CS 108 Quiz Project - Quizlr

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Features Completed:

Required:
- Questions
  - Question-Response Questions
  - Fill in the Blank Questions
  - Multiple Choice Questions
  - Picture-Response Questions
- Answers
  - Question Response, Fill in the Blank, and Picture Response Answers are able to have multiple possible answers, where the taker has to input one that matches
  - Multiple Choice Answers must match the provided answer to receive credit
- Quiz Properties
  - Random Questions allow the creator to randomize the order of questions within the quiz when it is taken, or unchecked to present them in the same order
  - One page or Multiple Pages allows the creator to decide if one question will be presented at a time to the taker, or all of the questions will be rendered at once
  - Immediate correction allows the user to receive immediate feedback on whatever question they just answered. Can only create a quiz with this option if One Quiz Per Page is selected.
- Scoring
  - Based on how many answers the user got correct out of the total possible
  - Once a user finishes taking a quiz, they are redirected to a score page that displays the questions, the answers they put, and the score for each of the questions. It also displays the total score and time taken at the top
  - Keeps a history of every result by every user when they take the quiz
- Quiz Info Page
  - Dedicated page that displays stats about the quiz
    - Title, creator, description, category
    - Highest scores of all time (ranked by score first, then time spent)
  - Able to take the quiz
- Users
  - Hashes passwords
  - Doesn't allow users to create an account or login without specifying username or password
- Friends
  - Users can send each other friend requests, and system keeps track of which users are friends
  - Everywhere a user's name is listed, an href is present that links to the user's page

- o User profile page allows current user to add the person as a friend, but only if they are already logged in, not currently friends with the user, or don't currently have a pending friend request
- o Search function in the top nav bar that allows someone to look up a user. If they specify the correct name, goes to that user's page. If not correct, displays a user not found page and asks them to search again
- o On your own page, you are able to remove another user as your friend simply by pressing the 'x' next to the name
- Messages
  - o Friend Requests
  - o Challenges between users
  - o Notes
    - There is a box on the user's page that allows you to send that user a message with text
- Pages (Also includes extensions in this section for readability)
  - o Home Page – Always viewable, even if not logged in
    - Announcements that displays the most recent admin announcements
    - List of recently created quizzes
    - List of site-wide recently taken quizzes
    - List of quizzes that the user created (if logged in). Only displays if the user actually has quizzes created
    - List of achievements possible on the site. Can hover over to view description. If logged in, will highlight any achievements you have earned and display when you achieved it
    - Messages box that will display recently received messages (if logged in) or text telling the user to log in to see more. There is also an inbox indicator in the nav bar that will display the number of unread messages
    - List of friends' recent activities (if logged in) that also includes links, ways to respond, and a way to delete each of the messages
  - o Quiz Summary Page – Always viewable, even if not logged in
    - Description of quiz, creator of quiz with link to user page, list of your performance (if logged in), highest scorers of all time, list of top performers in the current day, list of all recent test takers, total times taken, average score by all users, button to take quiz
  - o Quiz Results Page – Only viewable if the result is by you
    - Appears immediately after taking a quiz. If auto-graded, will display the questions with their scores, and the total score received. If human graded, will not grade the answers and shows pending until the human graded questions are filled out
    - Chose not to display the correct answer next to any wrong answers to motivate quiz takers to continue to take the quiz until they get everything correct
    - Text box to send a challenge to a specific user using the result you just got
- Error Checking
  - o Cannot go to any pages that user does not have access to. All paths are protected and checked for correct permissions if links on the page are followed correctly

Recommended:
- User quiz history

Extensions:
- Questions
    - Multi-Answer Questions
    - Multiple Choice with Multiple Answers
    - Graded Questions (by human)
- Answers
    - Multi Answer Answers – backed by text answers, where each answer can also have multiple answers that a user can input for each option. Ordered and Unordered preferences are maintained when the quiz is taken by users.
    - Multiple Choice with Multiple user Answers – backed by same answer as Multiple choice but can look for multiple required answers
- Scoring
    - With human graded questions, allows submission of a quiz that will then wait un-graded in the Results table of the database for the quiz creator to come by and grade them. When grading, the creator will be able to give points for each of the human-graded questions ONLY. Once they finish, the entire quiz will be submitted for grading the rest of the questions and the user will be notified it is ready through a message.
- Quiz Info
    - 10 pre-made categories that a user can use to categorize a quiz. Only one category per quiz
        - Able to search for quizzes by category and display them in a separate webpage using the option on the navbar
    - Users' performance if they are logged in
    - Highest scores of all time (ranked first by score, then by time taken)
    - Highest scores today (ranked first by score, then by time taken)
    - Recent test takers and their scores
    - Quiz average all time
    - Number of times the quiz has been taken
- History
    - Dedicated history page for each user that displays all of their quiz history in chronological order
- Administration
    - Dedicated Admin page only accessible by an admin of the website
    - Actions: create announcements, remove user accounts by userID, remove quizzes by the quiz ID (should know if you are admin), clear all history for a quiz, promote user to admin
    - Displays site statistics
- Design
    - Used a combination of Servlets, JSPs, Bootstrap, CSS, HTML, and JavaScript to render the entire website. Professional look of what a 5-person team is required to make

- o Very polished and clean look like you would expect of a production-level website
- Achievements
  - o Amateur Author, Prolific Author, Prodigious Author, Quiz Machine, I am the Greatest
  - o Did not implement Practice Makes Perfect because we chose not to implement the Practice extension
  - o Added our own achievement "Grade Explorer." Achieved when a user has taken quizzes in 5 different categories.
  - o Added our own achievement "Popular Quiz Writer." Achieved when a user has created a quiz that was taken by 5 different users (including himself).
- Improved Error Handling
  - o Do extra checks to make sure that user cannot enter empty values into important text boxes
  - o If quizzes are unable to be found, directs to a defined not found page
- Non-Registered Access
  - o User is able to view all of the basic stats and functions of the website, except for:
    - ▪ Taking a quiz
    - ▪ Viewing/sending messages
    - ▪ Adding friends
- Naming
  - o We present to you, Quizlr!

Features Not Implemented:
- Practice mode for quizzes (extension)
- Edit a quiz if owner (extension)
- Tags for quizzes (extension)
- Rating and Reviewing System (extension)
- Reporting System (extension)
- Cookies (extension)
- Privacy Settings (extension)
- XML Loading (extension)