SW Engineering CSC648/848 Spring 2021

PipeWave

"The Fast-Track from Student to Professional"

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Section 02, Team 04

Milestone 2-- 3/9/2021

History Table (Revision Summary):

03/09/2021: Document Created

1. Functional Requirements

Priority 1-

All Users:

- *All users* from verified schools or companies shall be able to register and create accounts on the website
- *All users* shall be able to search for jobs and or requirements based on respective category
- *All users* shall be able to update their profile information
- *All users* shall be able to view other's profiles
- *All users* shall have the ability to use an in-site messaging system to communicate with other registered users

Students:

- *Students* shall be able to upload resumes to their profile in a pdf format
- *Students* shall be able to enter any demographics, experience and education to customize their profile

Industry Professionals:

- *Industry Professionals* shall be able to search for new graduates or students by major and demographics
- *Industry Professionals* shall be able to register and get alerts for matching student or new graduate profiles
- *Industry Professionals* shall be able to flag or notify a candidate that they are interested in interviewing through the press of a button
- *Industry Professionals* shall be able to leave recommendations on students or graduates

Professors:

- *Professors* shall be able to rate students on a scale from 1-5 based on different aspects such as responsibility, teamwork, leadership, etc.
- *Professors* shall be able to enter recommendations for students

Priority 2-

All users:

- *All users* may be able to view reviews left on employer or employee profiles

Students:

- *Students* may be able to upload videos to their profile in supported video format
- *Students* may be able to register and get alerts for matching employer profiles in order to prepare for interviews

Industry Professionals:

- *Industry Professionals* may be able to follow profiles of candidates that they may be interested in without notifying them
- *Industry Professionals* may be able to search for professors by demographics or subjects

Priority 3-

Students:

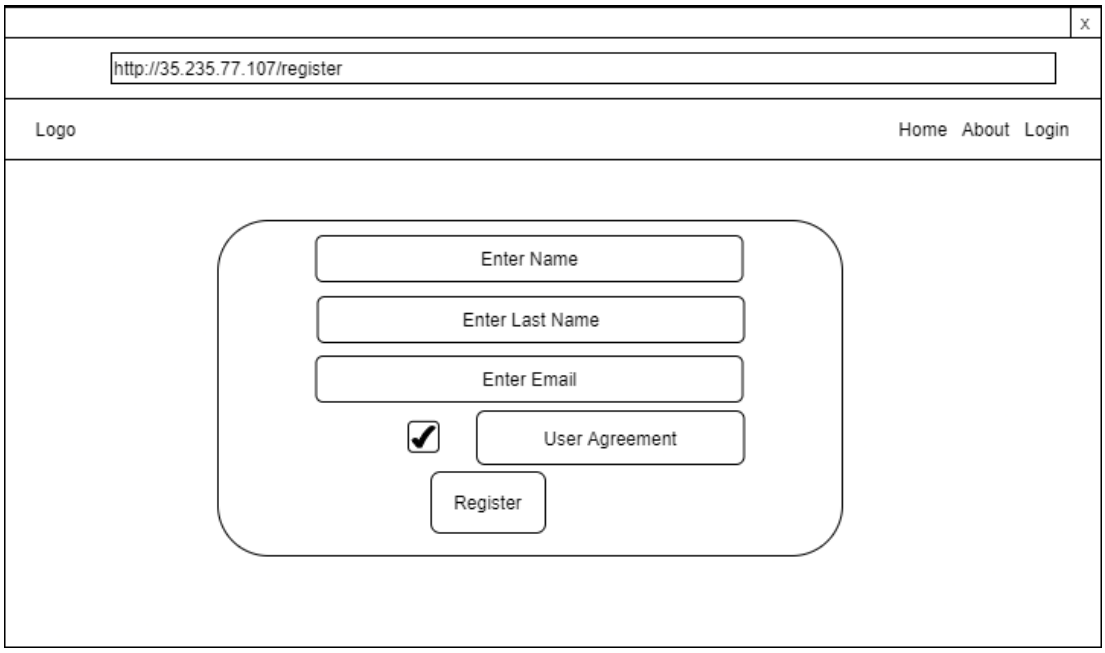
- *Students* shall be able to follow other students or companies that they are interested in without sending notifications
- *Students* shall be able to leave recommendations for other students

Professors:

- *Professors* shall be able to enter any demographics, experience and subjects that they teach to customize their profile

