

Writing Exercises

We get a lot of value from evaluating the results of your completed writing exercises. They are designed to test your technical and writing skills, as well as your ability to explain a technical concept.

Do

- Use any resources to help with completing your exercises.
- Complete findNeedles as your first exercise, and choose from tic-tac-toe or REST vs. SOAP for your second exercise. Or do all three exercises to stand in the place of the 3 samples requested.
- Be thoughtful and analytical about the content that you produce. Consider your audience's needs for the exercises.
- Critique your own work and use best practices where appropriate.

Avoid

- Getting help from other humans. We want to see your original work.
- Rushing on your exercises. These should represent your best work and be considered publication ready.
- Sending extremely lengthy exercises. Two pages or less is sufficient.
- Sending proprietary doc formats. Send PDFs or another format that is compatible with Google Drive.



Exercise #1 - findNeedles (required)

This section contains a short code sample written in Java. If you have a preference for C++ or C#, we can provide a version of the code in those languages.

This exercise has two required parts:

1. **Write an API reference document that explains how to call this method. Your audience for this document is an experienced Java programmer.**
2. **Assume you have a chance to send comments or questions to the person who wrote the code. Suggest ways to improve the code, for example, to reduce memory usage or enhance features.**

```
public static void findNeedles(String haystack, String[]
needles) {
    if (needles.length > 5) {
        System.err.println("Too many words!");
    } else {
        int[] countArray = new int[needles.length];
        for (int i = 0; i < needles.length; i++) {
            String[] words = haystack.split("[ \\t\\n\\b\\f\\r]", 0);
            for (int j = 0; j < words.length; j++) {
                if (words[j].compareTo(needles[i]) == 0) {
                    countArray[i]++;
                }
            }
        }
        for (int j = 0; j < needles.length; j++) {
            System.out.println(needles[j] + ": " + countArray[j]);
        }
    }
}
```

Pick either option 1 or option 2 below as your second exercise or perform all 3 exercises to stand in the place of work samples.

Exercise #2 [option 1] – Explaining Concepts

Write a short overview that helps an engineer choose when to use REST or SOAP web services.

- This exercise should be two pages or less.

Exercise #2 [option 2] – How to Play Tic-Tac-Toe

Write a short document that describes how to play tic-tac-toe. You might think this sounds easy and is a trick question, but it isn't a trick. We find value in how candidates approach both exercises.

- Assume that your audience is an intelligent adult but has somehow never heard of tic-tac-toe.
- This exercise should be two pages or less.



What do we assess when evaluating your samples and exercises, you might wonder?

- Overall writing quality
- Audience awareness
- Organization
- Grammatically correct writing without typos
- Technical comprehension