hatchio 

[May 11, 2021]

Final Project for SW Engineering CSC648/848 Spring 2021

Section 02 | Team 03

Milestone 05

Demo URL: http://3.141.216.125:3000

Team Information

POSITION	NAME	EMAIL
Team Lead / Github Master	Roland Lee	mlee38@mail.sfsu.edu
Front End Lead	Jose Gonzalez	jgonzalez34@mail.sfsu.edu
Back End Lead	Lyra Solomon	lsolomon3@mail.sfsu.edu
Database Manager	Aaron Singh	asingh26@mail.sfsu.edu

History Table

Milestones	Date Submitted	Date Revised
01	2/23/2021	3/2/2021
02	3/9/2021	3/23/2021
04	4/23/2021	4/27/2021

Table of Contents

1)Product Summary

Brief Description: *Hatchio* is a website that provides functionality for three unique users including: students, professors, and employers. *Hatchio* provides an interface for these three types of users to interact. The following are lists of functions that explain the interactivity between the three users further.

URL Product: http://3.141.216.125

Unique about our product: Some of the things that make our product unique include the following: unique dashboards conditionally rendered based on the user type, very apt in response time, and clean interface.

Name of the Product: Hatchio

- Employers shall be able to filter through student profiles based on a criteria that can select talented students such as their gpa, major, and ratings based on professors.
- Employers shall be able to notify the student that they are interested in employing the student.
- Employer's dashboard will have the ability to post jobs on the market place. The job description will include things like the position, salary, benefits, and type of work.
- Students shall be able to filter through jobs based on a limited set of criteria such as Job and Position type for simplicity.
- Students shall be able to notify the Employer that he or she is interested in getting hired for the job; the employer will get notified on his dashboard.
- Students will have the ability to add as many projects,education or experience they would like to add on a public student profile; only students with education,and a profile page will be listed on the public view of the student profiles search.
- Students will get notified when they are rated by a professor.
- Professors, exclusively, will have the ability to rate the students based on a general criteria and have the ability to enter a recommendation.

2)Feedback Summary Report

M0:

Correctly Installed and Configured Software Stack	2
Correctly Populated Credentials Folder in GitHub The required data was partially entered (server URL/IP, password and db username and password, I couldn't access your server)	2
Correct use of Git and GitHub	2
Correct team WWW page functionality, deployment and proper usage of team's Software Stack for creating web page	3
Total:	9

M1:

Re: CSC 648 848 Spring 2021 Section 02 Team 03 Milestone 01 Submission

ID	Item	Criteria	Feedback
01	Expected size of this document	About 7-10 pages	Good (14). Good job adding the table of content.
02	Title Page	Format and Structure • SW Engineering CSC648/848 Fall 2020" • Section Number • Team number • Names of students and roles • M1 • History table (revision)	Good.
03	Executive Summary	~1 page. Why we should fund this project?	Good. I like the references and context added at the beginning of the summary.
04	Personas and main Use Cases	About 1/3 of a page per persona 4-5 main *use cases*. Descriptive title and number to each use case	Good. 3 personas (Professor with 2 use cases, Student with 2 use cases and Business & Recruitment with 1 use case). I like the sub-categories for the students, what about subcategories for the other 2 personas (Professors and Business)? 5 use cases. For these uses cases before the entire description, try to define in 1-line a concise intention/goal of the use case. For instance, for professor UC #1: Professor recommending, and rating students.
05	List of main data items and entities	Name, meaning, usage, etc.	Good list of data items. Don't forget to include data type for each item (string, integer, etc.)
06	Initial list of functional requirements	High level functions you plan to develop	Good. 22 requirements.
07	List of non-functional requirements	Performance, expected load, security requirements, storage, availability, fault tolerance	Good. (14+2). Good job adding WCAG 2.1 and performance.
08	Competitive analysis	3-4 competitive products	Great. Good job including references, it is very important in any documentation like this.
09	High-level system architecture and technologies used	Itemized list of all main SW components	Good
10	Team and roles	List student names	Good.
11	Checklist	Answers to the items	Good

M2:

Milestone 2 Feedback

Team 3 "Hatchio".

CEO/CTO Feedback
Good documentation and display of the elements that will help you to implement this application. Just be mindful of the functionality that you identified as #1 and P1, that's exactly what we want the application to be around. Overall nice understanding and alignment with desired outcomes. Keep it up team Hatchio.

Instructor Feedback
Overall Objective of Milestone 2 [Need improvement, On track, Above Expectations]: **On Track**

Specific Feedback:

ID	Item	Criteria	Feedback
00	Expected size of this document	About 20-25 pages	30 pages
01	Functional Requirements - prioritized	Expand or repeat functional requirements from Milestone 1 into Milestone 2 w/ reference numbers (1-*must have*; 2 – *desired*; 3 – *opportunistic)*	**Ok.** P1: 7 P2: 6 P3: 6 Few P1s, but I like the conciseness and focus.
02	UI Mockups and Storyboards (high level only)	All major use cases from M1. Format is very flexible, recommend hand drawings	**On Track.** All Good, but I didn't find the mock up for the use case supporting your #1 functionality with P1..
03	High level Architecture. Database Organization	Make sure the titles and var. names are in easy to understand plain English and consistent with data definitions. *Media storage,* APIs (if anv), algorithm and SW tools	**On Track.** Relationship, and class diagrams look good.
04	High Level UML Diagrams	*HL Class diagrams, and Component and deployment*	**On Track.** Good.
05	Key risks for your project at this time	Skills, schedule, technical, teamwork, legal/content	**On Track.** Re: Technologies, not sure why it is a risk if this was decided and identified in M0. Employee turnover is a reality, but we need for this section your teammates realities re:teamwork. Good job identifying the risks and describing solutions that you are implementing. Try for these risks not to become issues.
06	Project management	No more than half a page how you managed and plan to M2 and future tasks. Must start using Trello or similar tools for task management	**On Track.** Good.

