customization options and would allow me to create more of an identity for Longbox in the long run. You can find a full list of links to the platforms and open source libraries that I utilized throughout the project below.

Having decided on the various frameworks and libraries that would make up my MVC architecture, I set to work learning about how Firebase and Angular work. After spending about a week getting up to speed on techniques and syntax, I began building my application. This was the most time-consuming aspect of the project, taking around two months to complete. Along the way I worked to develop the Longbox identity, developing a logo and working on wireframes and basic site layout concepts that influenced the final design of the application. While developing the Marvel API, I found it most limiting in the sense that I was only able to display Marvel releases, and for a service like this I would prefer to be able to show all releases from all publishers. While the ComicVine API wasn't ideal, only showing comic releases for a given week on the Tuesday before New Comic Wednesday. However it was the best data source I could find that provided the information I needed without resorting to scraping publisher websites. As an additional side project I worked on a separate branch of the project that used a slightly self-modified version of Comic Vine's API. I eventually wrapped this API into the project

as well, allowing the user to decide which service they'd prefer to use through settings stored in HTML5 local storage.

As I worked on the project, I maintained my codebase on GitHub, and plan on making the Longbox service completely open source, providing documentation and instructions to assist users of any technical skill level to get a version of the application up and running for themselves.

### Third-Party Sources

- Firebase (<https://www.firebase.com/>)
- AngularJS (<https://angularjs.org/>)
- Angular Foundation (<https://pineconellc.github.io/angular-foundation/>)
- Marvel API (<http://developer.marvel.com/>)
- ComicVine API (<http://comicvine.gamespot.com/api/>)
- Font Awesome (<http://fontawesome.io/>)
- Pikaday (<https://github.com/dbushell/Pikaday>)
- Moment.js (<http://momentjs.com/>)
- Angular Local Storage (<https://github.com/grevory/angular-local-storage>)
- Angular Hammer (<https://github.com/RyanMullins/angular-hammer>)
- JQuery (<https://jquery.com/>)
- Modernizr (<https://modernizr.com/>)
- Registration photo from StockSnap (<https://stocksnap.io/photo/FFNGYLQM7X>)

### Credits

#### Competitors

- League of Comic Geeks (<http://leagueofcomicgeeks.com/>)
- Longboxed (<https://www.longboxed.com/>)

#### Open-Source Code

- Firebase (<https://www.firebase.com/>)
- AngularJS (<https://angularjs.org/>)
- Angular Foundation (<https://pineconellc.github.io/angular-foundation/>)
- Marvel API (<http://developer.marvel.com/>)

- ComicVine API (<http://comicvine.gamespot.com/api/>)
- Font Awesome (<http://fontawesome.io/>)
- Pikaday (<https://github.com/dbushell/Pikaday>)
- Moment.js (<http://momentjs.com/>)
- Angular Local Storage (<https://github.com/grevory/angular-local-storage>)
- Angular Hammer (<https://github.com/RyanMullins/angular-hammer>)
- JQuery (<https://jquery.com/>)
- Modernizr (<https://modernizr.com/>)

### **Tutorial Resources**

- Up and Running with AngularJS 1  
(<http://www.lynda.com/sdk/AngularJS-tutorials/Up-Running-AngularJS/154414-2.html>)
- AngularJS 1: Building a Data-Driven App  
(<http://www.lynda.com/sdk/AngularJS-tutorials/AngularJS-Building-Data-Driven-App/421230-2.html>)
- AngularJS 1: Adding Registration to Your Application  
(<http://www.lynda.com/sdk/AngularJS-tutorials/AngularJS-Adding-Registration-Your-Application/438887-2.html>)

### **Image Sources**

- Registration photo from StockSnap (<https://stocksnap.io/photo/FFNGYLQM7X>)

### **Software Used**

- Designed using Adobe Illustrator (<http://www.adobe.com/products/illustrator.html>), xScope (<http://xscopeapp.com/>) and Sketch (<http://www.sketchapp.com/>)
- Developed using Sublime Text (<https://www.sublimetext.com/>)
- Uploaded using Transmit (<https://panic.com/transmit/>) and GitHub (<https://github.com/>)

### **Thank You**

- To Hunter Barnhardt for being a stalwart work buddy and giving me advice and encouragement when I most needed it.

- To Carolyn Crenshaw, Jake Moser, and Chiara Costanzo for their kind words and supportive comments throughout the process.