Lab 8: MERN stack – ReactJs + ExpressJs + MongoDB

Software Systems Development – Monsoon 2022

Date: 6th October 2022

Instructions:

- Create 2 folders – **server** & **client,** which are to be placed inside a folder named as **<your_roll_number>**.
- Compress the above-mentioned folder into **.zip** format.
- **server** folder must contain the backend source codes written in **ExpressJs**.
- **client** folder must contain source code for **ReactJs**.
- **Submit the zip file in Moodle before the deadline**, *for example –*
    - ***2021201060.zip****.*
        1. *Folder – 2021201060*
            1. *Folders – server, client.*
- Push your code to GitHub repository as well.
    - Repo – IIITH_SSD
        1. Folder – ssd_lab_activity_8
            1. Folders – server, client.
- **README** file is mandatory.
- Please follow the above-mentioned submission format, else you will be awarded **0 (zero)** in this activity.

Essential information:

- Use **.env** file for maintaining constants such as DATABASE_CONNECTION_STRING, PORT, etc. as discussed in the tutorial.
- **DO NOT** include **node_modules** in your submission.
- Database Schema –
    - User –
        - roll: String
        - password: String
        - role: String
    - Query –
        - exam_name: String
        - course_name: String
        - question_num: Number
        - ta_roll: String
        - std_roll: String
        - ta_comment: String
        - std_comment: String
        - IsActive: Boolean

Question:

(Total Marks: 50)

1. Login Page: **(10 marks)**
    - This is the landing page of your application which has the following: **(2 marks)**
        i. Input field to capture **Roll Number** of the user.
        ii. Input field to capture the **Password** of the user.
        iii. Dropdown with 2 options – Student and TA, to capture the role of user.
        iv. Two buttons – Login and Sign Up, to log in the user to application and register the new user, respectively.
    - The login of user must me session-based authentication and use MongoDB to persist sessions' data. **(5 marks)**
    - If a user navigates to other pages without login, he/she must be redirected to the login page. **(3 marks)**

2. Feedback Page **(For Students)**: **(20 marks)**
    - As you login with student account the student landing page will have
        i. one button – **"Add new Query"** which navigates to a form page consisting of details as (**ALL details are required**) - **(10 marks)**
            - Exam Name
            - Course Name
            - Question number
            - TA' Name (this is drop down list & can be made static)
            - Comments/Concern in the evaluation
            - Post button should post the students query on the TA' page
        ii. Route for **Add new query** should be **/student/addQuery**

    - The landing page will have responses to their queries in sorted order I.e., latest comes first. The number of characters visible for any responses/comments will only be 30, after that text will be ellipsized & a **read more** buttons should be activated. **(10 marks)**

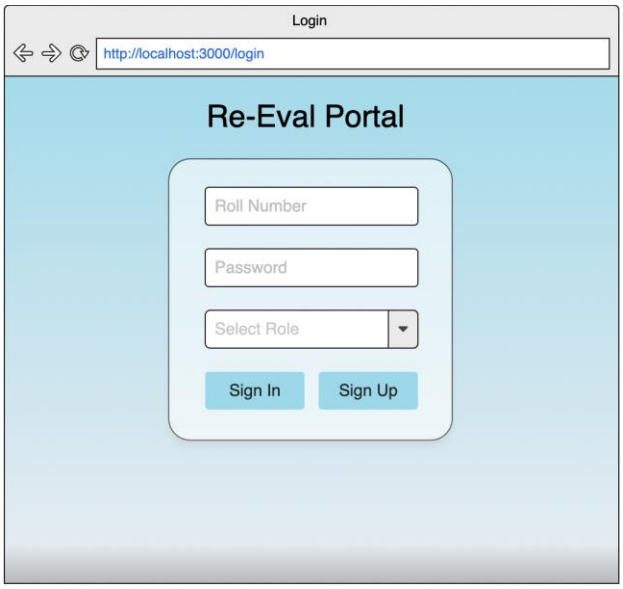
3. Students' Concerns Page **(For TAs)**: **(Total: 20 Marks)**

