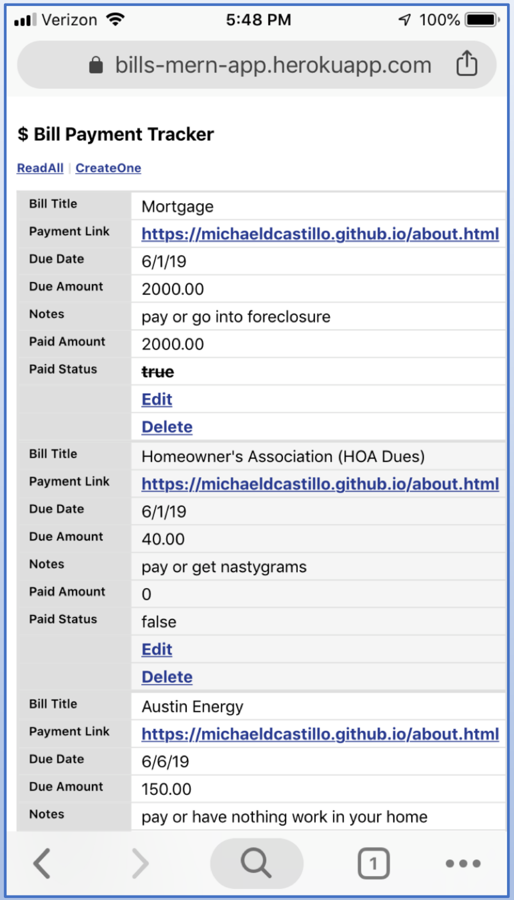
$ Bill Payment Tracker (bills-mern-app)

