Project Phase 2

Optional Submission (Not Graded)
Due date: Friday, 04.12.2020 @ 23:55

The goal of the course project is to expand your Peerster's functionality in a non-trivial way. There is a reasonable amount of freedom regarding what you can do, however, you need to motivate how your project enhances Peerster's functionality, e.g., through a new mechanism that you use to achieve your project goals.

This means:

- Since you build on Peerster, your project will be a peer-to-peer decentralized application.
- You should clearly motivate why you want to add a specific functionality by reasoning how it is useful in the real world; this means, do not simply implement an algorithm without a clear practical goal in mind.
- The project should be non-trivial, which means not just coding complexity, but also showing an understanding of the problem you are addressing from a practical perspective.
- Whilst the main focus of this course part is group work and a considerable part of your project will be joint work, we still require each team member to have a distinct subproject. We will evaluate each student based on two criteria: the overall project quality and their individual contribution.

Deliverables

At this stage, you need to deliver one coherent write-up per team. Based on our feedback for Phase 1, you should expand your proposal or change it partially / completely. You are free to choose any topic that you are passionate about, as long as you follow the requirements above.

This submission is optional and not graded. However, we strongly encourage at least the teams that we asked to change or significantly modify their project to use this opportunity to get our feedback so we can make sure that your proposal meets the course requirements. Furthemore, the teams that did not submit in the first round must submit their project proposal in this round. The teams that received our approval in the previous phase are also welcome to submit.

Consider this write-up as a working draft for the final project document, which you will provide in January. This also means that you are free to reuse and extend the content from your Phase 1 proposal.

Write-up contents

For each section of the write-up, we specify in parentheses how much (single-column) text either the whole team or **each team member** is expected to contribute. So if your team has 3 members, then for the section `Background`, you will write 3 * ~1/3 = ~1 page.

Topic Changes w.r.t. phase 1 of the project (if applicable) (1 paragraph per team)

Briefly describe the main points where your topic differs from the Project 1 submission. Applicable only if you've received feedback from us that suggested changing your topic either completely or in a non-trivial way. It does not apply if we agreed with your topic but suggested minor added functionality.

Introduction (1 paragraph per team)

Briefly describe the problem that your project is trying to solve and explain your motivation for selecting this problem.

Background (~1/3 page per team member)

In your project, you will likely rely on approaches and algorithms that have already been in use by the community. Summarize the main ideas and describe how these approaches are relevant to your system. Also, mention their limitations and justify how you are going to deal with them in Peerster.

System Goals & Functionalities & Architecture (~1 page per team member)

State concisely yet **concretely** what the goals of your project are and the functionalities that you envision to implement. For instance, in Peerster, one of the goals is spreading rumor messages and one of the functionalities is that a rumor message sent by a peer spreads through the network in a few seconds. Describe how your aimed properties can be achieved: if your system exhibits the property X, how is it achievable with the mechanisms in Peerster?

What will be the overall architecture of your system and how are different parts going to work together? Please draw a diagram and specify which team member is responsible for which part.

Each team member must contribute to this section by describing the logic and engineering plan for her/his part of the project. This piece of the text must be marked with the name of the student who has written it.

Submission

You will need to submit your write-up in PDF format on Moodle. **Each team submits one write-up.**