QuizMe!

Scope

The IT community is a great place to be part of!

What can be more pleasant than finding yourself in an environment that facilitates sharing ideas and meeting new people? People with the same interests as you, people that work with the same technologies, that encountered similar problems as you did and are willing to share their experiences.

Conferences and meetups are opportunities to meet up in an informal space and develop new personal and professional skills. As the number of people passionate about this domain is growing there is also a significant growth in the number of such events.

As you may probably know, very often at these events we can use our knowledge to win prizes by filling out some quizzes. And of course, because we always want each edition of an event to better than the previous one, we are willing to give some feedback about our experiences at the event or suggest new ideas.

Your goal for the next two days will be to create a platform that will help the organizers of such events to collect inputs from the participants and get insights about the data they collect. We thought of a multi-purpose platform that can be used in all sort of events. It must be modular, have reusable components and provide an awesome experience to the users.

Requirements

The platform will have two actors: **Admin** which will be the administrator of the platform and actual **user** which will be the one that will participate in the quizzes provided by the platform.

The **Users** will receive a QR code on a physical card. Scanning the code will redirect them to a registration form. They can register with email address, name, phone number and will have to provide a password. After registration, they will receive an email/SMS to confirm their account. If they already have an account on the platform (they participated on other events previously) they can log in using their email and password. *The registration should be possible also with social login (Facebook, Google, etc...)*

After the registration is done, they will be redirected to the actual quiz. After completing the quiz, they will receive a confirmation email with their score. If they try to scan the same QR code again, they will see a message saying that the quiz was already completed. If they scan another QR code for the same event and quiz and will log in with the same credentials, they will not be allowed to complete the quiz.

At the end of the event, if it was a scored quiz, they will receive an email with the leaderboard of the event. *Also, they may receive custom emails when admins trigger them. Users will have the possibility to unsubscribe from receiving such emails.*

The **Admins** will be the ones that will manage the questions and the events. There will be an events pool and a questions pool. *They will also be able to add other admin accounts in the system.*

Managing questions pool

Admins will be able to add, delete and modify questions in the pool. A question will be a text and optionally a picture. Each question can have either one answer, many answers or free text answer. Optimally for each question they can choose a time constraint for its completion. The questions can be scored or not, will be grouped in categories and will be characterized by a difficulty level.

For the scored questions the platform should allow providing their score and marking their correct answers.

The platform should provide also a possibility to add a bulk of questions by uploading them via .csv files.

When adding a new question to the pool, the platform will try to identify if there was already a similar question added (we try to avoid duplicates).

Managing events pool

Admins will be able to add, delete and modify events. An event can have one or more quizzes. Each event can have (not mandatory) an expiry date and time. When the event expires users will not be allowed to complete any quiz from that event anymore.

For each quiz in an event Admins can define rules for automatically choosing the questions. They will define the total number of questions for each category and for each difficulty level. Each quiz can be scored (like a test) or non-scored (like a feedback form) and it can have a maximum time allowed to complete. After all the rules for the quiz were set, the actual questions that will form the quiz will be randomly picked (for each user) from the questions pool based on the defined rules. For each quiz Admins will be able to generate a QR code.

Dashboards

Admins will have dashboards for questions and events.

Questions dashboard - shows questions grouped by category and allows search by text, filtering by difficulty level and sorting by date.

Events Dashboard - shows events and allows search by name, filter by status (expired, in progress, incoming) and sorting by date. Each event will have a *live* leaderboard for the timed quizzes *(if the page is open, update the leaderboard after a quiz was completed without refreshing it)* and *live* statistics. Statistics will show success and failure rates for each question and statistics per user (if the same user participated at many events)

Evaluation Criteria

Some of the points mentioned above are optional (they are marked with *italic*). These additional features will be taken into consideration and the team will win bonus point for them only if all the mandatory features are implemented.

Core features:

- Users can

  - Register and receive confirmation email/SMS
  - Log in to the application
  - Complete a quiz only once
  - Receive emails at the end of the event with the leaderboard for the quiz they completed

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- Admins can

  - Add/delete/modify/search/filter/sort questions
  - Add/delete/modify/search/filter/sort events
  - Define rules for generating quizzes for each event
  - Generate QR codes for each quiz
  - View statistics for questions/users/events

Additional features:

- Social logins
- Adding other admin users
- Send custom emails to users and give users the possibility to unsubscribe
- Upload bulk of questions via .csv
- Questions similarity detection
- Live update of the leaderboard and statistics

Architecture and clean code

- Follow OOP and SOLID principles (if applicable to your technology)
- Use of design patterns
- Clean architecture
- Code structure and modularity

User experience

- Portability (design based on the fact that it will be used mainly on mobile devices)
- Responsiveness
- Intuitive user experience

Originality

- Approach of the requested features
- Creativity

Security

- Authentication and authorization
- Validation

Demo

- Clear structure of ideas
- Demonstration of working functionalities

Good luck and happy coding!

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