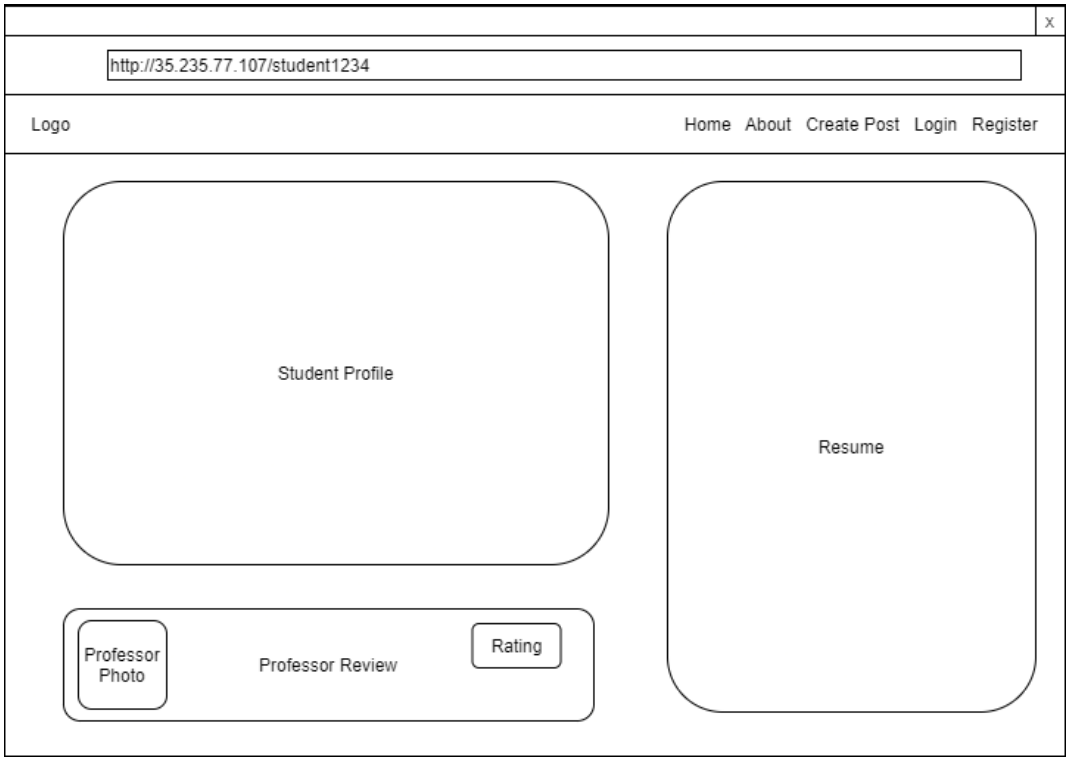
2. UI Mockups and Storyboards (front end)

Main Use Case 1: Recent Graduate Looking for a Job



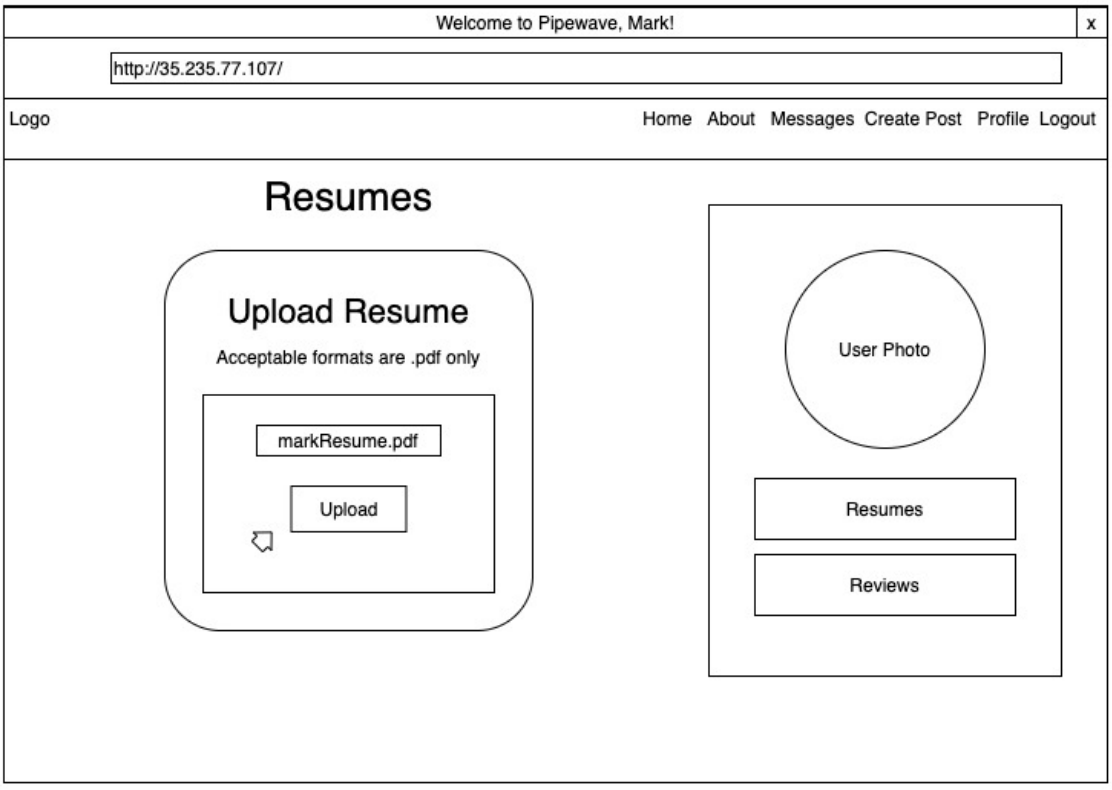
John is new to the website so he enters his information on the registration page and clicks on ‘Register’ to create a profile.

