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CSCI 344: Web Technology

Term Project: Dungeons and Dragons Character Creator

Documentation

User's Guide

The main page contains instructions for how to select a character, followed by a button to click to go to the character creation page. Below the button loops images of the different classes. There are navigation buttons at the top of the page to the character creation page as well as a page with your created character.

Clicking on the 'Create a Character' button below the instructions or 'Character Sheet' button in the title bar of the page takes you to the character creation page. This page contains more detailed instructions on how to create your character, followed by a button that simulates a dice roll. Clicking on the 'Roll the Dice' button changes the text of the button to a number. Using the provided material to fill in data for the character, the data will then be sent to the database for later use when the 'Submit' button is clicked. This can be viewed in the 'My Character' tab.

Opening the 'My Character' tab will display all of the information that has been filled previously in regarding your character. This information can be used as future reference for playing Dungeons and Dragons. Clicking the 'Remove' button next to each reference to a character will delete that character from the database.

Credits can be viewed by clicking the 'Team 13' icon in the upper left hand corner of the screen. This screen features the names of the group members as well as the tasks they completed for this project.

Technologies Used

- **HTML:** used for creating the main structure of the main page and the character selection page. In each, the HTML files were used to incorporate the CSS and JS files relevant to themselves as well as laying out aspects of the page. It was used to layout the images, buttons, textboxes, and text on each of the pages within the project.
- **CSS:** used for adding design to the HTML pages of the project. Used to edit placement, color, size, and several other factors of various objects in the corresponding HTML page.
- **JavaScript:** used for adding functionality to some features within the website such as the drop-down menus and for database integration. Also used for providing the necessary random functionality of the dice of the select.html page.
- **AngularJS:** used as a controller for MongoDB to ensure that aspects regarding the user's character are pushed to the database when the design is completed and pulled from the database when the user wishes to view the character that they have designed.
- **Bootstrap:** used to regulate the appearance of the website across multiple devices. Helps to ensure that the final website is fully functional regardless of how the website is accessed.
- **MongoDB:** used for storing the information regarding the user's character for their later use. Controlled via AngularJS.

- Express JS: used in combination with Node.js for creating and using the server for the website.
- GitHub: used for version control of the project. Group members could pull the most up-to-date version of the project and proceed to add to the project. On pushing the project into GitHub, the user who performed the action could indicate changes for the next user.
- Node.js: used for executing server-side JavaScript code. Allows the website to be accessed locally on localhost:3000 in combination with Express JS.

The Source Files

- index.html: used as the main page of the website. The page features a button to direct a user to select.html as well as a slideshow of the Dungeons and Dragons characters and an explanation as to the purpose of the website. Uses main.css as a stylesheet for the page. Integrates css, and AngularJS to complete functionality of slideshow. Bootstrap was used to create the page to ensure a functional appearance across devices. Found in 344_project folder.
- newSelect.html: used as the create-a-character page. Allows the user to fill in several fields regarding the potential character with the data being pushed into MongoDB. Some fields allow the user to manually enter input such as name and age but others such as background feature drop-down menus. Allows users to roll appropriately-sided dice with random integer results to be used in character specifications such as the strength of their varying abilities via rng.js. Uses main.css as a stylesheet for the page. Bootstrap was used

to create the page to ensure a functional appearance across devices. Found in 344_project folder.

- credits.html: page used to display the names and tasks of the group members. Uses main.css as a stylesheet and created with Bootstrap to ensure functionality and clean appearance across devices. Found in 344_project folder.
- main.css: features the styling specifications of both the index.html and selection.html documents. Describes the placement and appearance of various objects throughout the page such as the appearance of the header and footer, designs and placements of text, and other similar data. Created with Bootstrap. Found in 344_project folder.
- package.json: code generated by Node.js to describe the project and allow it to be initiated by server.js. Found in 344_project folder.
- character.js: created in AngularJS to save and remove characters from the website's Mongoose database. Used by newSelect.html. Found in 344_project folder.
- index.js: schema for the website's Mongoose database. Found in 344_project folder.
- server.js: code generated by Node.js with express to produce the webpage of localhost:3000. Found in 344_project folder.
- bootstrap.min.css: installed Bootstrap used to create the website so that it is perceived well across multiple devices, not just on computers. Found in 344_project/images folder.
- ability.js, alignment.js, backgrounds.js, classes.js, factions.js, languages.js, race.js, and skills.js: used for generating each of the respective drop-down menus featured in the create-a-character page as described by newSelect.html. Found in 344_project/js folder.

- newRNG.js: used to simulate the random dice roll. Provides an array of the odds of each dice roll outcome and uses it to produce a fitting random result. Found in 344_project/js folder.

Work Log

As his initial task for the project, Eli worked on the front-end of the project. This included creating the HTML, CSS, and the JavaScript required for their functionality. Eli used Bootstrap to aid in completing this task and allowing this website to be viewed across a diverse array of devices. Felicia worked on creating the database to store the character information using Firebase. However, Felicia later developed a MongoDB instead as it was determined to be more suitable to the project. Ryan and Michaela worked to develop the Express for the website's server as well as completed required documentation. Ryan would later help develop the PowerPoint presentation, assisted in database integration, and other miscellaneous tasks. Michaela modified the front-end code of the website to ensure criteria better fitted to the play of Dungeons and Dragons.

One of the biggest challenges of the project was integration of the Mongoose Database into the existing project. The HTML, CSS, and other files had been generated with Bootstrap which left them somewhat illegible. Due to this, ample time had to be taken to correct problems within the files and successfully add the Angular JavaScript code to work with the existing HTML. After MongoDB had been successfully integrated, some small bugs were generated such as the drop-down menus on the character creation page displaying an empty description and rather having that as an option in the drop-down menu.