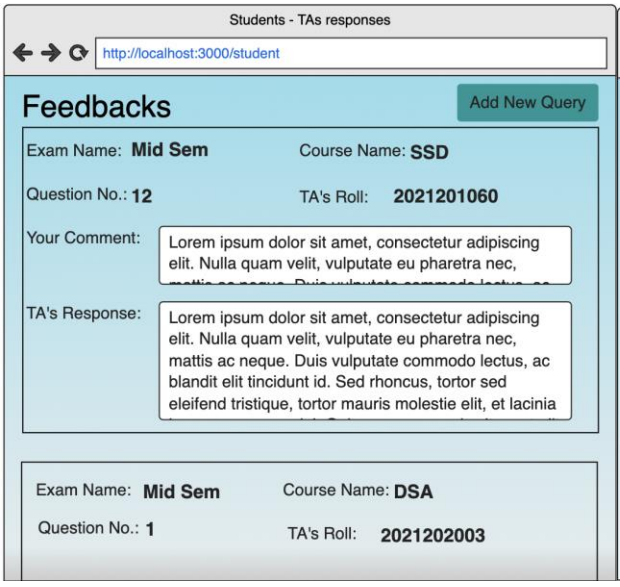
This is the landing page for the TAs after login. It displays all the re-eval queries (answered and unanswered) from the students.

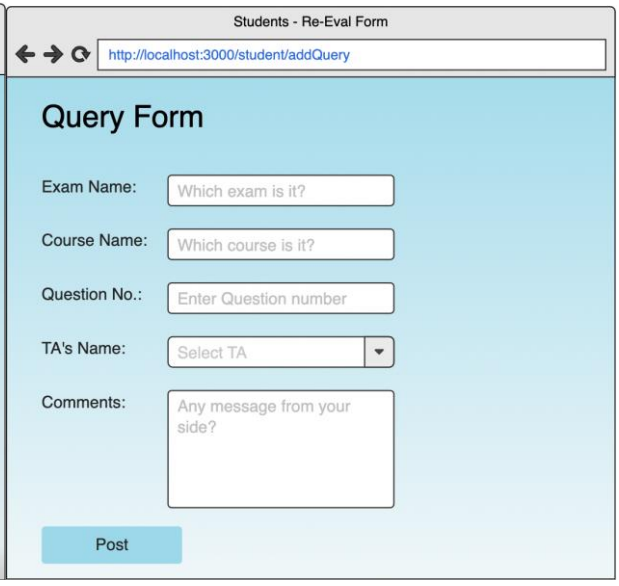
The following are the requirements for the Students' Concerns Page (for TAs):