Next Steps: Review this feedback with your team, in general your team is on track. Focus on the vertical prototype for next class. We will be introducing M3 on Tuesday, which you will need to focus right after the Vertical Prototype session.
~Prof. Villar

Vertical Prototype: Half implemented.
Comments: No dropdown/filter search implemented. And results display is raw data.
Prof. Villar

M3:

CEO/CTO M3 Feedback
Thank you **Hatchio** team. Your application is looking robust and aligned with our specification and requirements. The display of the GPA, major, ratings and student year is making your application unique, and that is a good thing. Now it is mattered to glue all the components from end-to-end. Just be mindful that the GA is approaching fast, so you need to manage all the pending P1, plus finalizing the details of the rest. Manage your time wisely and make Hatchio the best platform for the student transition and for employers to find talent.

Instructor M3 Feedback
Overall Objective of Milestone 3 [Need improvement, On track, Above Expectations]: **On Track**.

Specific M3 Feedback:

ID	Item	Criteria	Feedback
01	UI and functionality feedback (P1 functions only)	• Test main use cases • Check functionality and record issues/observe bugs. • Check UI and usability • Check if UI is responsive to change of browser size. • Performance in page/image rendering, search • Verify enough WWW pages are implemented and connected	**Needs work.** No all the criteria on the left of this table were tested but it is here for reference for students to understand the milestone objectives.
02	Functionality Check	• Home page • Search (including search field validation) • Search results • Filtering (dropdown menu search) • Search Details and maps (if applicable) • Alert Messaging/Registration/Administration (if applicable) • Data Upload/Metrics Entry • Dashboards (user/admin) • UI responsiveness (resize the browser) • Performance (e.g., display of results list)	**On Track** for main search capabilities and requirements: • Search (including filtering and jobs) • Forms • Profile pages • Ratings **Needs work:** finalizing & enhancing the E2E experience, and some pending functional requirements: Search results display, alerts, dashboard, etc.

03	Brief review of code, github, database etc.	• All key DB tables completed (users, items, messages, categories etc.) • Search fully working. • Home page and search results integrated with back end. • Search field input validation to allow proper alphanumeric characters (letters and numbers) • Search arguments persistent • Be ready to show examples of code so coding style and code comments can be checked.	**On Track.** Based on M2, but DB need full integration for all the functions. **Needs work:** • Search validation needs to be implemented (Error handling). • Code comments need to be added
04	Project status	1. *Teamwork*: 2. *Risks* 3. *Coding practices* 4. *Usage of proper SE code management practices* 5. *How did you address site security and safe coding practices?* 6. *Digital content* 7. Other	**On Track.** Make sure to address site security.
05	List of P1 features committed for delivery agreed	*Team already reviewed and committed for final P1 list?*	**On Track.** Make sure to commit to your P1 list
06	Overall Instructor Review	• Git/Github organization • Git/Github usage • Code documented. • MVC/OO patterns followed up. • Frameworks • Database organization • Blobs being used. • Adherence to best practices of security • Efficiency • Other	**Needs work.** Make sure all your code and documentation is in GitHub. Make sure ALL the results in your search are items called from the database, no static results or hard coded display is allowed. Keep working on documentation and finalizing the application.

M4:

Milestone 4 Feedback

Team 3 "Hatchio"

CEO/CTO M4 Feedback

Hatchio, overall milestone and progress is okay. The testing plans althouqh not fully executed should position you to be ready for the GA launch. Make sure that the rest of your available time is focused on finalizing the last details of your functional requirements in your priority list, and get prepared for the Demo and final documentation.

