Exploding Unit's GPA Project

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OVERVIEW

The Exploding Unit's GPA Project is a site designed to allow users to easily store their grades and calculate their GPA as well as add current classes with expected grades. The user is first able to register effectively creating their own account. From this account, the next step is for a user to add classes from either the CU Boulder Engineering classes that currently populate our database or to add their own classes. The user is able to navigate to the current courses page to verify the courses they have added. If they identify a mistaken class or wish to remove a class that is there only for an expected grade, then they have the ability to delete the class from their courses. With confirmation of their courses, the user is able to then move to the Current GPA page. On this page, it is the user's responsibility to use the drop down forms to select individual courses and assign either their received or expected grades. As the grades are compiled the GPA is updated as the letter grades are added. Once all course grades have been modified, the user is then able to navigate to the print tab, which provides a table of all courses and their relevant grade point values as well as the username and gpa at the top of the page. A print button allows the user to easily print from their current browser.

PROJECT TRACKER

GOALS

1. Allow a user to register and store their classes and relevant grades in a personal database.
2. Utilize that database to provide the user with an up to date estimation of their current grade point average (GPA).
3. Allow the user to insert alternate class options in order to project possible overall GPA outcomes.
4. Allow the user to print a table of their classes, the class grade point value, and their GPA.

MILESTONES

Week 1

 Focused on the initial layout and construction of the necessary pages that will be utilized as well as the creation of the header, menu, and footer. Menu functionality was added this week.

Week 2

Login and register functions added and functional. Adding courses page now displays as does the current gpa page. However, these pages do not run off of the database at this time and mostly use placeholders at this time.

Week 3

Full CU Boulder Engineering Class list added to database. Pages now display the username at their top. Current gpa now has functionality calculating the quality points and credit hours to display accurate gpa value.

Week 4

Home page added and printer functionality finalized.

Testing and bug fixes associated with the login page, add courses page, and current gpa page.

The login page had an issue with correct username and incorrect password that has been fixed.

The add courses page required a minor bug fix associated with the positioning of the add custom course, as well as simplifying the add course forms so test users could understand what inputs belonged where.

The current GPA page would fail to properly display the user's gpa on the first render. This was subsequently fixed with smartly placed async and awaits.
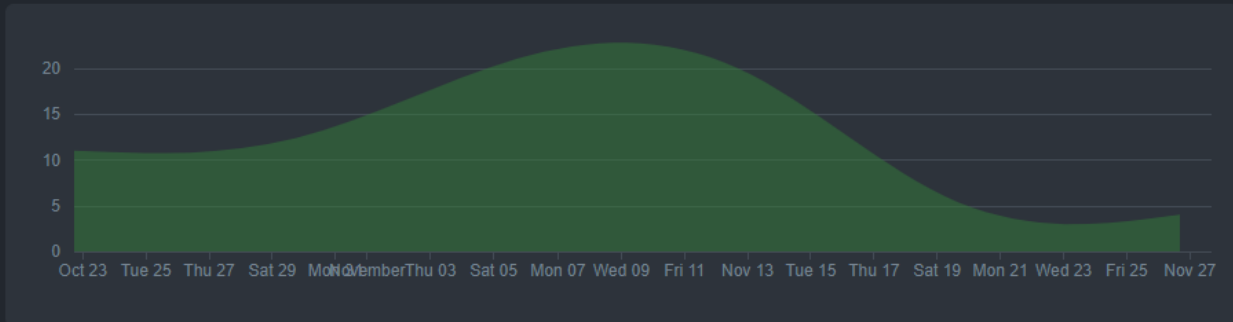
CONTRIBUTIONS:

1. Kailen Sammons

a. The vast majority of my efforts were delegated to the page that would display the user's GPA. Starting first with the creation of the page using .ejs and then branching out into the index.js to confront the multitude of queries that were required. The culmination of effort was finalized with a means of which to calculate quality points from given courses based upon their credit hours and their grade received in the class. These queries of the quality points and credit hours were instrumental in the final calculation of GPA.

2. Trevor Reed
   a. My initial efforts at the beginning of the project timeline was to create the baseline ejs for each of the pages to be expended upon. This baseline was mostly just a skeleton page that each member could modify to edit the page that they were assigned. From there, I developed the login and registering functionality in order to have users that were able to have their data (classes, password, etc) saved and stored. Additionally, I added the functionality to catch any errors produced by entering wrong passwords, entering wrong usernames, or registering a user that already exists. These errors are distinguishable and are displayed when any of those situations occur. During this development as well a bug where logging in with an incorrect password would crash the site was patched and corrected.