A professor viewing the website gets a notification that John has joined pipewave and is in need of a review.

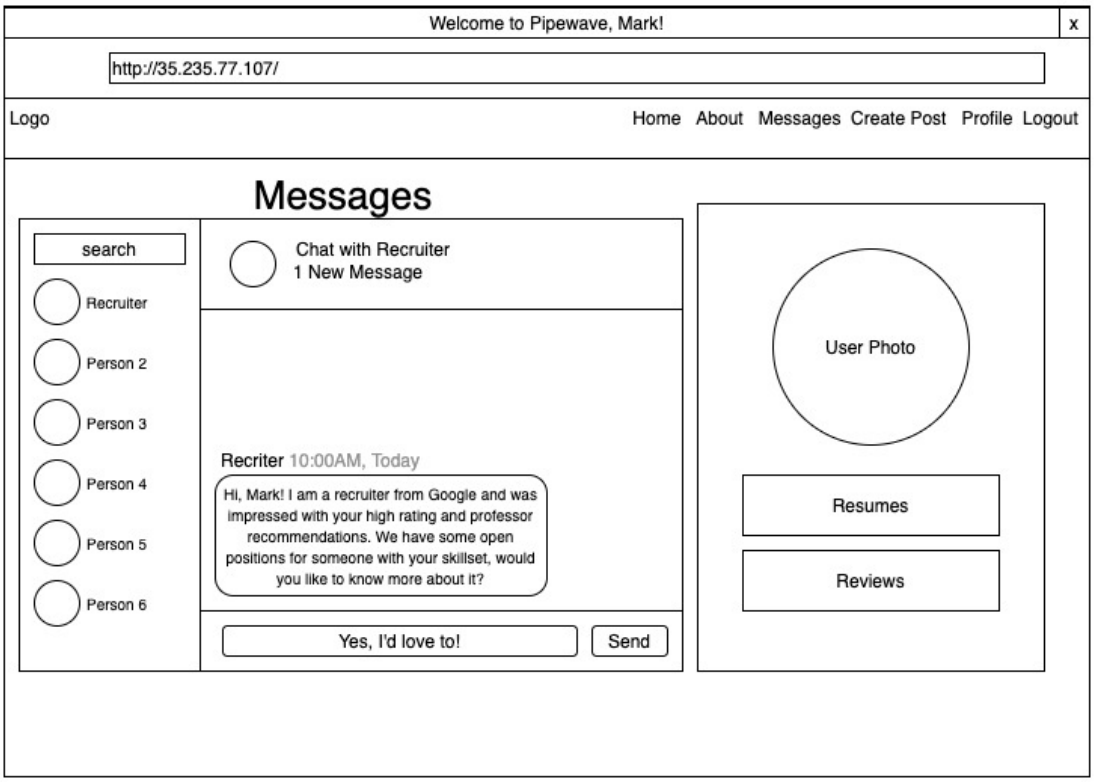


The professor leaves a review which is now displayed on John's profile.

