1 General

1.1 Interviewer Considerations

Notes:

- How did the candidate **analyze** the problem?
- Did the candidate miss any special or **edge** cases?
- Did the candidate approach the problem **methodically** and logically?
- Does the candidate have a strong foundation in basic computer science **concepts**?
- Did the candidate produce **working code**? Did the candidate **test** the code?
- Is the candidate's code clean and easy to read and **maintain**?
- Can the candidate **explain** their ideas clearly?

1.2 Steps for Success During the Technical Interview

Summary:

1. **Clarify the question**
   (a) Understand what the question is asking and gather example inputs and outputs.
   (b) Clarify constraints such as:
      i. Can numbers be negative or repeated?
      ii. Are values sorted or do we need to sort them?
      iii. Can we assume input validity?
   (c) Asking clarifying questions shows communication skills and prevents missteps.
2. **Design a solution**
   (a) Avoid immediate coding; propose an initial approach and refine it.
   (b) Analyze the algorithm's time and space complexity.
   (c) Consider and address edge cases.
   (d) Think aloud to demonstrate logical reasoning and collaboration.
   (e) Discuss non-optimal ideas to show your thought process.
3. **Write your code**
   (a) Structure the solution using helper functions.
   (b) Confirm API details when uncertain.
   (c) Use your strongest programming language and full syntax.
   (d) Write complete, working code—not pseudocode.
4. **Test your code**
   (a) Validate your solution with 1–2 example test cases.
   (b) Walk through each line using inputs.
   (c) Do not assume correctness—prove it through testing.
   (d) Discuss any further optimizations and their trade-offs.

1.3 Common Mistakes to Avoid

Warning:

1. Starting to code without clarifying the problem.
2. Failing to write or discuss sample inputs and outputs.
3. Using pseudocode instead of fully functional code.
4. Misunderstanding the problem or optimizing prematurely.

2 Arrays

3 Two Pointers

3.1 Slow and Fast Pointers

Algorithm:
1.

3.1.1 Common Problems

Notes:
- Linked list problems

3.2 Front and Back Pointers

Algorithm:
1.

3.2.1 Common Problems

Notes:
- Two sum
- Three sum