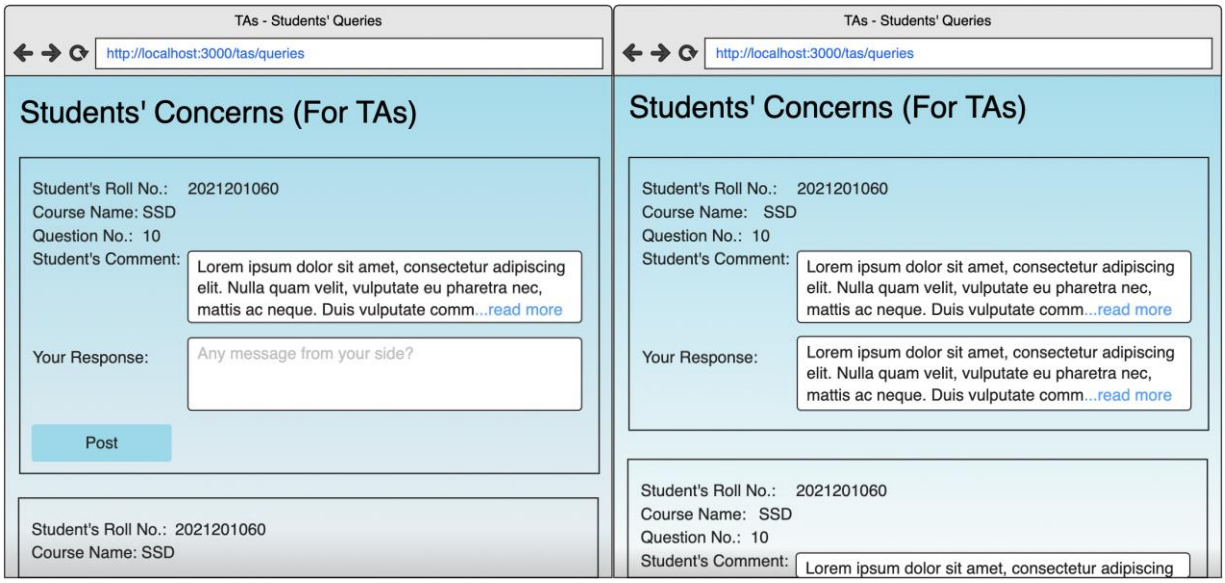
- **a.** The page should open on the route - ***/tas/queries (*****2 marks)**
- ***b.*** When the page is loaded it should show a **list of the queries** that were made to the TA who has logged in. - Fetch this data from the database through the backend. **(3 marks)**
- ***c.*** For each query on the page, the following fields should be shown:
  - ***i.*** **Student Roll No., Course Name, Question No** [with labels]. **(2 marks)**
  - ***ii.*** **Student's Comment** [with label]: (**5 marks)**
    - If the text in the student's comment exceeds 30 characters, then only show the first 30 characters with a "...read more" button or clickable text.
    - By clicking this button or clickable text, the rest of the characters should also show up.
  - ***iii.*** "**Your Response**" input field [with label] for the TA with a **Post** Button: (**5 marks)**
    - This will be an input field where the TA should be able to enter his/her response.
    - Add a placeholder.
    - If the query is **unanswered**, then there should be a **Post button** after the response input field. On clicking this button, the value in the response input field should be **added to the database** through a POST request to the backend.
    - If the query is **answered**, the Post button should not show.
    - Show the response message of the POST request in an alert box.
- d. Show the unanswered queries before the answered queries. **(3 marks)**

References:


Login
http://localhost:3000/login
Re-Eval Portal
Roll Number
Password
Select Role
Sign In
Sign Up


Students - TAs responses
http://localhost:3000/student
Feedbacks
Add New Query
Exam Name: Mid Sem
Course Name: SSD
Question No.: 12
TA's Roll: 2021201060
Your Comment:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec,
TA's Response:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec, mattis ac neque. Duis vulputate commodo lectus, ac blandit elit tincidunt id. Sed rhoncus, tortor sed eleifend tristique, tortor mauris molestie elit, et lacinia
Exam Name: Mid Sem
Course Name: DSA
Question No.: 1
TA's Roll: 2021202003


Students - Re-Eval Form
http://localhost:3000/student/addQuery
Query Form
Exam Name:
Which exam is it?
Course Name:
Which course is it?
Question No.:
Enter Question number
TA's Name:
Select TA
Comments:
Any message from your side?
Post


TAs - Students' Queries
http://localhost:3000/tas/queries
Students' Concerns (For TAs)
Student's Roll No.: 2021201060
Course Name: SSD
Question No.: 10
Student's Comment:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec, mattis ac neque. Duis vulputate comm...read more
Your Response:
Any message from your side?
Post
Student's Roll No.: 2021201060
Course Name: SSD
TAs - Students' Queries
http://localhost:3000/tas/queries
Students' Concerns (For TAs)
Student's Roll No.: 2021201060
Course Name: SSD
Question No.: 10
Student's Comment:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec, mattis ac neque. Duis vulputate comm...read more
Your Response:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec, mattis ac neque. Duis vulputate comm...read more
Student's Roll No.: 2021201060
Course Name: SSD
Question No.: 10
Student's Comment:
Lorem ipsum dolor sit amet, consectetur adipiscing