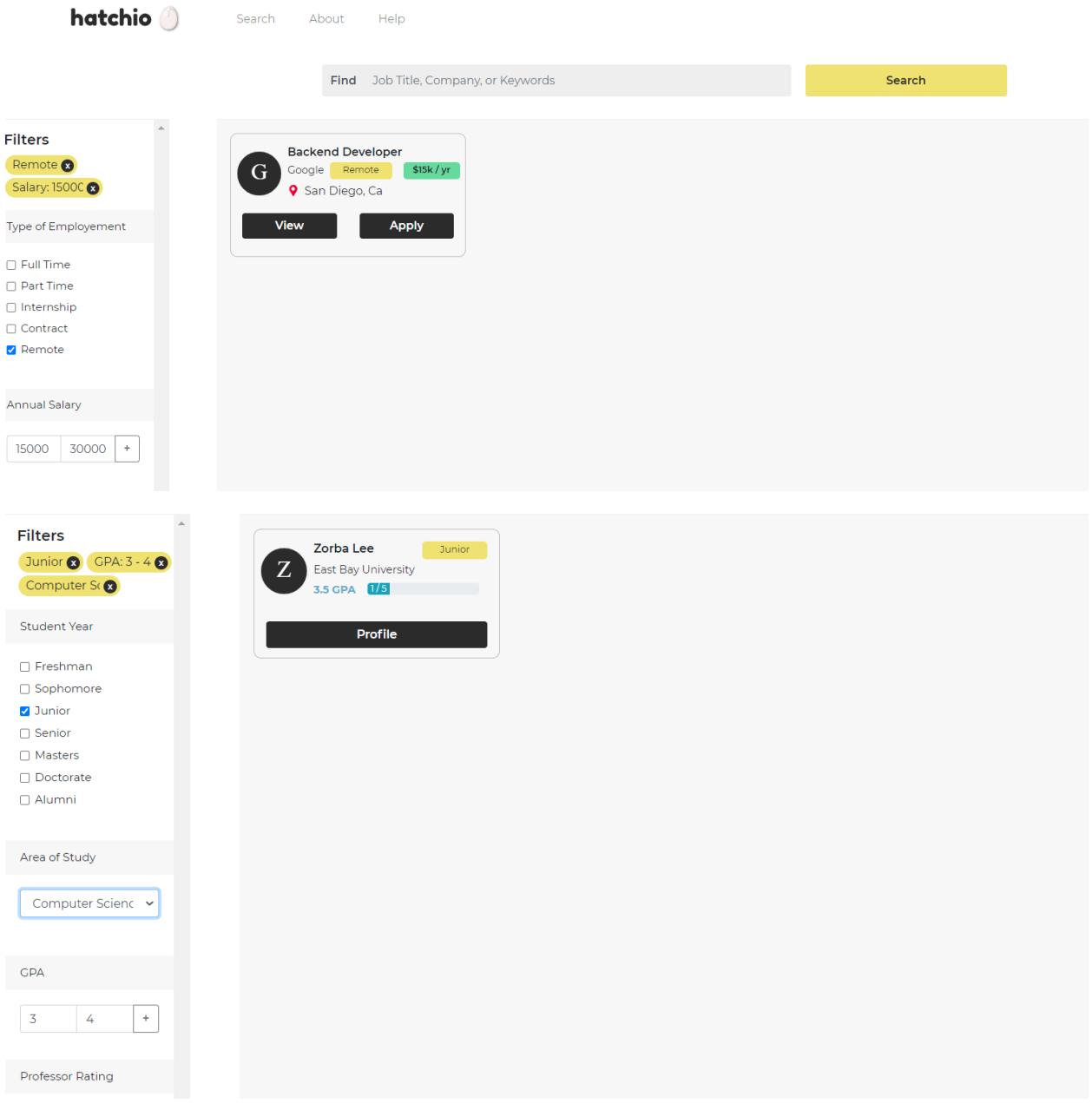
Instructor M4 Feedback

Overall Objective of Milestone 4 [Need improvement, On track, Above Expectations]: **On Track**

Specific M4 Feedback:

ID	Item	Criteria	Feedback
01	Objectives Achieved?	1. To make final commitment for functions to be delivered 2. To check that all required non-functional specs are satisfied or on track 3. To practice formal usability test plan development 4. To practice formal QA 5. To practice code review 6. Ensure basic practices of secure SE are applied 7. Ensure effective teamwork 8. Ensure software development is effective	**On Track.** In general the objectives for M4 seems to be achieved in the submitted document. Time management should be better though, and more descriptive sections would have been better. Additionally, as several of the teams during this class have struggled in the area of teamwork in a Software Engineering process environment, that has not been the exception for the Hatchio team. As stated during the class, try to finish strong and collaborate to finalize the final product and documentation.
02	Document delivered (PDF)	1. Product summary (~1/2 p) 2. Usability test plan (~2 p) 3. QA test plan (~2 p) 4. Code Review (~2 p) 5. Self-check on best practices for security (~1/2 p) 6. Self-check: Adherence to original Non-functional specs	**On Track.** • The **Summary** is okay. It could have been more descriptive and complete. Noted 8 items in the priority list. • Good objectives and background of the **Usability Test Plan** and it is comprehensive, but lack specifics for the user flow interaction. • Lickert Test is Okay. • QA. Good objectives and report. • Code Review. Good that the code style was specified at front. And the interaction in your peer review is good. • Good security approach. Be ready to demonstrate your approach during your demo. • Be mindful about those non-functional specifications still on track and not completely DONE. #3 & #9 (mobile devices & Google analytics) are not completely mandatory but the rest SPECs your team should work on them.