Main Use Case 2: Current student looking for internship

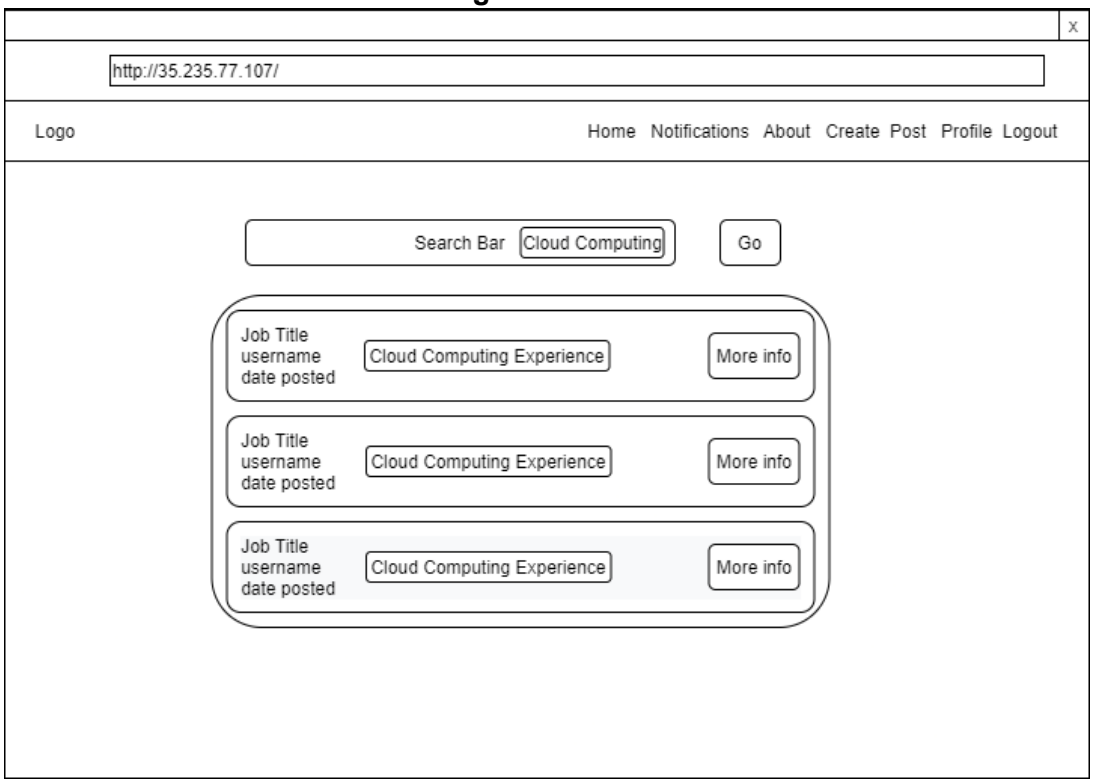


Mark selects a resume from his local device to upload to his profile, then clicks upload

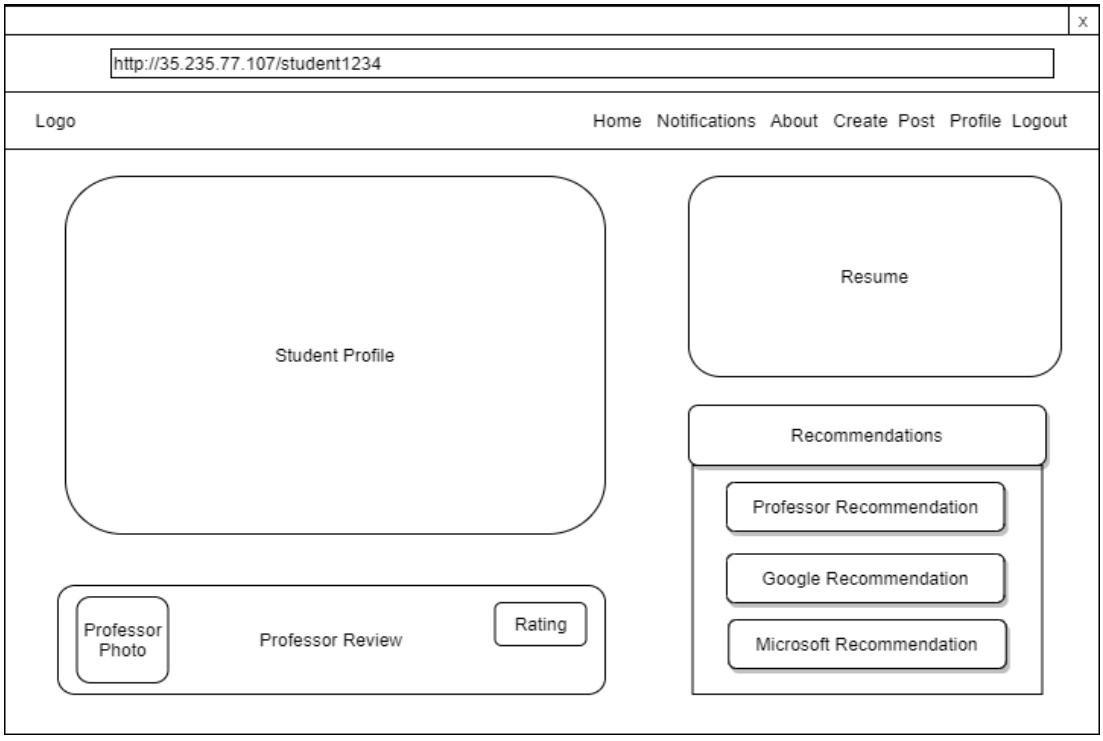


Mark discovers a message from a recruiter with a potential job offer and replies.

