# Module 6 Workbook

Well you've made it. Congratulations!

We're finally on the final week of the course. You've made a ton of progress so far and this week we're going to tie up all the loose ends and make sure that you're able to go forward and give 110% in all of your interviews.

Like with last week, you'll notice that there are fewer exercises this week. That's because it is critical that you get practice in an actual interview situation. Therefore, I've left 2 free days for you so that you can schedule 2 mock interviews.

I would recommend scheduling these mock interviews ASAP. If at all possible, **schedule 2 mock interviews this week**. Then simply do the exercises on the days that you aren't doing a mock interview.

As a reminder, here are your options for mock interviewing:

1. Pramp (Free, peer-to-peer mock interviews. **Use our link for unlimited credits**)
2. Gainlo (Paid, interview with an engineer at a top company)
3. Interviewing.io (Free, interview with an engineer at a top company. Long waitlist)

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# Day 1

This week, we talked a bit about System Design and behavioral interviewing. While these aren't as important as your technical interviewing skills, it is still important that you be prepared for these parts of the interview.

By taking a little bit of time to prepare for behavioral interviews in particular, you will see much better results without having to put in massive amounts of effort.

Today, I want you to take your time to go through the interview prep grid as we discussed in this video and clearly define your experiences that you can talk about in your interview.

You can find a link to the spreadsheet here:
http://www.thegoogleresume.com/uploads/6/5/2/8/6528028/behavior_preparation_grid.xlsx

You can also find more detailed instructions here:
https://www.byte-by-byte.com/behavioral-interviews/

# Day 2

Today I want to take a little time to think about system design specifically.

In this video, I discussed how you should focus your efforts primarily on filling in the gaps in your knowledge and strengthening your existing knowledge rather than trying to learn lots of new stuff.

Today, I want you to catalog the things that you do know and the things that you need to learn.

Here's what to do:
1. Make a list of all the technologies that you're familiar with and rate them on a confidence level from 1-10
2. Break things down into categories (frameworks, programming languages, data stores, etc)
3. For any category where you don't have anything that you're confident in, pick a popular technology that you will learn about to fill in that gap
4. Use the tools that we discussed this week to develop a study plan to fill in any of the gaps

If you're having trouble figuring out which categories are most important, I recommend this guide that I mentioned during class:
https://www.hiredintech.com/classrooms/system-design/lesson/52

# Day 3

With all the exercises this week, I want you to practice using everything that we've talked about throughout the course. That means following the framework step by step and drawing on all of the techniques that we've covered for breaking down hard problems.

You should also practice these problems using pen and paper or on a whiteboard. If you are coding on the computer, you will simply not be able to develop the comfort level that will get you to succeed in your interviews.

As a quick reminder here is the problem solving framework. Make sure that you are comfortable with each step of the process:

1. Understand the problem      [3-5 minutes]
2. Find a brute force solution      [5 minutes]
3. Optimize your solution      [15 minutes]
4. Code your solution      [15 minutes]
5. Test your solution      [5 minutes]

**Problems:**

1. Word ladder (Leetcode)
2. Sliding puzzle (Leetcode)

# Day 4

With all the exercises this week, I want you to practice using everything that we've talked about throughout the course. That means following the framework step by step and drawing on all of the techniques that we've covered for breaking down hard problems.

You should also practice these problems using pen and paper or on a whiteboard. If you are coding on the computer, you will simply not be able to develop the comfort level that will get you to succeed in your interviews.

As a quick reminder here is the problem solving framework. Make sure that you are comfortable with each step of the process:

1.  Understand the problem          [3-5 minutes]
2.  Find a brute force solution     [5 minutes]
3.  Optimize your solution          [15 minutes]
4.  Code your solution              [15 minutes]
5.  Test your solution              [5 minutes]

**Problems:**

1.  Merge 2 binary trees ([Leetcode](Leetcode))
2.  Course schedule ([Leetcode](Leetcode))

# Day 5

If you haven't done a mock interview already, make sure to schedule that ASAP.

# Day 6

If you haven't done a mock interview already, make sure to schedule that ASAP.

# Day 7

Rest day!

We've done a lot this week so I didn't schedule anything for you on this last day. Use this time to take a little break or catch up on anything you may have gotten behind on :)

# Workbook Solutions

## Day 3

Copy your code verbatim into Leetcode and keep track of any bugs.

1. Word ladder (Leetcode, Java Code, Python Code)
2. Sliding puzzle (Leetcode, Java Code, Python Code)

## Day 4

Copy your code verbatim into Leetcode and keep track of any bugs.

1. Merge 2 binary trees (Leetcode, Java Code, Python Code)
2. Course schedule (Leetcode, Java Code, Python Code)