3)Product Screenshots



Student Notifications for Professor Ratings | Employer Interest

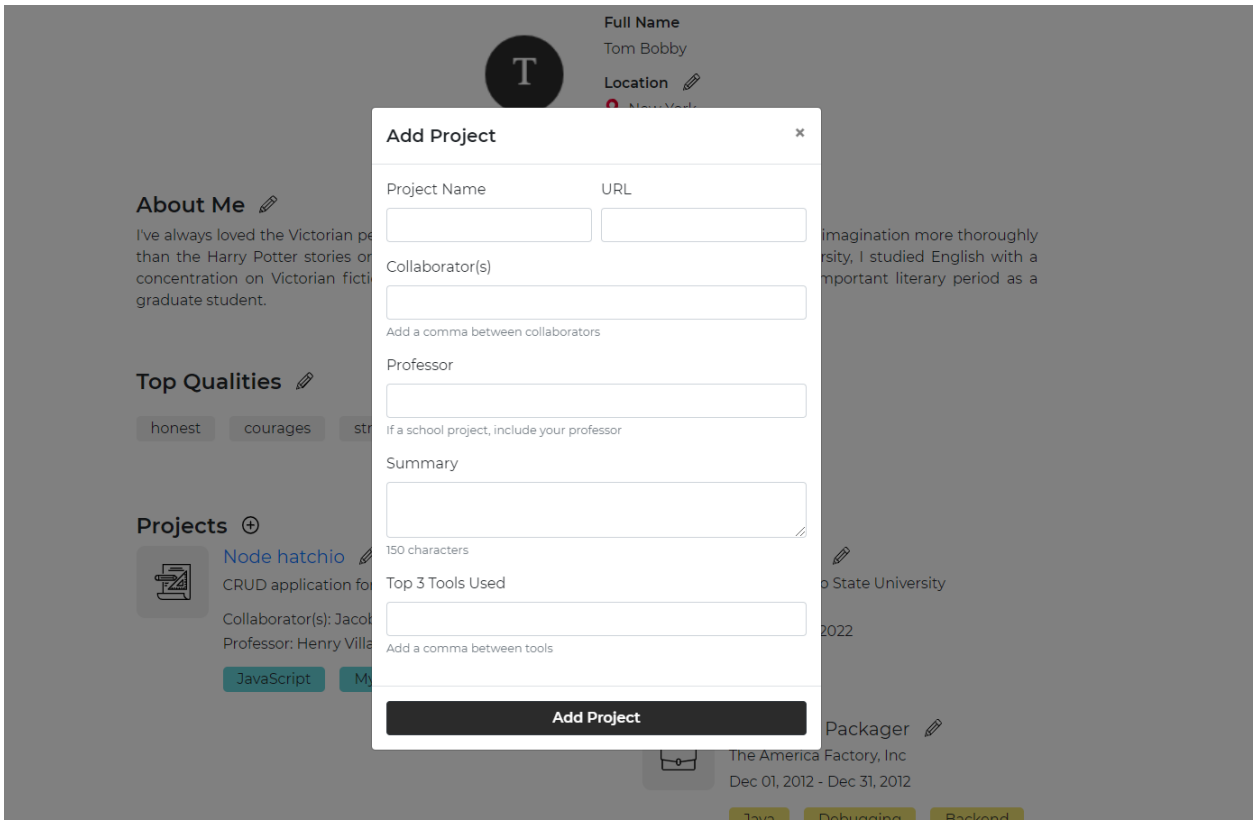
Rating UnSeen Ratings Notifications

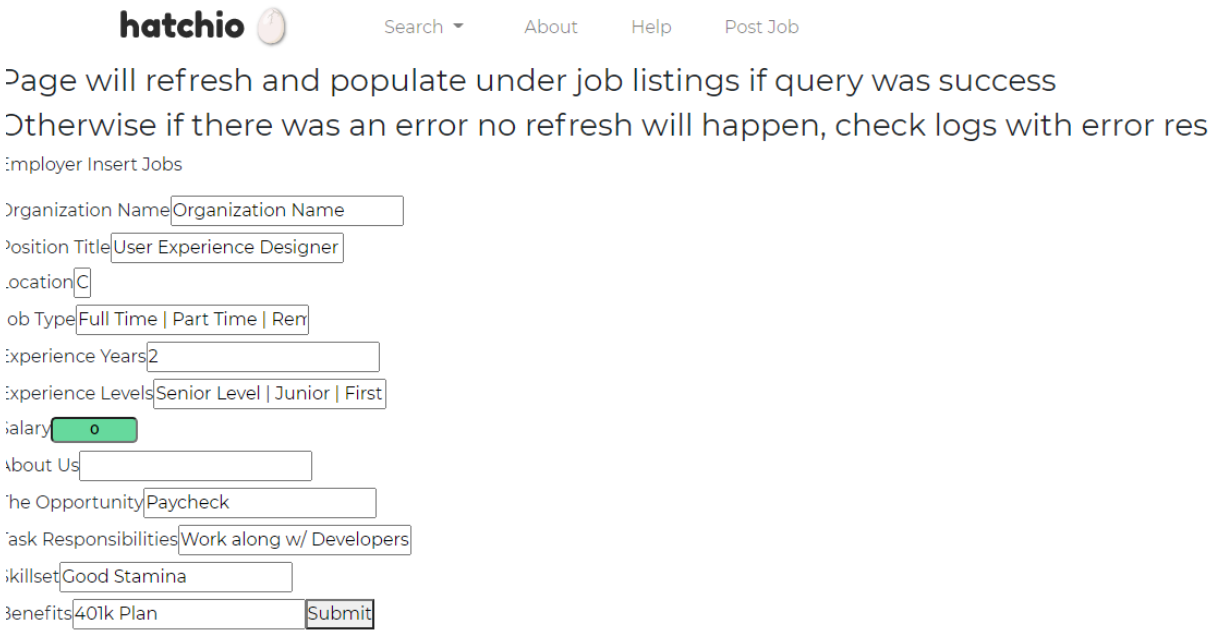
Professor : Henry**Time Rated** 2021-05-02T08:12:19.000Z**Rating Total** 2HIDE
Professor : Jose **Time Rated** 2021-05-11T14:17:44.000Z **Rating Total** 2HIDE

