Final Projects: A Specialized Backchannel Application

A Backchannel is a medium of communication that is used alongside a primary activity or communication. Backchannels are often used in conferences or education, where online communication tools are used to talk about the speaker or topic while a presentation is held.
But Backchannels can also be used in different scenarios:

- during a sport event visitors and viewers could discuss about the quality of the referee, or bet on the outcome of the match
- during a political debate (e.g. a presidential debate in the u.s.) viewers could fact check the statements made by the politicians and possibly provide evidence for or against them
- during and beforehand a natural phenomenon like a solar eclipse, enthousiasts could share the best lookout points or relevant weather data
- ...

Team assignment: With your Team, you will design and implement a Backchannel application for a specific scenario of your choice.

- The software should provide basic user management (i.e. registration and login), while providing authentication, password management and addressing security issues is not necessary.
- The software should provide at least one non-trivial form of interaction related to the project's scenario, apart from submitting text messages. Opening bets and betting in the sport event example are a form of non trivial interaction.
- The software should be well designed, such that it could be reused to build other backchannel applications.

Elaborate the following questions:

- Which kind of data should be distributed among the users for your scenario?
- Which forms of interactions does your software provide?
- What kind of user interface will you provide? E.g. a Web-application, a command line interface, a native GUI,...
- Which Scala specific paradigms and structures will you use?

Tasks:

- Form teams of 3 or 4.
- Until the 12 of December, create a subproject of "High Level Programming Languages: Scala" on Backstage / Projects[1], and add all your team members as well as Niels. Publish a description document (title: "description") in your subproject, containing:
  - the name of your project
  - a list of all team members
  - a short description of your project's scenario and of the scenario-related non-trivial backchannel interactions to be implemented in your project, answering all of the aforementioned questions. (Or a description of the alternative subject you want to address).
- You will give a presentation on your project of 10 to 15 Minutes. Your presentation will take place either in class the **19 of December** or in the following a practice lesson, the **20 of December**. The exact dates will be announced via email.

Alternative Subjects: If you have an idea for an alternative project which you and your team want to realize in Scala, you can contact me (via email niels.heller@ifi.lmu.de or in class) **before** the 12 of December. Interesting frameworks to use for alternative ideas: akka [2], scala parser combinators [3], the playframework [4]

[1] `http://kelang.pms.ifi.lmu.de:8080/#!/project/scala-17ws18/overview"`
[2] `https://akka.io/`
[3] `https://github.com/scala/scala-parser-combinators`
[4] `https://www.playframework.com/`

Oral Examination:

- **Duration:** 45 Minutes
- **Dates:** 21th and 22th of February between 13:00 and 18:00.
- **Registration:** Until the **12 of December**, send a registration mail to `niels.heller@pms.ifi.lmu.de` containing the participants of your team and the respecting matriculation numbers. Use the subject line "Registrierung scala" followed by the name of your project.

  If there are restrictions because of other examinations include them also in the mail. You will receive your examination time the following days.