

Interview Worksheet

Scoping Input Output

0:00 - 0:05 mins

Assuming the solution is a black-box you arrive at sufficient examples of the possible inputs and outputs to the solution and you clarify the possible formats for inputs and outputs, errors, exceptions and edge cases. If the interviewer gives you more than 2 examples of inputs & outputs you should use this time to examine these examples as well.

☐ Examined the interviewers examples and understood why the required output is the correct output

☐ Arrived at 2-3 easy, small examples on my own

☐ (if Applicable) Arrived at outputs for empty/null/zeroed inputs

☐ (if Applicable) Arrived at outputs for Single, lonely, one-sized inputs

☐ (if Applicable) Arrived at outputs for large/max-values (such as max integer/string) inputs

☐ (if Applicable) Arrived at outputs for duplicate, unique, sorted, unsorted inputs

☐ (if Applicable) Arrived at outputs for specialized data structures like cycles (linked lists, graphs, trees), skewed structures (trees, tries)

☐ (if Applicable) Discussed guarantees of input formats and validities

☐ Arrived at output error types and formats, exceptions

Red Flags

☐ I did not examine interviewer's examples

☐ I could not understand why the required output is the correct output

☐ I made a complicated example that delayed me in the later stages

Brute force

0:05 - 0:10 mins

In this stage you arrive at the bare minimum, brute force approach and describe its complexity.

- Described the brute force approach and Big O time & space complexity
- Demonstrated the brute force approach on a simple example
- Declared that you will aim to optimize this further

Red Flags

- The interviewer did not agree with my brute force solution and believed it wouldn't solve the problem even with bad performance
- The interviewer did not understand my brute force approach and we ended up spending more time discussing it
- The interviewer thought my brute force solution was the eventual solution I was proposing

Optimal solution

0:10 - 0:25 mins

The bulk of the interview should be spent in this stage. This is your problem solving stage. At this stage you want to make small, good, incremental decisions to arrive at core insights that will lead you to the solution. The more you vocally describe your mental thoughts and thinking process in this phase, the more likely you'll get hints from the interviewer. Resist any temptation to jump into coding. Use the following signals to determine when it is time to start coding:

- 1. Describe the complexity of an optimal solution to the interviewer and ask them if it is acceptable. Their response is a signal to continue optimizing or declare that you'll start coding the solution*
- 2. You have sufficient amount of pseudocode on the whiteboard and you can visualize what the entire code is going to look like*

☐ Successfully identified the core insight required to crack the problem open

☐ (If Applicable) Realized that the problem could be broken up into separate “Cases” that could be solved separately

☐ Wrote pseudocode or (if applicable) math equations on the whiteboard

☐ (If Applicable) Diagrammed my optimal solution to describe my intuition for the solution

☐ Ran some examples through my pseudocode

☐ Declared the Big O space and time complexity of the solution. Asked the interviewer if this was acceptable

☐ Declared to move to coding phase since optimal solution was found

Red flags

☐ The interviewer did not want me to start coding

☐ The interviewer was not interested in discussing performance and was mostly talking about my approach or proposed solution

Coding

0:25 - 0:35 mins

Coding should be the least of your worries. When you get to this stage and if you did with the signal from the interviewer that your complexity was good, then this is your finishing lap. You need to execute well but your preparation should have ensured that your coding skills are the least of your worries. In addition, your pseudocode from the previous section has solved all of the logical complexity needed and all you need to do is translate that pseudocode into real code. It should feel like you banged out the function top to bottom in a few minutes and spent some time looking for typos, syntax and basic logic errors.

- ☐ Declared which language I will be using to code the solution
- ☐ Completed code without logic bugs (a handful of typos or syntax errors are fine)
- ☐ Was briefly vocal while coding so the interviewer had a sense of what my code implied.
- ☐ (If applicable) I used some language specific constructs and made sure to vocally describe what these did and how they impacted performance.
- ☐ Declared that the code looks good and that a walk through was necessary to show that it indeed works.

Red Flags

- ☐ I had to erase my code a few times to fix it
- ☐ I got stuck several times when i started coding
- ☐ The interviewer was interrupting me while I was coding

Walk through

0:35-0:40 mins

Imagine your walkthrough is like test coverage. Your walkthrough should ideally show execution of every single line, so choose your examples to do this. Edge cases can be shown later. Your walkthrough should be thorough at first and can skip over sections of code as you choose other examples.

☐ Chose sufficient examples for a walk through that made it across all lines of my code

Red flags

☐ My walk through revealed a bug

☐ My walk through showed my code was incomplete and some examples failed to give the required output

☐ The interviewer declared that they thought my code had a bug and I didn't realize there was one!

☐ The interviewer was not satisfied with the examples I chose for the walkthrough and declared that I was missing showing that the solution works comprehensively

End of interview review

There was not enough time to get to the end of the interview (Walkthrough)

☐ Yes

☐ No

I blanked out once or more:

☐ Yes

☐ No

The room was silent for the majority of the interview

☐ Yes

☐ No

I felt one or more of the below:

☐ Nervous or Anxious

- ☐ Calm & Composed
- ☐ Scattered
- ☐ High energy & enthusiasm
- ☐ Low energy
- ☐ Depressed
- ☐ The interviewer was not-nice/rude to me