Applications Outgoing Fullfilled Notification

Message From: Google on Jan 02, 2020

HIDE




hatchio
Search
About
Help
Post Job
Page will refresh and populate under job listings if query was success
Otherwise if there was an error no refresh will happen, check logs with error res
Employer Insert Jobs
Organization Name
Organization Name
Position Title
User Experience Designer
Location
C
Job Type
Full Time | Part Time | Ren
Experience Years
2
Experience Levels
Senior Level | Junior | First
Salary
0
About Us
The Opportunity
Paycheck
Task Responsibilities
Work along w/ Developers
Skillset
Good Stamina
Benefits
401k Plan
Submit

Alerts

User Experience Designer #1
Location: Pleasant Hill, Ca

Job Type: Full Time

Experience Years: minimum 5 Years

Salary: 105000

Skillset : 1.Enthusiasm2.Willing to work hard3.Passionate

Task Responsibilites: debugging,c++,collaboration

The Opportunity: Work with the top class engineers and mentors that will help you grow with the company and as an individual

DELETE
Backend Developer #2
DELETE

Candidates Found

Alert: 1

Notified Jan 01, 2020

student_id: 1

listing_id: 1

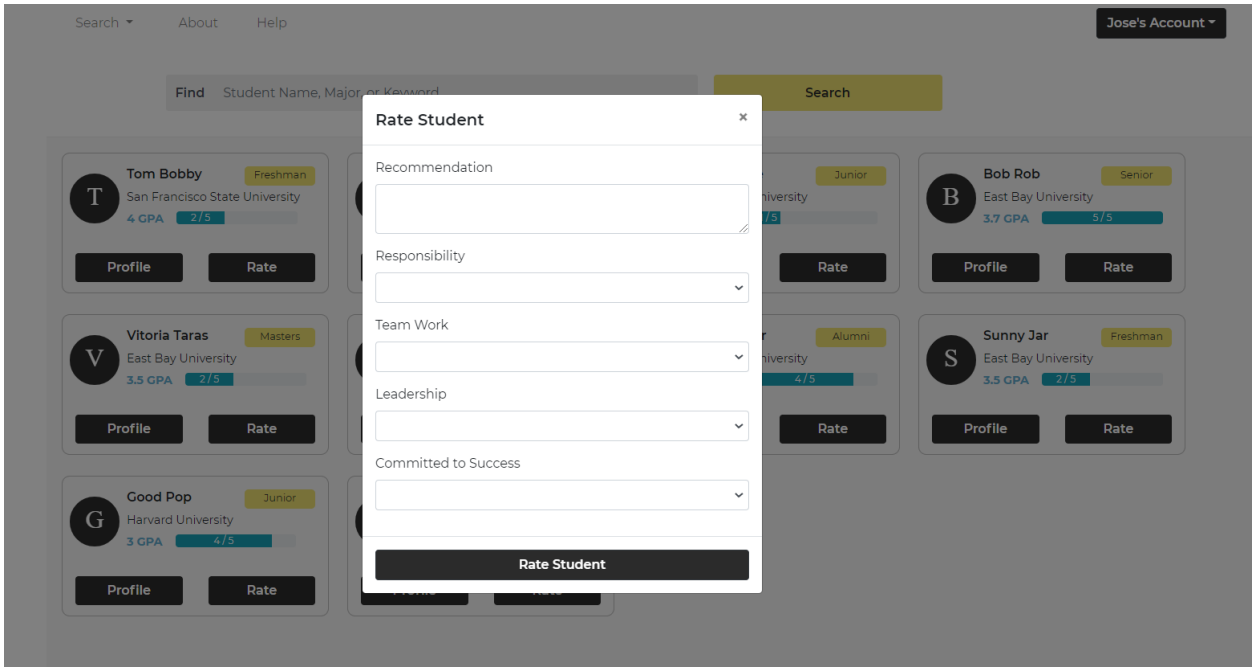
Candidate: Tom Bobby

School: San Francisco State University

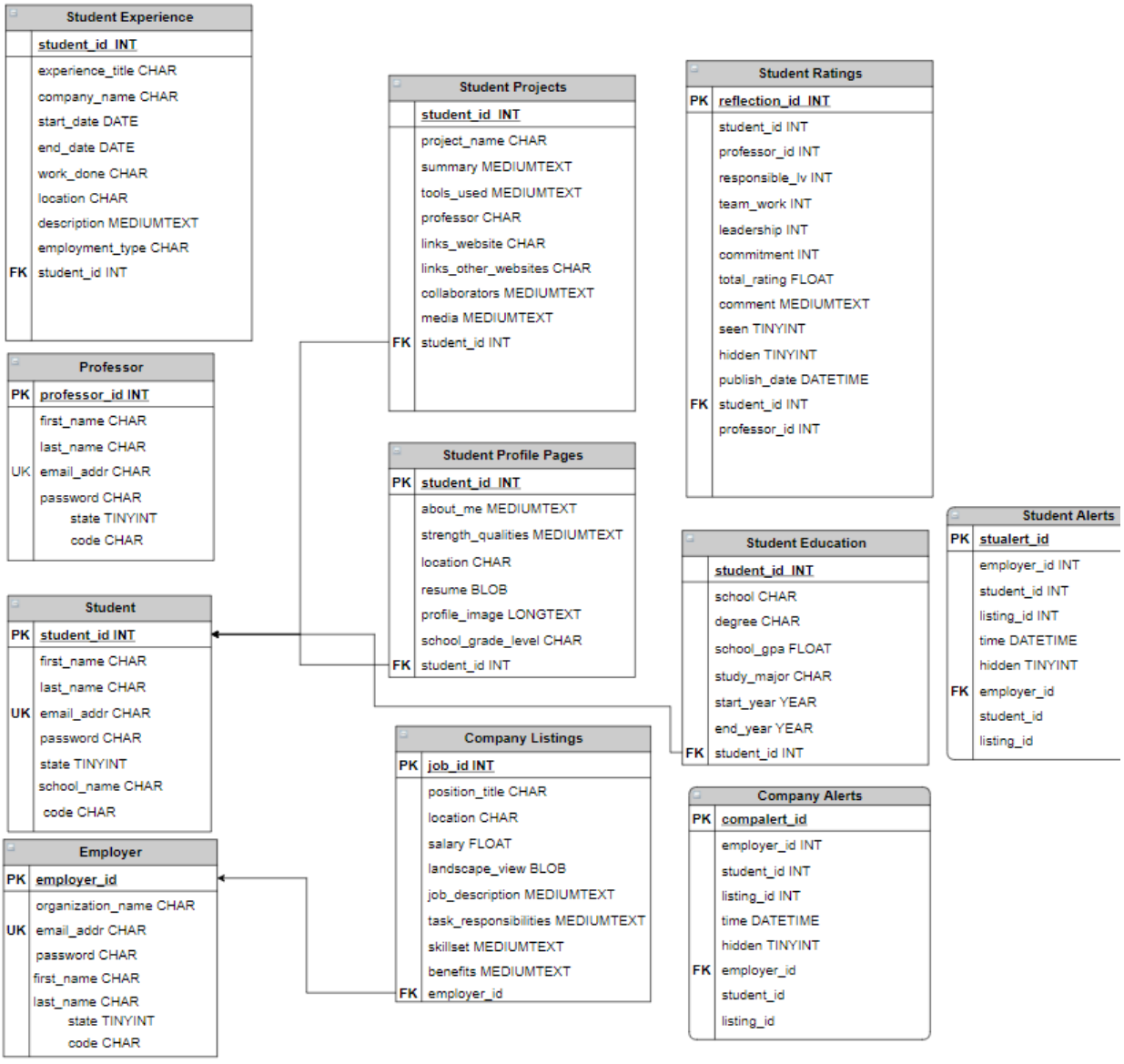
Major: English

School Year: Freshman

HIRE Hide



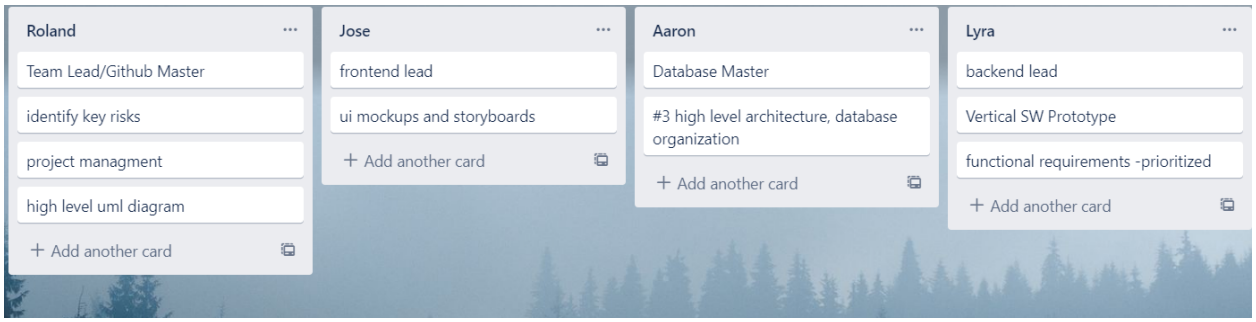
4)Database Screenshots

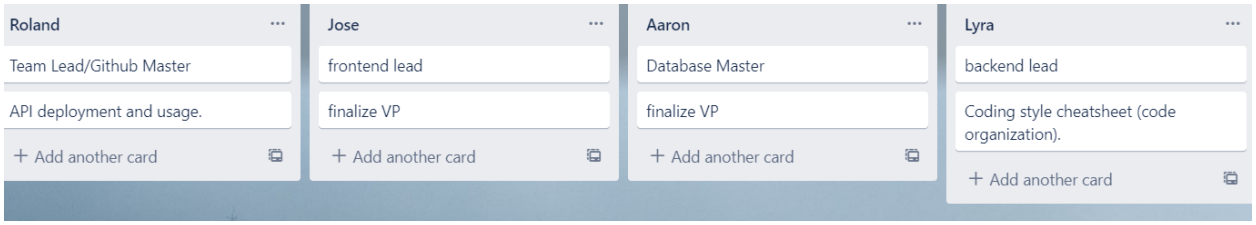


5)Screenshots of task management

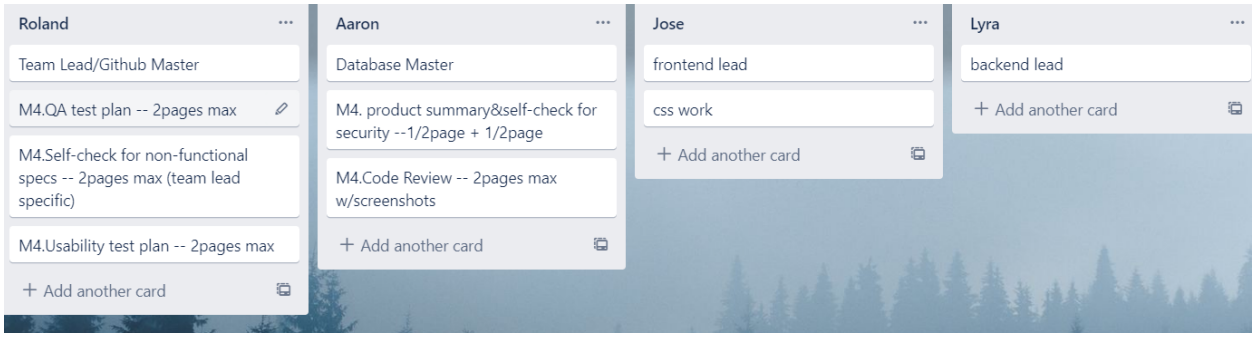
Milestones 1 assigned paragraphs

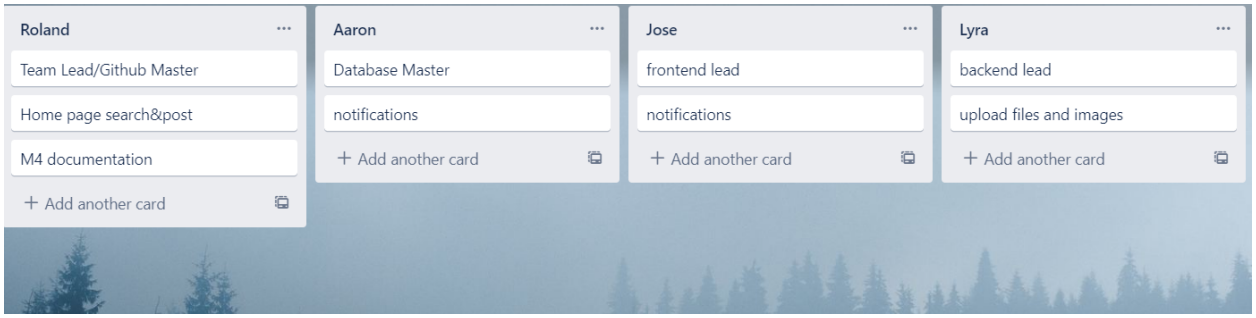
Jose: competitive analysis, executive summary
Lyra: persona and main Use cases, list of data items
Aaron: non-functional requirements, functional requirementsD