Main Use Case 3: Recruiter looking for overall talent

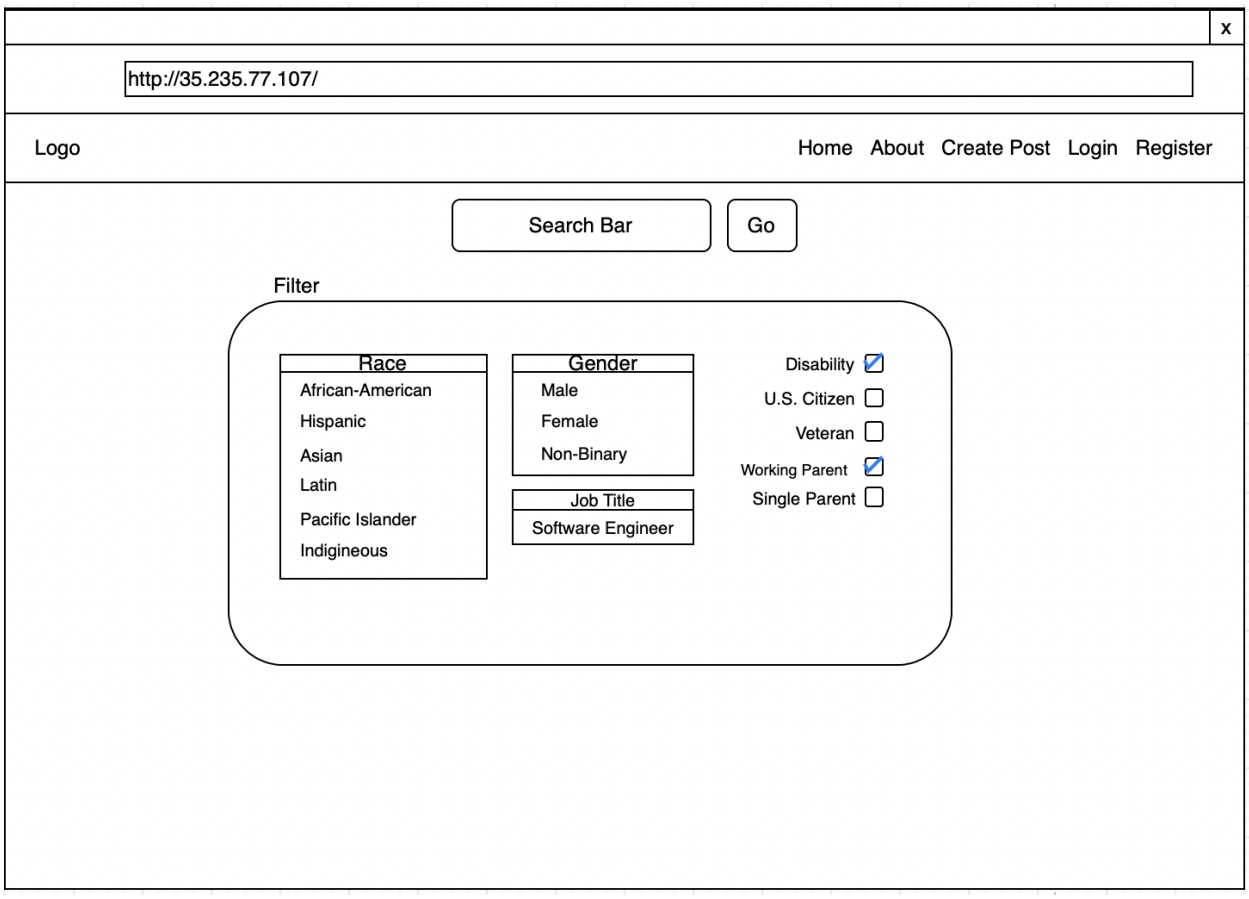


Linda is viewing the website for potential talent and filters based off of cloud computing experience.

