

Final Report

(ToDo Cake) *To Do app*

1. Introduction

Summary

App that allows users to sign up for an account and store To Do items to their account, mark to do

items as complete and show or hide completed items.

Features

- Users can create register and login
- Users can write to do items
- Every user can edit, delete or mark items as complete item
- To-Do items can be searched and ordered

2. Design and Implementation

System Design

Very simple data model

Based on two entities: user and todos

A user have 1 todo list

A todo has some items:

- An unique ID
- A creation date

The data is stored in a MongoJS database.



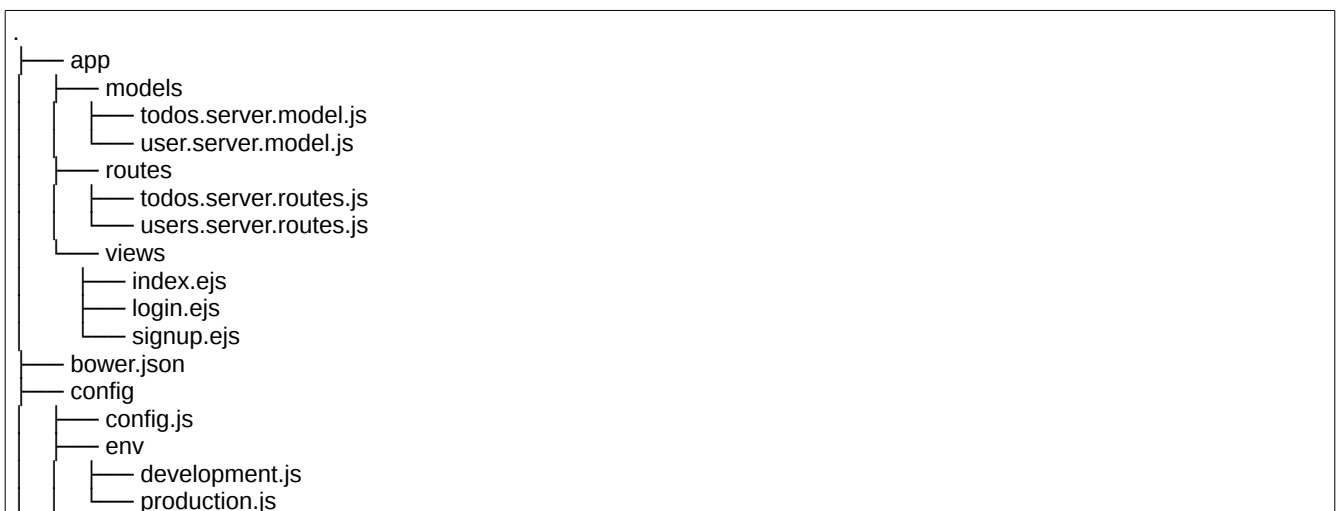
Implementation

Summary On the frontend, a custom Angular.js factory service allows the Todo controller to make AJAX CRUD requests to the app's API endpoints. The app uses Angular's `$routeProvider` to serve partial html views according to defined URL routes, and `ngRepeat` is used to render To Do items. `ngShow` provides a simple method of conditionally showing/hiding UI elements depending on whether there are To Dos and completed To Do items.

A normalized data structure with two separate MongoDB collections are used to store User accounts (with password hashing) and Todo items. Each To Do document stores a reference to the User ID that the To Do item belongs to. A MongoDB search on the Todo collection, by user ID, ensures that each user only sees To Dos they own.

Passport.js is used to authenticate users and create a session which is stored as a cookie, and Passport attaches `req.user` when a user is logged into a session. `req.user` is attached to the window object as `window.user` to allow Angular.js to conditionally show/hide elements, like a Logout link, if the user is logged in.

API endpoints that require user authentication are also protected using a custom middleware that uses Passport's `req.isAuthenticated()` to either return `next()`, or returns a status code of 401.

