

UCP Technical Mentor Guide

Uber

Agenda

01 Homework

02 Mock Interviews

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Homework

Fellow Homework Expectations

Assignment

- Each assignment consists of 10-15 interview questions with sample input/output. The solution should work for all input/output, not just the provided examples.
- Most problems are an example of one of the types taught in the previous workshop's technical session. Fellows must identify the problem type for each problem in a comment.
- Some problems will ask fellows to implement data structures from scratch.

Rules

- Fellows may use the internet prior to starting the problems to learn data structures/algorithm.
- Fellows may not use the internet during the assignment except to look up syntax or unfamiliar terms.
- Fellows should complete the assignments individually.
- Each problem has a time limit of 40 min. Fellows should submit after 40 min and indicate in a comment the time spent on the question.

Submission

- Homework should be emailed to mentors and [your-program-email] and uploaded to GitHub in a folder under the appropriate assignment named "FirstName-LastName"
    - Each problem should be submitted as its own executable with hard-coded test cases
- Homework assignments are due 10 days before the next workshop
- Homework assignments should be graded and discussed with fellows within a week after they are due (the Monday the week of the next workshop)

Homework Recommendations for Your Fellow

Before

- Review the prerequisite material and the problem types covered in the workshop technical sessioni.
- Brush up on anything they're rusty on and/or learn anything that they haven't covered before using resources from the internet or their school. Ask PgMs or their mentors if they need help or recs.

During

- Treat the homework like an interview (like a take-home test/assessment some companies do).
- Watch the clock and prioritize (e.g., working solution before code clean-up).
- Consider Big O and aim for the optimal solution. Record the time and space complexity in a comment in the file.

After

- If they're close to the solution but ran out of time, try to finish.
- Review homework feedback with their mentors. Implement recommended changes as practice.
- Learn how to do any problems they were stuck on and implement the solutions.

Homework Grading Guide: Logistics

What

- Review the assigned questions. I recommend reading a question, then grading that question, rather than reading the entire assignment and then grading it (it will be hard to remember the details of so many questions).
- Complete the appropriate feedback form for the assignment:
    - Homework 0 (Link to Form)
    - Homework 1 (Link to Form)
    - Homework 2 (Link to Form)
    - Homework 3 (Link to Form)
    - Homework 4 (Link to Form)

When

- Fellows will email you their assignment when complete. You can also find them on the GitHub if you prefer the UI
- Grade homework within one week of submission (e.g., for homework submitted on the due date, grade it by EOD the following Monday). The sooner you grade it the sooner they can incorporate your feedback!
- Review the feedback and answer questions at your next 1:1. Be sure to schedule a 1:1 after you've finished grading before the next workshop so they can utilize the feedback in their next mock interview.

Homework Grading Guide: Individual Problems

Linear Scale Scoring

Rank each problem from 0-3 (corresponding to double thumbs down to double thumbs up) on the following criteria using the **E3* interview bar**:

- **Code Style**: helper functions, variable / function names, readability, DRY, etc.
- **Testing**: edge cases, appropriate size, lack of redundancy, etc.
- **Correctness**: how often the solution works,, bugginess, compilation/runtime errors, etc.
- **Problem-Solving & Optimality**: simplicity, hackiness, break down into sub-problems, Big O (time/space), etc.
- **Speed**: how long it took

Yes/No Scoring

For each problem, also identify whether the Fellow correctly identified in a comment each of the following:

- **Type of problem** (based on previous workshop)
- **Time complexity**
- **Space Complexity**

Overall Evaluation

Based on your scores from the previous sections and the **intern interview bar**, rate the individual problem from Double Thumbs Down to Double Thumbs Up as if it were an entire interview.

**Refer to your company's junior-engineer interview bar*

Mentor Homework Grading Guide: Overall Feedback

Pros/Cons

- Fill out these fields like in interview feedback, considering the entire assignment as the “interview.”
- Look for recurring trends, backed up with examples from specific problems, rather than one-off instances.
- Point out any areas that are inconsistent (pros for some problems and cons for others).
- Point out an anything that is a pro for an interview but a con for professional work and vice-versa.

Conclusion

- Fill out this field like in interview feedback, considering the entire assignment as the “interview.”
- Also consider what fellows should work on improving or continue doing in order to excel in their interviews. Consider whether there are specific technical topics and/or interview skills they should focus on.

Overall Evaluation

Based on your scores from the individual problems and the **intern interview bar**, rate the assignment as a whole from Double Thumbs Down to Double Thumbs Up as if it were an extended interview.

Mock Interviews

Fellow Mock Interview Expectations

Frequency

- One mock interview the Friday of each of the first four workshops; the fifth workshop is the conversion interview.
- Let us know in advance if they can't make it and reschedule (also reschedule if there are technical difficulties or the interviewer no-shows).

Topics

- Mock interviews (except the first) are on the same topic as the previous homework (and technical session from the last workshop). Doing the homeworks and attending the workshops are the best prep!
- Questions will be intern-level difficulty but will be different from our real interview questions and homework questions.

Importance

- Until the 10-15 minute feedback session at the end, both fellows and interviewers should treat mocks like real interviews.
- Practice for real interviews and a rare opportunity to get feedback from the interviewer.
- Help us make a decision (along with homework feedback and general mentor feedback) if the conversion interview is on the line. We'll be looking for improvement as well as performance.

Mentor Mock Interview Review Guide

Why review?

- Fellows only have 10-15 minutes to go over feedback with their mock interviewer and may have additional questions.
- Fellows have a relationship with you and may feel more comfortable discussing their challenges with you.
- You are more familiar with your fellows strengths and weaknesses and can compare mock interview performance to homeworks and previous mocks.

What to look for

- Areas of growth (or recession) since the last mock interview.
- Similarities and differences from homework feedback, particularly the previous assignment (as the topics are the same). Fellows may struggle more in a mock interview setting than doing an assignment at home.
- Major red flags!
- Things to celebrate!

Tips for discussion

- First ask how the fellow thought the mock went and what they discussed during the feedback session.
- Share anything from the written feedback that they don't mention and clarify points of misunderstanding
- Frame feedback constructively but honestly. Hold you fellow to the bar!
- Identify both technical and interview skills for improvement.
- The goal is to create an actionable plan to help them improve and pass their conversion interview!

Questions?