



# CSCI 2270 – Data Structures

## Guidelines for final project

### PROJECT TIME!

Students are welcome to form groups of 2 or even do it as solo. However, groups of 2 is strongly encouraged. (But strictly not more than 2).

For ease in grading, we encourage students to form groups within the recitation classes.

Assume hiccups will occur and start of early. Since we have very limited time, there will be no extensions in any of the project evaluations.

### Project Evaluation and Stages:

Your evaluation for the project is divided into 4 stages. If you don't complete any of the stages, you wouldn't be eligible to receive grades for the subsequent ones. **Example:** To receive grades for the 3rd stage, you should have completed both 1st and the 2nd stage.

#### 1. Project Proposal (to be submitted by Nov 14th on moodle)

##### 20% of the overall project grade

The project proposal must contain approximately 1-2 page that talks about the story, the problem you are going to solve, design and the type of the data structure you will be using.

##### Proposal Presentation

All groups have to give a short (2min) presentation on their proposal on Nov 15th in your respective recitation classes. You can choose to make a set of slides for the presentation or use the same proposal document you submitted on Moodle. You will be evaluated by 2 TAs during the recitation.

Create flow charts using - <https://www.lucidchart.com>

#### 2. Interview Grading (Floating deadline: Nov 30th - Dec 8th )

##### 25% of the overall project grade

Interview grading slots will be released on Moodle. You need to setup an appointment with your TA for the same. You would be required to show your progress along with an elaborate contribution of each of the team member. This will be a midpoint progress check on your work.



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### 3. Project submission(to be submitted by Dec 10th on moodle)

#### 25% of the overall project grade

Submit all the files related to the project, including notes, code, reference, design etc as a .zip file on moodle.

### 4. Final Presentation (Dec 13th at DLC)

#### 30% of the overall project grade

Students have to give their final demo and presentation at DLC. You would lose out on 30% of your project grades if you are not present for this. You should prepare a poster for your project and showcase your project on that day. An example poster will be posted soon on Piazza. Exact (room) location and time information will be released shortly.

### Project Expectation:

You are expected to go beyond the level of assignment for the project. You can use some advanced data structure or the basic ones to solve an advanced problem. Try to focus more on the applications part of the data structure, instead of **recreating** the existing core data structures. We are also giving a set of example project ideas below.

### Some Example Projects

1. Maze solver using BFS and DFS
2. LRU Cache
3. Finding running median using min and max heap
4. Word Dictionary or phone directory implementation using BSTs
5. Spelling correction
6. Text autocomplete using trie
7. Text editor - Undo and redo operations using stack
8. Simple calculator
9. Implementation of treaps