Bilkent University CS 102 Project

Spring 2020-2021 Semester

Group Members

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Our original proposal

Project Name: **LabConnect** ~~(Project Labenport)~~

Some features:

- Tutor-check queuing for lab sessions
- Unit testing (TA-controlled way to determine state of student's code)
- Version control for TA's to observe changes more easily
- Admin (instructor) defined style checker (linter to enforce CS 101/102 guidelines)
- User self notes to keep track of lab-related feedback, etc.
- And possibly more as the development progresses...

Secondary preferences

Listed in order of preference, to be picked if the original proposal is refused.

1. *Option 4* → Application for sharing items.
2. *Option 8* → Coding practice system.
3. *Option 2* → Organizer for travelers.

Rough draft of the project submission

Our group (from Section 2) contains the members Vedat Eren Arıcan (22002643), Borga Haktan Bilen (22002733), Berkan Şahin (22003211), Alp Ertan (22003912) and Berk Çakar (22003021).

Our original project proposal, named "LabConnect", facilitates communication between students, TA's, tutors, and instructors. In the background, it is mainly a web application (can be ported to Android possibly) that aims to assist CS introductory courses in terms of organization and communication. Proposed ideas for features include priority queuing for TA zoom rooms. For example, those who have completed their labs can be tested using pre-defined (by TA or instructor) unit tests and ordered from most complete to least, in order to decrease waiting times for students who are done with their labs, and to optimize the process in general. TA's can also use the system to see previous versions of each student's code in a more practical way, similar to real version control managers

in spirit. The style guidelines put forth by the instructors can be enforced automatically by parsing the student's sent code files. Much of the repetitive work that course staff need to do can be reduced substantially by automated actions, allowing TA's to allocate time for more hands-on help towards students. The student experience can be improved further by adding helpful features such as personal notes for students and so on.

Of course, the application and its system will be designed in a modular way to allow the course staff to adapt into distinct situations by using an admin panel to change settings. Furthermore, features can be expanded as the project's development goes on, since there is ample room to be creative and help students and instructors alike. In terms of technologies to be used, there is also much potential to use a wide variety such as web technologies, databases, GUI's, and so on.

In the event that our original proposal is refused, the following options listed in the "CS 102 Project Descriptions" document are our project preferences in order of priority: Firstly option 4, application for sharing items; then option 8, coding practice system; and finally option 2, organizer for travelers.

To do list

- [x] Reorganize project document
- [ ] Send project submission
- [ ] Etc...