

Online Quiz Application

For the following requirements 1 through 8, use JDBC template; For requirement 9 admin page, use Hibernate.

Note:

I. Spring MVC architecture is required.

II. JSTL Preferred over scriptlet

III. Create at least 20 questions for each type of quiz

IV. Questions should be random assigned to each quiz

V. Add CSS/Bootstrap to make it look good

VI. All required functionalities should be implemented

1. Registration Page

Before taking a quiz, a user have to first register and login. To register one can directly click on the register menu or a link to registration page is provided on the login page to create an account.

2. Login Page

- When a user clicks, an exam user is directly redirected to the login page, if the user is not logged in.
- Login Page should be the default page when user enters the application

3. Home Page

- List of different type quiz that the application provides
- At least 3 types of quiz problem
- Each quiz has 10 questions

4. Quiz Screen

- Multi choice questions
- Each quiz last at most 15 minutes(The user should not be able to submit the quiz after 15 minutes)
- If user exceeds the time limit, show an alert and force to submit the quiz
- A navigator to jump to different questions(i.e. The user can directly click on any of the questions in the current quiz)
- Different styles for answered questions and available questions
- Previous and Next button to previous and next question
- If user is on first question, there is no previous button
- If user is on second question, there is no next button

- Submit button on all questions
- If user doesn't answer all questions, show an alert with Yes or No
- If user clicks Yes, the submit the quiz anyway
- If user clicks No, hide the alert
- **Bonus:** Short Answer
- **Bonus:** Provide the mark function which can be used to mark one question
- **Bonus: Timer**(counting down from 15:00 to 0:00)

5. Quiz Result

- Show Quiz name
- Show User full name
- Show Starting time and end time
- Show the result of each multi choice question
- If user answers no less than 6 question correctly, the user passes the quiz; Otherwise, user fails the quiz
- Take another quiz link to the home page

6. Feedback

- User can submit feedback to the application
- Provide Star rating function — 5 star is the max
- Text boxes for user feedback
- Feedback should be anonymous

7. Global Nav

- Home
- Login
- Registration
- Feedback
- Contact Us

8. Contact us (Bonus)

Send a message to the admin. Then the admin user can see the message when he logs onto the system.

9. Admin Page(Hibernate)

Admin should be able to view quiz result of each user. Overview of all quiz results page

Each result should have Taken_Date, Category, User Full Name, No. of question, Score (Present using a table with header).

- The default order of quiz results should be sort by Taken_Date with most recent listed on the top
- Quiz result should be displayed via different pages with 20 results each page.
- User should be able to click on User Full Name / Category to sort quiz result by User Full Name / Category in alphabetical order
- User should be able to use a filter to only display certain category quiz result.
- User should be able to use a filter to only display certain user quiz result.

Note: the User Full Name can be duplicate, so instead of using User Full Name, you should user either userId or the primary key.

When user click on each quiz result, user should be taken to quiz result detail page. Quiz result detail page

- Display all question with all options
- Display user selection for all question and correct answer

Admin should be able to view each user profile User Profile Page

- First Name
- Last Name
- Primary Address
- Primary Email
- Primary Phone number
- Status (Active, Suspend)
- Activate or Suspend user profile page
- Display a list of user profile with pagination with 20 each page
- At the end each row, provide a button to toggle the status of the user profile
- i.e. if the user is already suspend, then display ACTIVE button; otherwise, display SUSPEND button; when the user is suspend, the user cannot login to the system and it will show an error message.

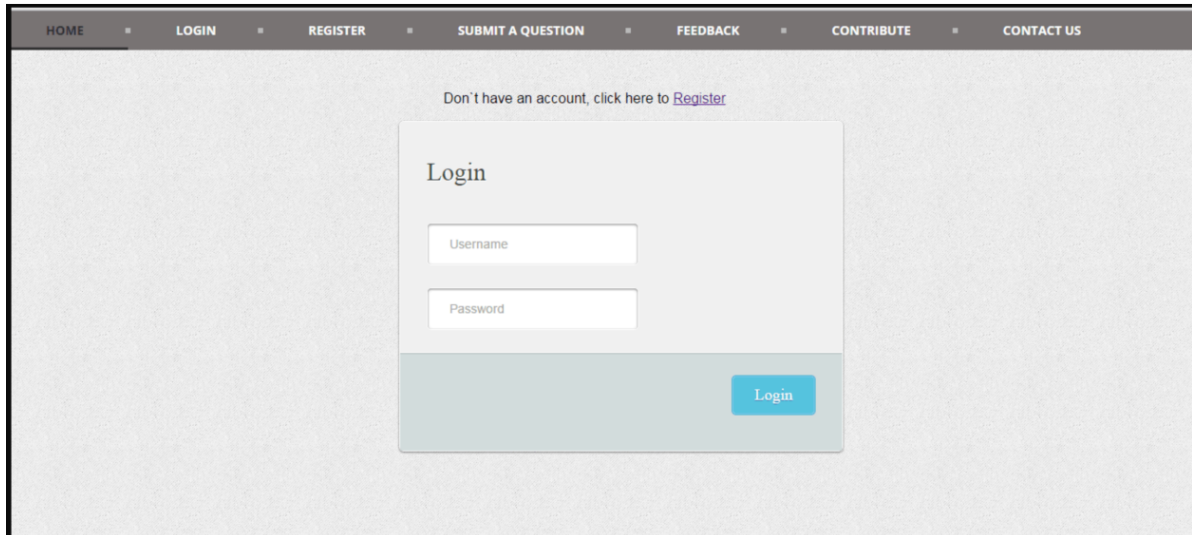
Admin should be able to add/update/disable quiz questions:

- add/update/disable quiz question page(when a question is disabled, it can no longer be randomly selected by any quiz)
- **Bonus: bulk upload with excel template (Apache POI)**
- Download link for excel template with following column
 - Question category
 - Question description
 - Question options (One filed with “|” separator)
 - Question answer
- Legend with following fields:

- Provide existing category names for user to input
- Provide the formatting of Question options
- Upload link for user to upload the template.
- Validate the template (in case user upload other files)
- Add questions to database.

Here are some sample screenshots. It is recommended to have your own design .

Login



The screenshot shows a web application's login page. At the top, a dark navigation bar contains links: HOME, LOGIN, REGISTER, SUBMIT A QUESTION, FEEDBACK, CONTRIBUTE, and CONTACT US. Below the navigation bar, a message reads "Don't have an account, click here to [Register](#)". The main content area features a light gray box with the title "Login". Inside this box are two input fields: "Username" and "Password". A blue "Login" button is positioned at the bottom right of the box.

Home Page



Taking a quiz

Current Question 1 / 10

_____ command is used to count the total number of lines, words and character in a file ?

- ☐ countfv
- ☐ wcount
- ☐ wc
- ☐ count p

[Next](#) [Finish Exam](#)