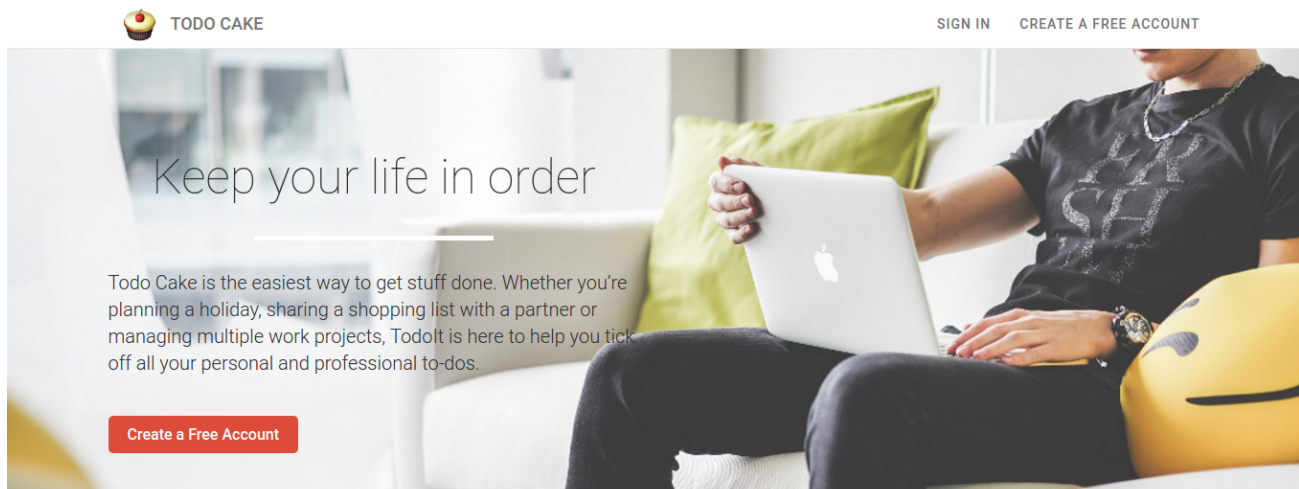




Built With the Following Libraries/Tools:

- Node.js (Express)
- Angular.js
- MongoDB (Mongoose)
- Passport.js
- Bootstrap 3
- Sass
- EJS Templating Engine
- Gulp
- Postman

Screenshots



About Todo Cake

Todo Cake is an application for managing your TODOs built on top of the MEAN stack.



Todo Cake

ToDolt is a full-stack [MEAN app](#) that allows users to sign up for an account and store To Do items to their account.



Coursera

This project is an academic work. It's my final capstone project for the Full Stack Web Development course on Coursera. Read more at: [Coursera](#)



GitHub

You can find the project on GitHub. It includes all source code as well as the documentation for Coursera.

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A screenshot of the 'Get ToDo Cake for Free' registration form. At the top center is a cupcake icon. Below it is the heading 'Get ToDo Cake for Free'. The form has three input fields: 'Username', 'E-mail', and 'Password', each with a corresponding icon (person, envelope, and lock). Below these fields is a red button labeled 'Create Free Account'. At the bottom, there is a link: 'Already have an account? [Sign In](#)'. To the right of the form, there are two sections: 'Get stuff done' with the text 'Whether you're creating a grocery list or working on a project, Todo makes it easy to get things done.' and 'At your fingertips' with the text 'Plan your day and stay productive on-the-go.'



	<input type="text"/>
	<input type="password"/>
<div>Login</div>	

Don't have an account? [Create a Free Account](#)

+ Add a todo...

☒ MARK ALL TODOS AS COMPLETE

☐ Register in Coursera

☐ Submit the report until next Monday

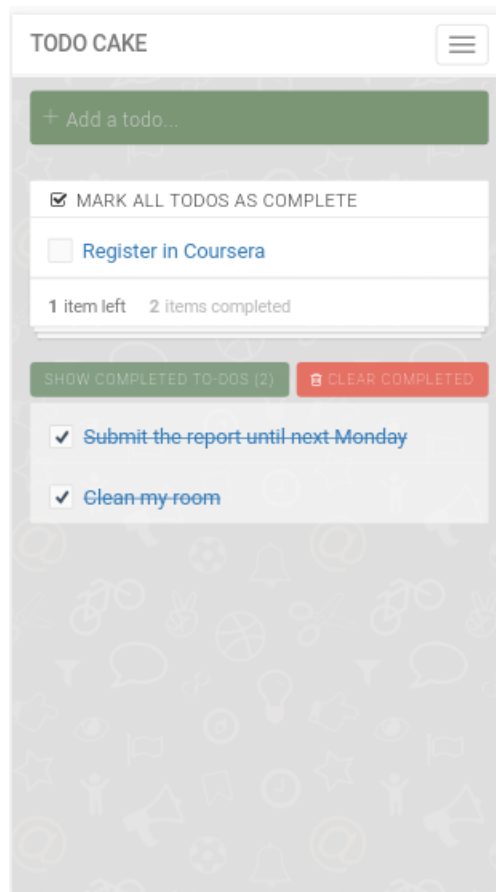
☐ Clean my room

3 items left 1 item completed

SHOW COMPLETED TO-DOS (1)

CLEAR COMPLETED

☒ Sunglasses



3. Conclusions

- I was able to implement the main features of the project. Users can create register and login
- Users can write to do items
- Every user can edit, delete or mark items as complete item
- To-Do items can be searched and ordered
- The deployment on IBM Bluemix was smooth and went well overall.

4. Reference

Tool used to draw Package Structure

- <http://www.computerhope.com/unix/tree.htm>

UI

- <http://todomvc.com>