Web Report

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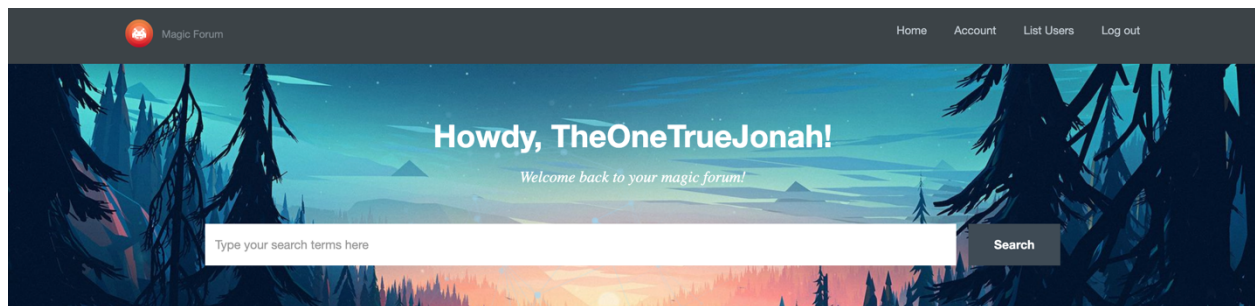project repo: https://github.com/JonahLyu/Web-Tech

Grade Overview

- A+ for HTML
- A+ for CSS
- A+ for JS
- A for PNG
- A for SVG
- A+ for Server
- A+ for Database
- A+ for Dynamic pages
- A+ for Depth (out of 20)

Description

- A+ for HTML
  - We found a simple framework case online which is best suit for our requirements. We fully understood the structure of it and rewrote codes to adapt to the final forum.
  - Made best use of various html tags and attributes.
  - Used pug to simplify the process of creating html documents.
  - All the delivered HTML pages could pass the validation.
- A+ for CSS
  - Designed web components including layouts, search bar, form, scroll top button etc.
  - Good use of Bootstrap to boost the web design.
  - Pretty shadow design for the forum components.
  - Used to facilitate creation of paged navigation for listed elements.
- A+ for JS
  - Beautiful client-side animation, including loading animation, on hover animation etc.
  - Imported some animation cases externally and fully understood them to make a good use of them.
  - Reduce clutter on page by taking certain elements (Posts, comments, categories, user list) and allowing them to be navigated in a page like format.
- A for PNG
  - Designed own png icons by using Photoshop. See design screenshots in appendix.
  - Fully understand the transparency and concepts of layers.
  - Import correctly in web.
- A for SVG

- o Have designed original web logos online in iconsflow.com. Made use of tools such as gradient, transformation, path editing.
  - o Embed svg image in web.
  - o SVG image filled on hover.
- A+ for Server
  - o Made a best use of Express framework to serve our web.
  - o Made use of external authentication service to ensure security of user passwords
  - o Always verify important information supplied by user.
  - o Make use of libraries to sanitize user input (Helps prevention of xss)
  - o Dynamic routes design allowing queries on posts, categories, search etc.
  - o Lots if error checking and data validation to ensure there are minimal server crashes, and that in general any failures occurring server side are handled gracefully.
  - o Https supported with certificates.
- A+ for Database
  - o Robust table relations among posts, categories, users, comments.
  - o Effort in Javascript DAO design with various SQL query on joined tables.
  - o Hashed User id ensuring security by md5.
  - o Regular use of callbacks to regulate program flow
- A+ for Dynamic pages
  - o Fully utilized the power of jQuery to do any post request from the front end, such as create a forum resources, user input validation, like a post etc.
  - o Made a best use of pug template and Express framework to serve the pages dynamically with various data (For example, all categories, when loaded are provided on a generic template, with differences only arising due to provided data).
- 16 for Depth (out of 20)
  - o We got lists of creative designs or experiments on web techs:
  - o Combine Auth0 platform with self-designed user system to provide robust and safe user authorization.
  - o Provided with a docker version so the web can run in a container, so cross-platform running is available, also we tried to deploy the web on Google Cloud nodes in Kubernetes, see this branch: https://github.com/JonahLyu/Web-Tech/tree/docker_version
  - o Used Redis server to store the user profiles into session.
  - o Robust user level management system to grant user different access power (so admin, moderator, general user can do different things with forum resources).
  - o Self-designed search engine among forum resources.
  - o Auto generated user avatar by importing modules from www.gravatar.com.
  - o A comment and like post system making the forum powerful and easy to use.

Appendix