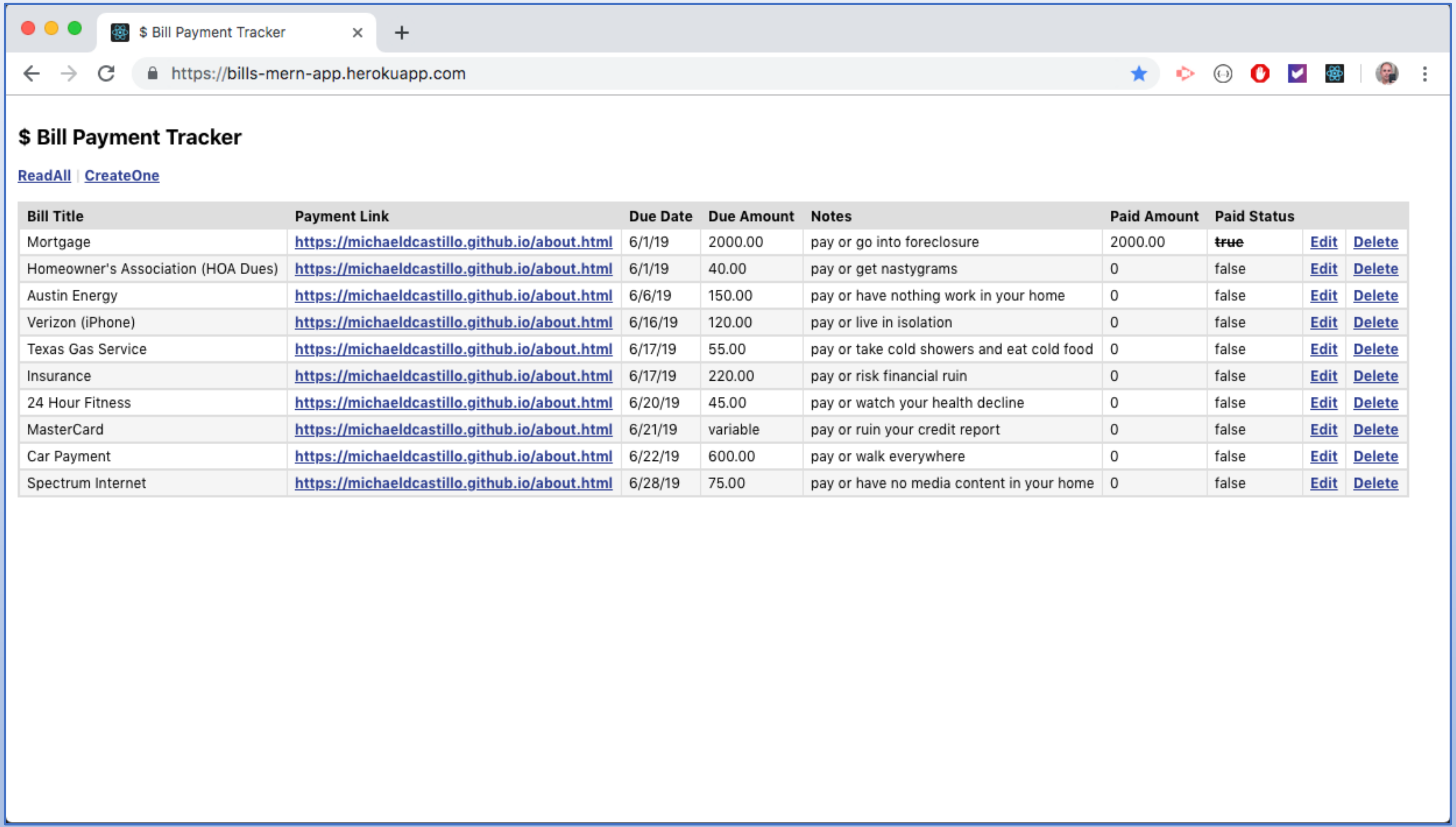
UT Coding Boot Camp Final Project



$ Bill Payment Tracker

ReadAll | CreateOne

Bill Title	Mortgage
Payment Link	https://michaeldcastillo.github.io/about.html
Due Date	6/1/19
Due Amount	2000.00
Notes	pay or go into foreclosure
Paid Amount	2000.00
Paid Status	~~**true**~~
	Edit
	Delete
Bill Title	Homeowner's Association (HOA Dues)
Payment Link	https://michaeldcastillo.github.io/about.html
Due Date	6/1/19
Due Amount	40.00
Notes	pay or get nastygrams
Paid Amount	0
Paid Status	false
	Edit
	Delete
Bill Title	Austin Energy
Payment Link	https://michaeldcastillo.github.io/about.html
Due Date	6/6/19
Due Amount	150.00
Notes	pay or have nothing work in your home



$ Bill Payment Tracker

ReadAll | CreateOne

Bill Title	Payment Link	Due Date	Due Amount	Notes	Paid Amount	Paid Status		
Mortgage	https://michaeldcastillo.github.io/about.html	6/1/19	2000.00	pay or go into foreclosure	2000.00	~~**true**~~	Edit	Delete
Homeowner's Association (HOA Dues)	https://michaeldcastillo.github.io/about.html	6/1/19	40.00	pay or get nastygrams	0	false	Edit	Delete
Austin Energy	https://michaeldcastillo.github.io/about.html	6/6/19	150.00	pay or have nothing work in your home	0	false	Edit	Delete
Verizon (iPhone)	https://michaeldcastillo.github.io/about.html	6/16/19	120.00	pay or live in isolation	0	false	Edit	Delete
Texas Gas Service	https://michaeldcastillo.github.io/about.html	6/17/19	55.00	pay or take cold showers and eat cold food	0	false	Edit	Delete
Insurance	https://michaeldcastillo.github.io/about.html	6/17/19	220.00	pay or risk financial ruin	0	false	Edit	Delete
24 Hour Fitness	https://michaeldcastillo.github.io/about.html	6/20/19	45.00	pay or watch your health decline	0	false	Edit	Delete
MasterCard	https://michaeldcastillo.github.io/about.html	6/21/19	variable	pay or ruin your credit report	0	false	Edit	Delete
Car Payment	https://michaeldcastillo.github.io/about.html	6/22/19	600.00	pay or walk everywhere	0	false	Edit	Delete
Spectrum Internet	https://michaeldcastillo.github.io/about.html	6/28/19	75.00	pay or have no media content in your home	0	false	Edit	Delete

Project Description

This project is about creating a web application from front to back that incorporates a complete web server, a responsive user interface, RESTful APIs, and create, read, update, delete (CRUD) operations against a cloud-hosted database.

Technologies Utilized

- Visual Studio Code (integrated development environment)
- Sketch (visual design and prototyping)
- GitHub (source code repository)
- Heroku (application hosting platform)
- mLab (MongoDB database as a service)
- Terminal (Mac OS command line)
- Homebrew (Mac OS package manager)
- Node.js (JavaScript runtime)
- Node Package Manager (npm) (external libraries, frameworks)
- Express (web application framework)
- React (JavaScript library)
- MongoDB (JSON-like document database)
- Mongoose (Node.js object data modeling)
- HTML5 (markup)
- Cascading Style Sheets (CSS) (markup styling)
- JavaScript (as a ‘full stack’ language)
- Postman (API testing)

What problem does your app focus on?

