

## Assignment 3: Coder's Blog

### Due Date

This assignment will be due Thursday, February 25, at midnight. You will need to upload all your files to KSOL as a zipped folder. Your website will be tested in the latest version of Google Chrome.

### Description

For this assignment, you will be creating a blog webapp using Node. This blog is intended for use by programmers, and should make the process of including code snippets on a webpage as easy and painless as possible.

### Rubric

For your webapp you will need to implement the following:

1. Your application should be created as a Node module (suitable for publishing to npm), and correctly specify all external dependencies in its package.json file. **Hint – use the npm init command to create your package structure.** (10 points)
2. You should use sqlite3 as your database and create tables for storing blog **posts, comments** (comments should contain a foreign key to the blog post it belongs to). You may use the **sqlite3** npm package (<http://github.com/mapbox/node-sqlite3>) to connect to your sqlite3 database (note: it will need to be added to your dependencies in package.json). (20 points)
3. Your interactions with the database should not allow for unsanitized user input in queries (10 points).
4. Your application should implement RESTful routes for the posts and comments. All the CRUD methods should be addressed. (30 points).
5. You should use AJAX requests and DOM manipulation to handle comment creation and posting. The JQuery library may be used for this functionality. (20 points).
6. You should create a widget for creating code snippets *within* a blog post while editing the post that wraps the code in some form of callout which allows the author to specify the programming language and highlights the syntax appropriately. You may use a syntax highlighting library like prism, highlight, etc. to perform the highlighting. (20 points).
7. Snippets should be specified with the `<pre><code class="language-X"> some code here </code></pre>` pattern (or `<code="language-X"> some code here </code>` for inline code) following the current code tag living standard: <https://html.spec.whatwg.org/multipage/semantics.html#the-code-element>. (10 points).
8. When editing a post, snippets already in the post should be automatically loaded into instances of your code editor widget. (10 points).
9. You should include a README.md file at the top level of your application's directory structure, which contains complete instructions for (1) installing and configuring your application, (2) running your application, and (3) utilizing its user interface to create posts and comments, as well as details about using the code snippet widget. Your file should use Github-flavored markdown for clarity (<https://help.github.com/articles/getting-started-with-writing-and-formatting-on-github/>) (20 points).

### Allowed Resources

For this assignment, you should only be using node.js, its built-in libraries, **plus you have the options of using JQuery, a syntax-highlighting library, Browserify, Formidable or a similar multi-part form processing library, and a node library for transforming markup, textile, or similar markup languages.** No other packages downloaded through **npm** or other external libraries will be allowed at this stage – while extremely useful and a good idea for commercial development, using such libraries in the early stages of learning web technologies shifts the focus of your learning by introducing abstractions that keep you from seeing the nitty-gritty details. Similarly, for this assignment we will not be allowing CSS3 libraries like Bootstrap – we'll cover (and use) these later in the semester, but for now please use vanilla CSS and HTML that was entirely generated by yourself. Additionally, you may use class examples as a starting point for your project.