Roland: editor, HL architecture, team and roles, checklist

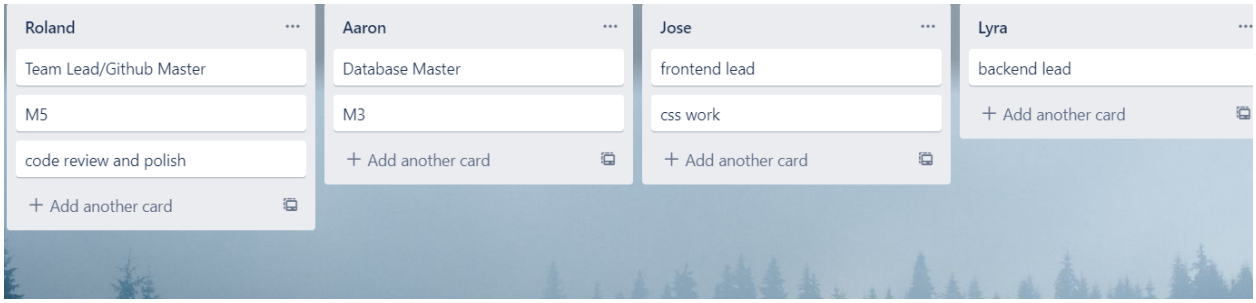




Assigned tasks during spring break (by 3/23)
[Jose] upload-resumes
[Lyra] search for talent
[Roland] register and alerts
[Aaron] rating and recommendations




Roland
Team Lead/Github Master
Home page search&post
M4 documentation
Add another card
Aaron
Database Master
notifications
Add another card
Jose
frontend lead
notifications
Add another card
Lyra
backend lead
upload files and images
Add another card


Roland
Team Lead/Github Master
M5
code review and polish
Add another card
Aaron
Database Master
M3
Add another card
Jose
frontend lead
css work
Add another card
Lyra
backend lead
Add another card

6)Team member contributions

:SC648 Contribution email

RL

Roland Lee
Tue 5/11/2021 3:06 PM
To: Aaron Rohit Singh; Jose Hilario Gonzalez

I have made around 25+ commits throughout the semester.