The problem this app focuses on is a question every single person must answer. **Have you paid your bills?**

Each person has their own unique set of bills to pay. Every day, each of must determine where we are with respect to paying these bills. In my case, I have numerous recurring bills where the amount generally does not vary over time and where the due date is on a fixed, recurring schedule. For me, I just need a way to consolidate them so that I can more easily keep track of each bill's payment status at any given time.

How does your app solve this problem?

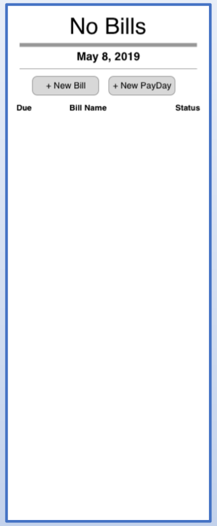
This app strives to solve this problem by providing users a way to easily create and manage as many bills entries as desired in a single, consolidated, easy to access location. Each bill stores the essential information required for paying the bill (online) and for checking the status, at a glance.

The web application can be accessed from any internet-connected personal computer or mobile device, making it accessible from virtually anywhere there cellular signal or Wi-Fi hotspot present.

$ Bill Payment Tracker / The Process

What steps did you take to build the app?

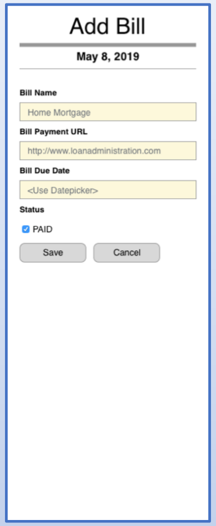
- Paper sketches
- Wireframe documents using Sketch application
- Static web page mock-ups (HTML, CSS)
- Numerous online tutorials (web blogs and YouTube videos)
- Tutorial example starter code
- Ongoing code publishing to GitHub
- Final deployment to Heroku



No Bills

May 8, 2019

Due	Bill Name	Status



Add Bill

May 8, 2019

Bill Name

Home Mortgage

Bill Payment URL

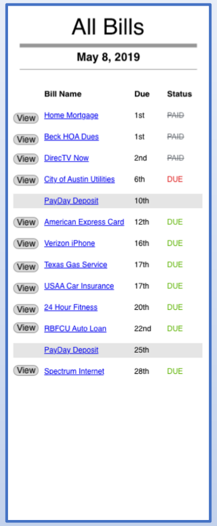
http://www.loanadministration.com

Bill Due Date

<Use Datepicker>

Status

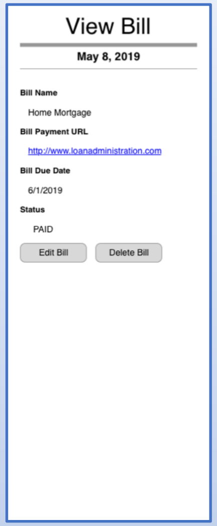
☑ PAID



All Bills

May 8, 2019

	Bill Name	Due	Status
View	Home Mortgage	1st	~~PAID~~
View	Beck HOA Dues	1st	~~PAID~~
View	DirecTV Now	2nd	~~PAID~~
View	City of Austin Utilities	6th	DUE
	PayDay Deposit	10th	
View	American Express Card	12th	DUE
View	Verizon iPhone	16th	DUE
View	Texas Gas Service	17th	DUE
View	USAA Car Insurance	17th	DUE
View	24 Hour Fitness	20th	DUE
View	RBFCU Auto Loan	22nd	DUE
	PayDay Deposit	25th	
View	Spectrum Internet	28th	DUE