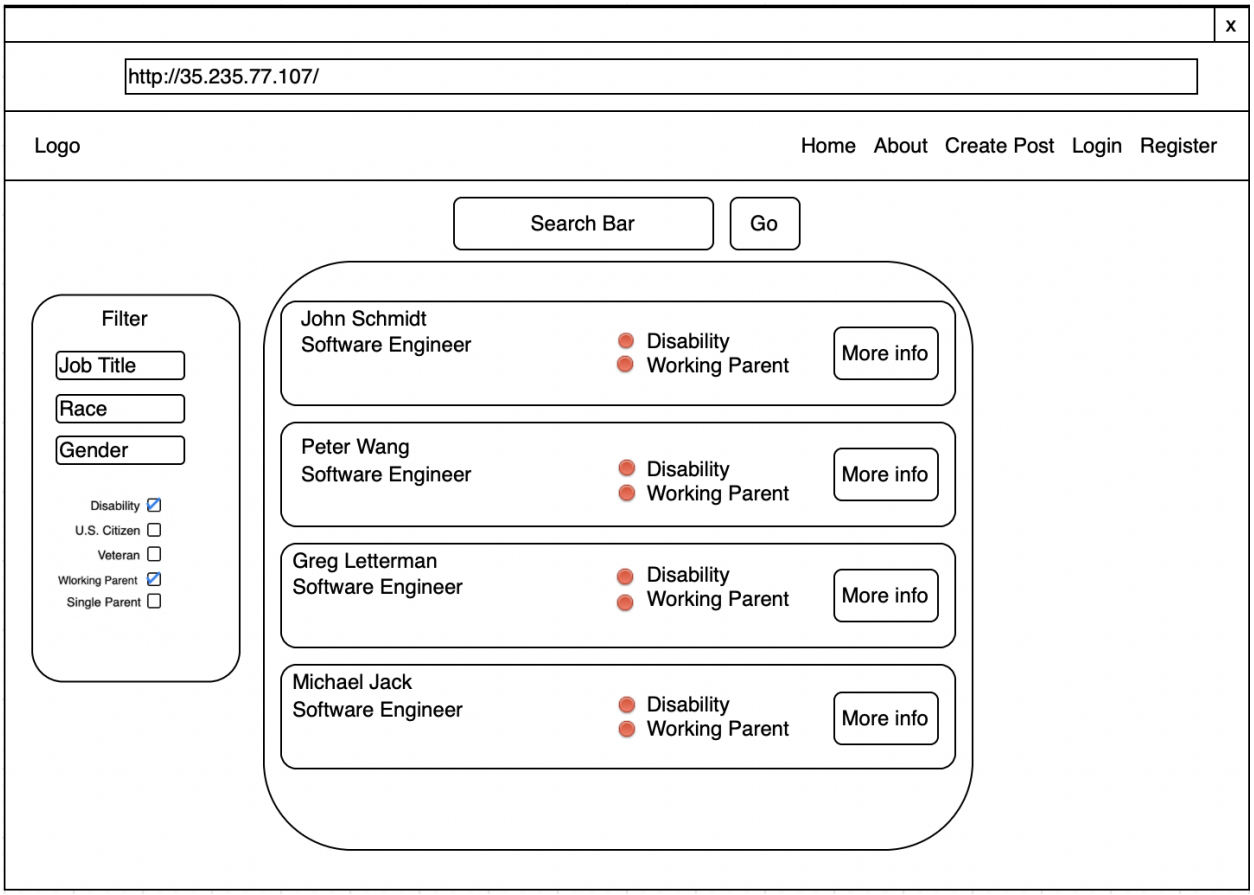


Linda sees the profile she's interested in and clicks the tabs to view to view the company and professor recommendations

Main Use Case 4: Current student looking for internship



Joseph, an employer, looks to recruit candidate using the search function, filtering by disability and working parent.



Search results show up for Joseph, showing only disabled and working parent employees.

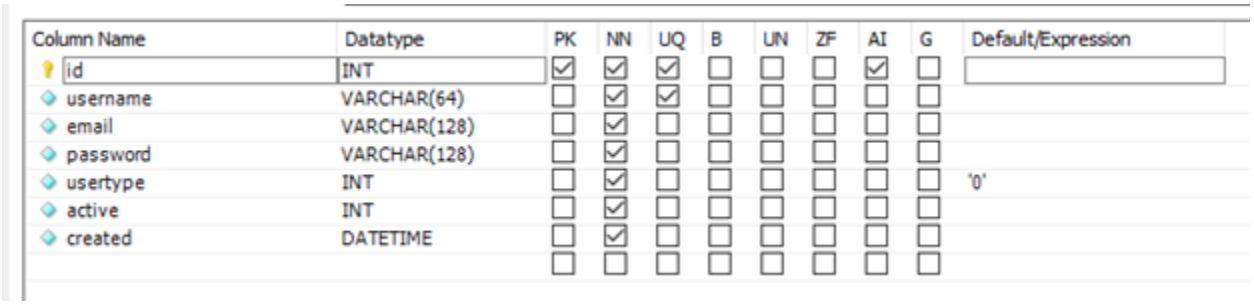
3. High Level Architecture and Database Organization

Database Organization:

Our team uses Mysql2 along with the mysql2 node package.

