# CS140 - Group Assignment 3
Due: Friday, Feb. 10 at 8pm

– Please work on these questions at the start of your group's meeting time. Once you have something you're comfortable submitting (note that we are evaluating based on effort+participation, not correctness!) you can use the remainder of the hour (i.e. the time during which your group mentor will be available) however you'd like: you can ask conceptual questions, start to work on the assignment, etc.

– One person in your group should upload the responses as a single file to gradescope (making sure to add all the other group members on the submission!). You do not need to typeset your responses in LATEX; if you want to take a photo of your work and upload that as a single file that's fine (as long as it's readable!)

*Master method*

Consider the following recurrences (in all cases assume that $T(n)$ is a constant for $n \leq 2$). Only some of them can be solved using the master method (the version in lecture). If the recurrence can be solved using the master method, give a tight bound on the running time. If the recurrence cannot be solved using the master method, explain why not (you do not need to solve the recurrence in this case).

(a) $T(n) = T(n-1) + 1/n$

(b) $T(n) = T(9n/10) + n$

(c) $T(n) = 2T(3n/4) + \sqrt{n}$

(d) $T(n) = 3T(n/3) + n \log n$

Group experience About how long did your group spend working on the first two questions? Is there anything you'd find helpful for me to go over again that we've covered so far?

Group participation Was everyone in the group at the meeting and, if not, who was missing? How will you help a group member who can't attend a group meeting?