

CSE 222 – Data Structures

Project Announcement

You will design and implement a software system to solve a problem of your choice. You will work in groups of 9/10 students. The groups will be formed randomly and announced through the Moodle system. If there is a non-contributing member of the group, with the more than 70% majority of votes, the group have the right to get the member out of the project group. These members will get a grade of zero.

Each group will create a free GitHub account for their project, the group members will also be members of the git project and the development process will run on GitHub.

The **project proposal** will include:

- Group members
- Problem definition
- Users of the system
- Requirements in details
- Use-case diagrams
- The C4 model of the system (only the first two levels, not the component and code diagrams. See c4model.com)

The **2nd project report** will include:

- The same parts in the project proposal. If there are changes in the parts, highlight and explain them.
- The C4 model of the system (only the first three levels, not the code diagram). Specify the data structures are used to implement components on the diagram. Explain how the data structures are used with the related components (not on the diagram).
- Class diagrams
- Sequence diagrams
- Activity diagrams (optional for extra points)
- The non-trivial implementation details.
- Test cases. Design integration test scenarios as much as possible beside the unit test. Explain each case briefly and specify which modules/components/activity will be tested by this case.

The **final project report** will include:

- The same parts in the 2nd project report. If there are changes in the parts, highlight and explain them.
- The results of the test cases. Use screenshots and tables to give the test case results.
- Submit the final report and the implementation of the project to the Moodle.

The **design and implementation process** will be as below:

- ➔ Upload the project proposal to the Moodle.
 - See the revision requests for the proposal and fix them. The revised parts should be explained in the 2nd project report.
 - You are given a list of data structures that should be included in the project design.
- ➔ Implement the project by including the asked data structures and upload the 2nd project report to the Moodle
 - See the revision requests for the 2nd project report and fix them. The revised parts should be explained in the final project report.
 - You are given a second list of data structures that also should be included in the project design.
- ➔ Implement the project by including the asked data structures in the second list. Upload the final project report and implantation of the project to the Moodle.
- ➔ Present the project by making a demo.

The reviews and the lists of data structures will be announced via Moodle so, please check the Moodle page frequently.

Please use the project forum on the Moodle page for your questions. You may send an email to b.koca@gtu.edu.tr if you need to contact the TA privately.