

Programmierpraktikum 3S (Summer Semester 2024)

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Task Description

In this Programmierpraktikum, you will develop software that resembles Kahoot in functionality. You have the freedom to choose the technologies you wish to use, as long as the conditions described below are met. Throughout the semester, there will be a milestone presentation and a final presentation, which you are required to prepare and deliver. Here, you will present the progress (or the result) of your work, followed by a five-minute Q&A session. In addition to the presentations, the source code must be submitted at the end, along with a weekly project diary. The deadlines for the presentations and the source code submission are provided below.

Implementation Conditions

1. Your goal is to replicate the functionality of Kahoot with your software. This includes a functioning web interface, a corresponding backend, and the appropriate interface.
2. Your software should cover the following components:
 - a. A session should be creatable by a host, where questions, answer choices, and round duration can be defined.
 - b. This session should then be publishable by the host.
 - c. Users should be able to join a session using an entry code or other means and choose a nickname.
 - d. Once the host starts the session, the following should occur:
 - i. The question is presented to the participants.
 - ii. After a short delay, the answer choices are presented, allowing users to submit their answer via their interface.
 - iii. After the defined round duration, the round ends. The correct answer is displayed, and points are distributed to the participants. The faster the correct answer is chosen, the more points are awarded.
 - iv. The participant can now start the next round, and points i-iii repeat.
 - v. Once this process has occurred for the last question, a game summary is shown.
 - vi. It should be possible for multiple game sessions to exist simultaneously.
 - vii. Game results should be searchable and viewable afterwards in the backend using a unique ID.

Artifacts to Submit

1. Project Diaries
 - a. Each team member submits a maximum of 1 page summary of the work done in the previous week. The team's diaries are checked for plausibility and submitted collectively by the project manager. The project manager's diary is reviewed and submitted by another fixed member of the team. These summaries are to be submitted **by Sunday at 23:59** each week.
2. Presentations
 - a. A milestone presentation, representing the current state of your work. This should showcase the current state of the project, the technologies used, and planned future features. The presentation duration is 10 minutes, followed by 5 minutes of Q&A. The slide submission is **due on June 5, 2024**, the presentations are scheduled on **June 6, 2024**.
 - b. A final presentation, where you present your results alongside other groups. Here, you present your final product, including a brief summary of the milestone presentation, a functionality demo (which can also be pre-recorded), and drawbacks of your implementation. The duration of the final presentation is 15 minutes, followed by 5 minutes of Q&A. The slide submission is **due on July 10, 2024**, the presentations are scheduled on **July 11, 2024**.
3. Source code of your project. This is **due on July 10, 2024**.
4. Project Documentation (Report), which is **due on August 30, 2024**. It should be clear who created each section.

Additional Information

- As a group, you should designate a person responsible for organization, task delegation, and communication with the module supervisors (project manager). Tools like Trello or Jira are recommended for organization, documentation, and overview of work.
- Your project should be hosted on GitHub/GitLab, and the module supervisors must be added as collaborators to the repository.
- At the end of the semester, there is a planned inter-Programmierpraktikum presentation. The group delivering the best project will present the final presentation again (and receive a small reward for doing so).