3. Ian Wong
   a. My part of the project was to create the function of allowing the user to add any class they want instead of the previously loaded courses and display the courses that were already populated within the courses table. Then it was to test the add courses tab and fix any of the bugs that came along with it.

4. Connor Rauscher
   a. My main task for the project was to create the "my courses" and "add courses" pages where the user is able to view their current courses and add new ones. To do this I created and implemented the database framework, which was then populated by the course list aggregated by William. I then created the courses pages and populated them using the class/user information from the database. Once I finished this, I moved on to creating the home page where some information about the website is shown and the login and registration buttons can be accessed.

5. William Fitzgerald
   a. At the beginning of the project, my task was to populate the database of courses with engineering courses at CU. This insert and some modifications to create rounded out my work on the database. After that, I was assigned to the Projected GPA page, which we later scrapped due to redundancy with the Current GPA page and how it could be used to predict projected GPA, so there was no need for a separate page. Lastly, I implemented the print page that allows users to print their course list and GPA.

Oct 23, 2022 – Nov 28, 2022
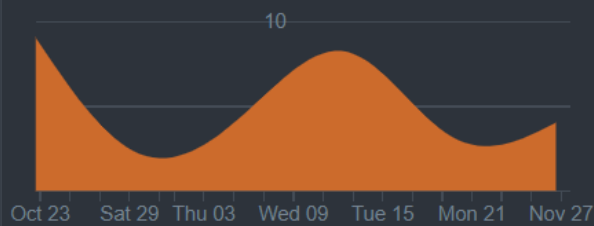
Contributions: Commits ▾

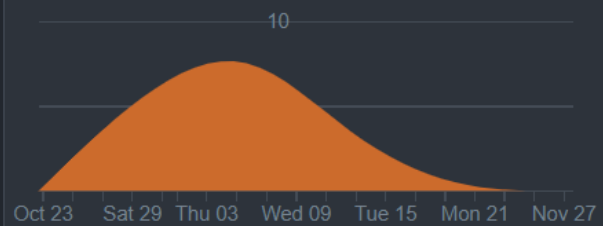Contributions to main, excluding merge commits and bot accounts

20
15
10
5
0

Oct 23 Tue 25 Thu 27 Sat 29 Mon 31 November Thu 03 Sat 05 Mon 07 Wed 09 Fri 11 Nov 13 Tue 15 Thu 17 Sat 19 Mon 21 Wed 23 Fri 25 Nov 27

Skye-Storm #1
29 commits   409 ++   147 --

10

Oct 23   Sat 29   Thu 03   Wed 09   Tue 15   Mon 21   Nov 27

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trre4109 #2
18 commits   4,851 ++   322 --

10

Oct 23   Sat 29   Thu 03   Wed 09   Tue 15   Mon 21   Nov 27

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fitz-1 #3
13 commits   1,419 ++   105 --