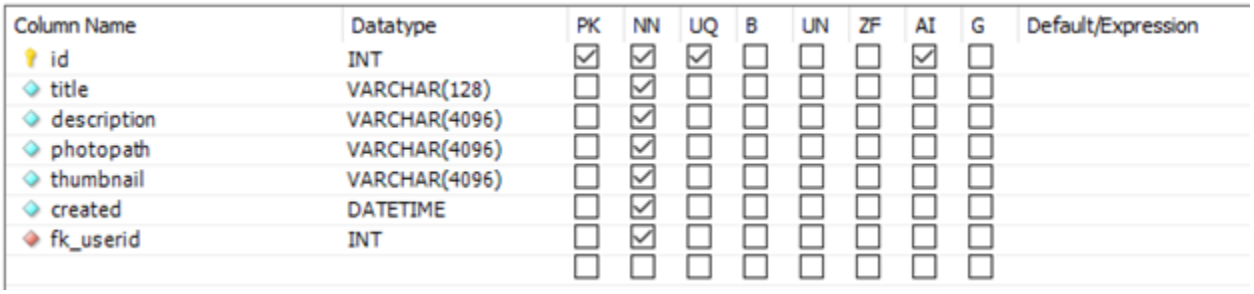
Currently we have a rough sketch of how our database will look.

Users Table



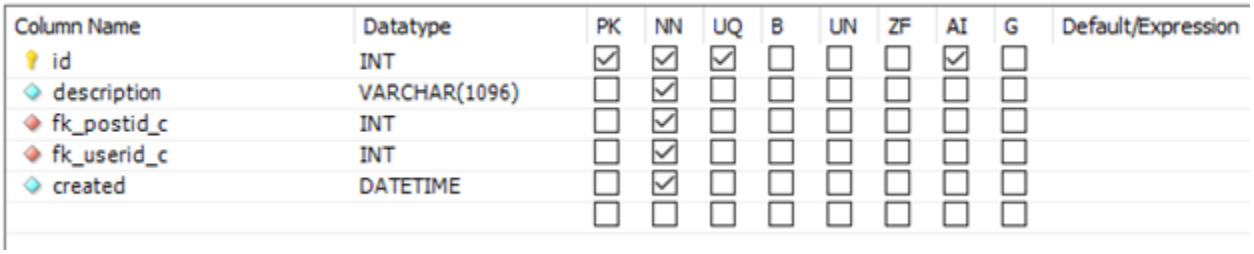
Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
id	INT	☑	☑	☑	☐	☐	☐	☑	☐	
username	VARCHAR(64)	☐	☑	☑	☐	☐	☐	☐	☐	
email	VARCHAR(128)	☐	☑	☐	☐	☐	☐	☐	☐	
password	VARCHAR(128)	☐	☑	☐	☐	☐	☐	☐	☐	
usertype	INT	☐	☑	☐	☐	☐	☐	☐	☐	'0'
active	INT	☐	☑	☐	☐	☐	☐	☐	☐	
created	DATETIME	☐	☑	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	

Posts Table



Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
id	INT	☑	☑	☑	☐	☐	☐	☑	☐	
title	VARCHAR(128)	☐	☑	☐	☐	☐	☐	☐	☐	
description	VARCHAR(4096)	☐	☑	☐	☐	☐	☐	☐	☐	
photopath	VARCHAR(4096)	☐	☑	☐	☐	☐	☐	☐	☐	
thumbnail	VARCHAR(4096)	☐	☑	☐	☐	☐	☐	☐	☐	
created	DATETIME	☐	☑	☐	☐	☐	☐	☐	☐	
fk_userid	INT	☐	☑	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	

Comments Table



Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
id	INT	☑	☑	☑	☐	☐	☐	☑	☐	
description	VARCHAR(1096)	☐	☑	☐	☐	☐	☐	☐	☐	
fk_postid_c	INT	☐	☑	☐	☐	☐	☐	☐	☐	
fk_userid_c	INT	☐	☑	☐	☐	☐	☐	☐	☐	
created	DATETIME	☐	☑	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	

Media Storage:

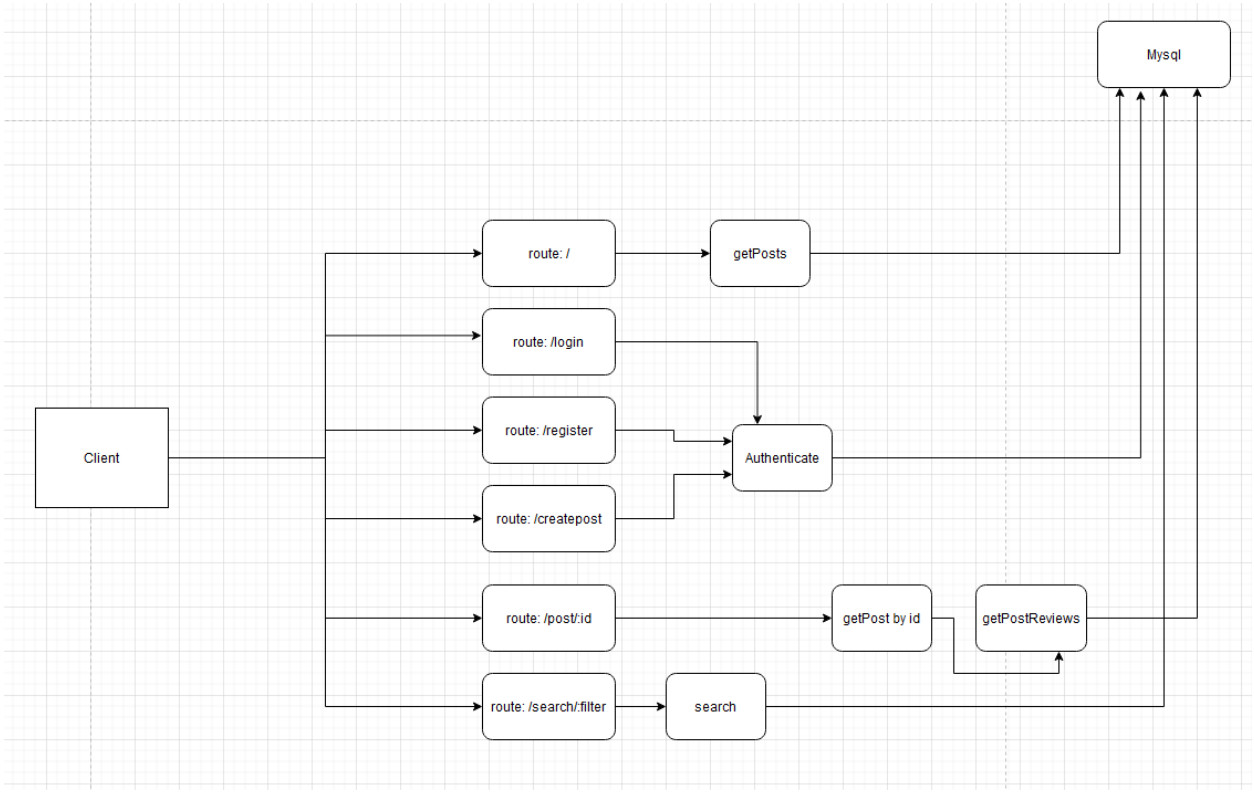
Our files (videos, images, audio) will be stored in file systems for our server.

Search/filter architecture and implementation:
To use search, we concatenate first and then search by using haystack. After users have entered their search request, the results would organize where users scroll down of all the results matching what they were searching for. The database terms would be centralized around the title of other users posts that they have created as well the username of other users.

Our own APIs (if any):
Currently, there's no plan of using our own APIs.

Non-Trivial Algorithms or processes (if any, like ranking, etc):
Utilizing mysql functions to get the reviews, where users are reviewed based on their profile.

4. High Level UML Diagrams



5. Key Risks

1. (*legal/content*) Possible legal issues surrounding the search filter system. Allowing people to filter by marginalized groups tends to be a controversial social justice issue that could work against those who disclose any protected classes. It is decided to move forward with this functionality while understanding that it may at some point need to be changed or modified.

2. (skills) We have decided upon using Handlebars as a frameworks, however, only one team member from the back-end currently is familiar with it. Therefore, all of the front-end team will have to study up on how to use it in order to take advantages of the benefits and conveniences of using it.

6. Project Management

_____In the planning of Milestone 2, we decided to break up the team into its respective front and back-end teams. The front end team decided to meet and discuss plans for revising and organizing the functional requirements, as well as plan out storyboards and assign each use case. After the front end team planned and distributed tasks, it was to all be completely asynchronously.

The back end team was given autonomy to plan their meeting and work sessions to tackle the high-level architecture and database organization sections, for them to complete asynchronously and independently. We are keeping track of progress through a shared google document, as well as the creation of a Milestone2 channel on our team's Discord channel, in which the team lead listed all of the tasks to complete and their status. It was decided by the team lead against using an external service like Trello for the sake of keeping all of the team's updates, resources, and discussions all in one place which is easy to manage. It is worth noting that a google group was created for Team Pipewave to easily keep track of and share all documents related to this project.

As for future tasks, the team will be dividing the Vertical Prototype milestone into front and back end teams. The back end will be responsible for tweaking and polishing our already existing search prototype, and the front-end will adjust the user interface to be more streamlined and in-line with the wireframe designs in this document.