Tasks that are done on the development branch:

1. email address verification and password hashing(sign-in/sign-up)
2. company notifications page
3. Job removal functionality and participated in student notification development
4. db redesign (with alerts implemented)
5. code review

Non-Code Related:

1. AWS cloud setup assistance and debug
2. M1: HL architecture, team and roles, checklist (some are done by someone else)
3. M4: QA test plan, usability test plan, and self-check for non-functional specs (some are done by someone else)
4. Entire M5.

Reply | Reply all | Forward

Aaron Rohit Singh
Sat 5/8/2021 4:14 PM
To: Roland Lee

Hello Roland,

An approximate of the number of commits I've made to the development branch ('milestone03') is about 101. This can be confirmed by going to the insights page on GitHub. Although, commits are not a 100% reflection of the work contributed to the source code.

Here is a brief outline of where most of my contributions were made as backend lead and database manager:

- Creating the sql script for the following tables: 'admins' ,'company_alerts' ,'company_listings', 'employers','professors','student_alerts','student_education','student_experience','student_profile_page', 'student_projects' ,'student_ratings' and 'students'. Roland created the company_listings and student_alerts and assisted in managing those relations.

- Almost all the backend routes with the exception of Roland's assistance on notifications, initially signing up users and encryption for passwords. All the backend routes I created were either GET for verifying user and getting information for users, POST for jobs to insert by employers, professors to rate students, and students for inserting information in their corresponding tables. PUT for editing student profile pages and notifications seen/unseen boolean.

- In addition to bringing the functionality for the frontend to communicate with the database, I contributed a lot to the models functionality to implement usable API requests for the frontend and I verified and tested usability before Jose could frame it in the user interface. I also assisted Jose with conditional rendering pages based on the type of user logged in with cookies sent from the backend.

- I also managed the deployment of the application on aws ec2 instance with Roland's assistance in between.

To find more cleaner details, you can visit the change logs in the GitHub repository where I tried my best to update in bullet points where I was making changes and what I was working on with a timeline format.

Thanks,
Aaron S.

JG

Jose Hilario Gonzalez
Tue 5/11/2021 3:31 AM
To: Roland Lee

Hello Roland,

So im referencing the analytics of GitHub but I also wanted to note that if branches are deleted, they will not be taken into account within the analytics.

I would say I did about 50+ commits and the following for the project:

Code Related:

- formatted folders to resemble the Model View Controller format
- AreasofStudy.json
- Templated the following components/pages & added frontend functionality (all backend and DB was done by Aaron):
  - About
    - About.js
    - MemeberCard.js
    - MemberPage.js
  - Authentication Pages
    - Auth.js
    - Redirect.js
    - Signin.js
    - Signup.js
  - Home Page
    - Home.js
    - PostJobs.js
    - SearchJobs.js
  - Profiles Pages
    - CompanyProfile.js
    - StudentProfile.js
    - ProfessorProfile.js
  - Search
    - SearchBar.js
    - JobSearch.js
      - JobCard.js
      - JobFilters.js
      - JobView.js
    - StudentSearch.js
      - StudentCard.js
      - StudentFilters.js

    - StudentSearch.js
      - StudentCard.js
      - StudentFilters.js

- All popup forms (except first-time user form)
- Alert indicating the website is a demonstration only
- global nav and login nav
- DefaultImage.js - produces a profile image for users based on their first name
- Footer.js
- App.js routes
- I did 99% of the styling
  - About.css
  - Auth.css
  - Forms.css
  - Home.css
  - Nav.css
  - Profile.css
  - Search.css
  - Theme.css

Non-Code Related:

- Milestone 01
  - executive summary
  - competitive analysis
- Milestone 02
  - UI Mockups and Storyboards
- entire Figma design

7)Post analysis - lessons learned

The challenges that we have encountered throughout the semester are mainly ensuring the project proceeds as scheduled and making sure everyone is assigned to tasks. In the early stage of development, due to limited knowledge of search for talent application, we overlooked several security features and basic authentication/validation and later had to rework some of the frontend and backend implementations. As for how to prevent it from happening, spending more time on research and having a senior developer or just generally someone who is more familiar with the project than you are to confirm that initial requirements and specifications are spot on. As the project progresses, the challenges that we have encountered are holding people accountable for their own works and dividing works evenly. As shown in task management, the majority of assigned tasks are milestone documentation while there is little to no evidence showing task management on project implementations. In addition, during the late stage of the development, few people just wouldn't respond and submit assigned tasks on time which turns out very unfair for those who are truly committed to the project. To avoid such incidents in the future, one must either contact the CEO/CTO and address the issues or contact the team lead and have the issues resolved as soon as possible.