View Bill

May 8, 2019

Bill Name

Home Mortgage

Bill Payment URL

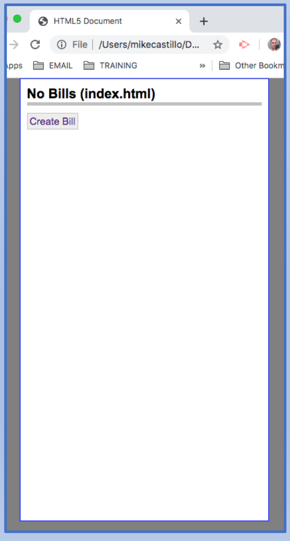
http://www.loanadministration.com

Bill Due Date

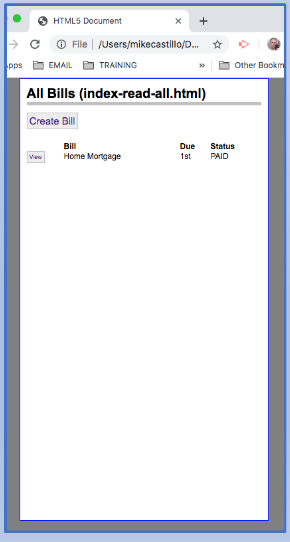
6/1/2019

Status

PAID

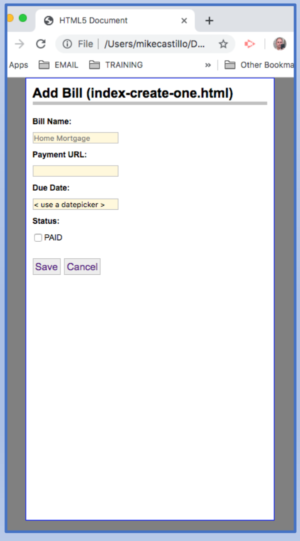


No Bills (index.html)



All Bills (index-read-all.html)

	Bill	Due	Status
View	Home Mortgage	1st	PAID



Add Bill (index-create-one.html)

Bill Name:

Home Mortgage

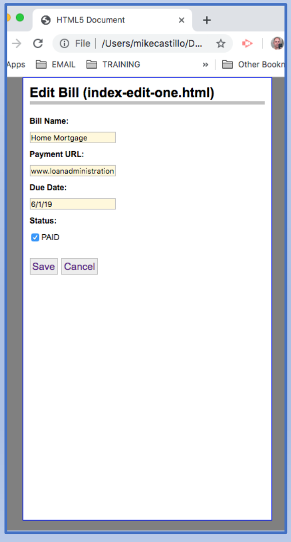
Payment URL:

Due Date:

< use a datepicker >

Status:

☐ PAID



Edit Bill (index-edit-one.html)

Bill Name:

Home Mortgage

Payment URL:

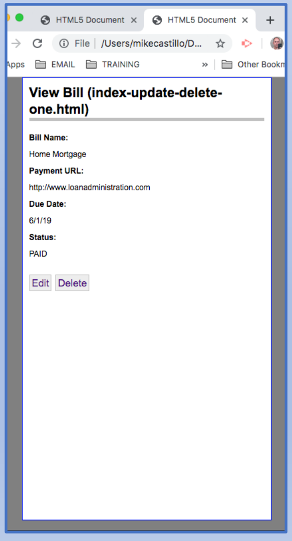
www.loanadministration

Due Date:

6/1/19

Status:

☑ PAID



View Bill (index-update-delete-one.html)

Bill Name:

Home Mortgage

Payment URL:

http://www.loanadministration.com

Due Date:

6/1/19

Status:

PAID

Live Demo

Deployment Address

https://bills-mern-app.herokuapp.com/

GitHub Address

https://github.com/michaeldcastillo/bills-mern-app

Problems I encountered…

- I experienced many moments of severe anxiety. Seriously. It was not fun.
- I could not write code without lots of starter example(s).
- The organization of files for both front and back end code was challenging and took a lot of time.
- I could not determine the correct database schema or determine whether a SQL database would have been a better choice.
- React was and continues to be difficult for me (JSX, component architecture, classes vs functions, state & props, routing, basically everything!).
- I need more practice with JavaScript ES6+ programming constructs (spread operator, destructuring, object and array methods, arrow functions).
- Responsive design is not easy without Bootstrap training wheels (I need to spend time with CSS Grid and CSS Flexbox, etc.).
- There is currently no form validation (not good for any production application).
- I completed a full tutorial on user authentication with Passport.js and JSON Web Tokens, but unfortunately, I was unable to successfully login with my newly-created users.
- I reviewed several blogs and tutorials covering authentication with Auth0, but ultimately could not figure out how to implement that either.
- Deployment went fairly smooth, but required a great deal of time and research.
- I'm sure I'm leaving out about 1,000 other things that caused me grief and need improvement…

Questions?