

CS 6363.003 Final Exam

May 13, 2021

Please read the following instructions carefully before you begin.

- The exam has 6 problems, some of which have multiple parts. Please start the solution to each problem on a new page.
- The exam is meant to take around 2 hours and 30 minutes, but you have some extra time to prepare the solutions for submission to eLearning and work through any related technical issues. You must finish uploading your solutions within 3 hours of beginning the exam or by 5:59am CST on Friday, May 14, *whichever comes first*. You may upload as many versions of your solutions as you would like, but you can only submit them once. Your solutions will be submitted automatically 3 hours after you begin the exam to prevent you from uploading but forgetting to actually submit your solutions.
- If you cannot successfully upload your solutions to eLearning before the end of the 3 hour time limit, email a copy to Kyle as soon as you possibly can.
- It is highly recommended that you take the exam between 9am and 5pm CDT on Thursday, May 13th. Kyle will be actively watching for questions via email during this time. He will also try to answer emailed questions at other times during the exam period, but he may be slower to respond, especially if he is asleep! Feel free to ask for clarification on any of the problems.
- Questions are not necessarily given in order of difficulty, so read through them all before you begin writing.
- This exam is closed book. No notes or calculators are permitted.
- If asked to describe an algorithm, you should state your algorithm clearly (preferably with pseudocode) and briefly explain its asymptotic running time in big-O notation in terms of the input size. Each individual problem will specify whether or not you must justify correctness.
- It's the end of the semester. Celebrate! (Throwing a party might be a bit much, though. See Problem 6.)