CSC309 Project Team #6

Team Members Info

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Introduction

We are planning to build a web application that allows user to upload and download past exam papers, and it also encourages users to exchange their thoughts and solutions online.

The three main purposes of our project are:

- Collect past tests and make them more publicly accessible.
- Simplify the process for students searching past tests online.
- Encourage users to collaborate and improve solutions together.

Our target users are university/college students. Users can view/download past exam papers for free and get formal solutions or informal collaborative solutions from peers.

Feature Specifications

Required features:

a) User Profiling
   - Each user has its own profile page. Regular users can only edit their own profiles and are allowed to view others' profiles.
   - Each user can upload an avatar, which is displayed on the profile page.
   - Admin can change profiles of any given user who has been registered and stored in our database.

b) User Authentication and Authorization
   - Users are able to sign up with a unique username and a non-trivial password.
   - Users can log out at any view of our web application.
   - If the login username is associated to the admin, then all privileges are granted to this user. (Specific privileges will be discussed in Admin section)

c) Data
- User data: username, password (hash), faculty, year of study, avatar and other profile info
- Course data: course code and course name
- Document data: corresponding course code, professor name, year, type (midterm/final) and document content (PDF URL).
- Comment data: corresponding document id and user id, and comment context.

They are all dynamically retrieved from our web server based on the query that each user makes.

d) Views (* means index page, and figures are at the bottom of this document)
- *Searching page (Figure 1)
- Course info and filter page (Figure 2&5)
- User profile page (Figure 7)
- Sign in and sign up page (Figure 3&4)
- Past test and comments page (Figure 6)

e) Admin
- Change the password of a regular user.
- Add and delete a user.
- Edit any user's profile.
- Modify or delete documents uploaded by regular users.
- Modify or delete comments created by regular users.

Additional features: (To be implemented)
1. Use search bar to quickly find past exams by specifying course code in a specific format, like CSC309 or csc309.
2. Apply additional filters on the past exam search result, such as exam type (midterm/final), professor name and year.
3. Upload past exam papers to our web server and categorize them into the corresponding course page.
4. Adding collaborative comments side by side with the PDF document.

Other feature thoughts: (Rough idea, if time permits)
1. Use email address as username. Send verification email when a user wants to sign up. This could potentially prevent spam/fake users.
2. Collaborative comments are only visible to signed in users.
3. Mixed data are all stored in a single database. This could be improved by separating dynamic and static data. For example, retrieving avatars and PDF files from a CDN.

User Interactions (A guide on how user interacts with the data)

When a user comes to our website, he/she can find a search bar with format hint like "CSCXXX" in our index page. After entering course code in a similar format and pressing Enter key, the user will be guided to another page. Let's call this page as "Filter". Page Filter provides users with more specific options to accurately find a specific past exam paper. The filter types include years, terms, professor names etc. The filter results will be shown as a list of past tests uploaded by a user with links to the actual PDF content. After clicking on any of these PDF files, users will be redirected to a new view which contains the exam paper and solution they just selected. What's more, users can add collaborative comments to the solution and download the solution if necessary.

Comparison and Highlighting Features

The highlighting feature of our website is the comment collaboration. Users can add their own thoughts on whether the current reference solution is correct or not. That is, most of the solutions on our website are all collaboratively written by users as an unofficial solution or even rough ideas. Compared with other existing websites such as Oxdia, this acts as a new feature extension, which can further improve user experience of our website. Moreover, another benefit is that there is no credit limit for download since most of the similar websites require credit to do so.

Our Source of Data

Currently, our web application doesn't need to pull much data from an outside source since all data can be created and collected by users. Later, we may consider pulling some data from UofT calendar and/or RateMyProfessors to add more functionality to our app. Since for one course, instructors can be different depending on school terms, and papers can be categorized into different years and terms too. However, we will focus on utilizing the data generated by users for now.
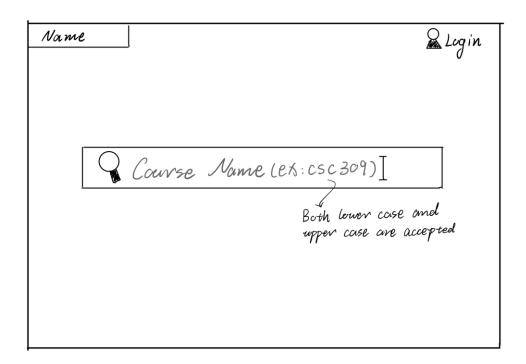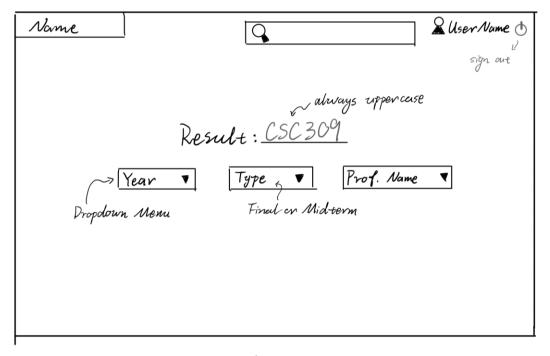
Name   Login

Course Name (ex: csc309)

Both lower case and
upper case are accepted

Figure 1

Name   🔍   UserName ⏻

sign out

always uppercase

Result: CSC309

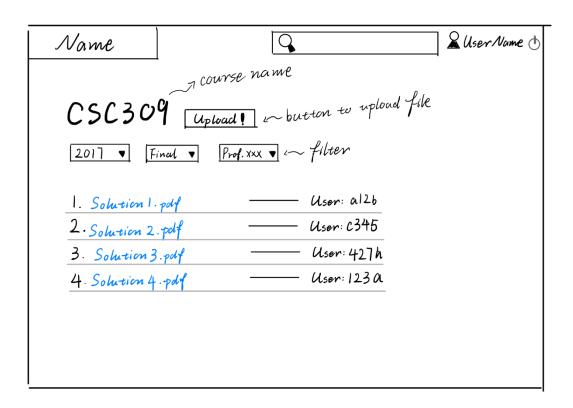Year ▼   Type ▼   Prof. Name ▼

Dropdown Menu   Final or Midterm

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7