10

5

Oct 23   Sat 29   Thu 03   Wed 09   Tue 15   Mon 21   Nov 27

RausConn #4
12 commits   1,342 ++   1,286 --

10

Oct 23   Sat 29   Thu 03   Wed 09   Tue 15   Mon 21   Nov 27
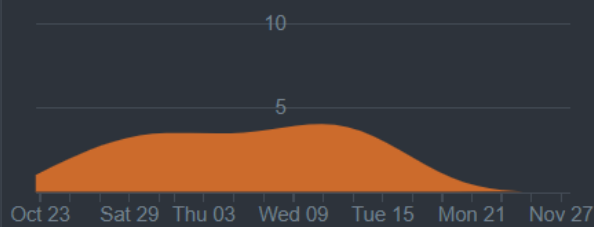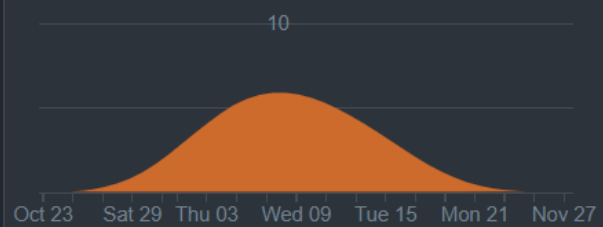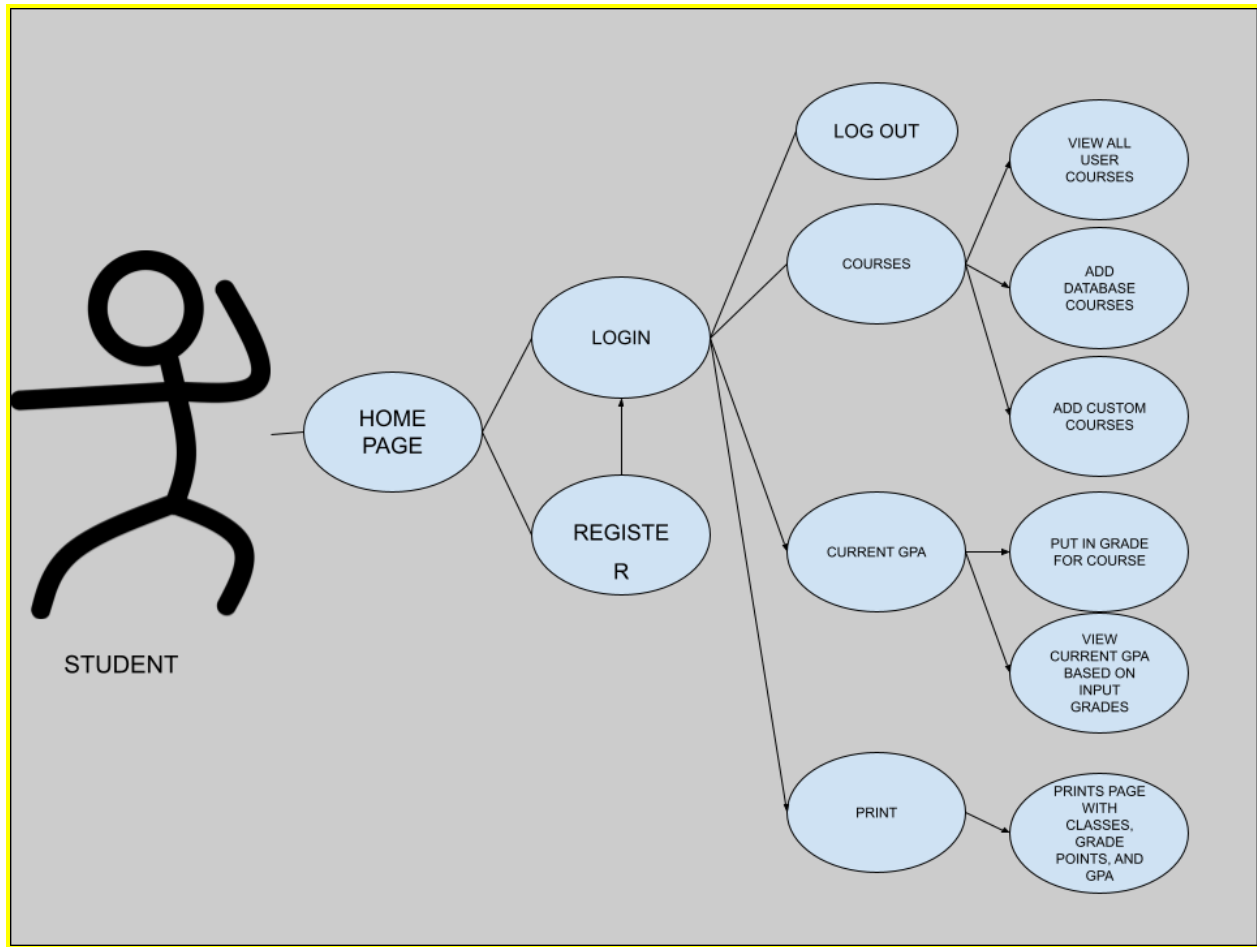
       Beta testers attempted to register and login. Beta testers attempted to add all of the classes to one's course list. Beta testers attempted to break adding courses.

       Beta testers overall employed the program along logical lines. In some cases they were caught off guard by the design of the add courses page. With mild explanation they understood the design and then went about adding courses and then modifying their grades. Their behavior was consistent with the use case.

DEPLOYMENT

Our project was deployed via the CU Boulder Private IaaS.
`http://csci3308.int.colorado.edu:49158`