**Senior Research Survey**

This survey looks at Java, Python, and C++ and compares how they perform in two different tasks.

**Before you answer the questions below, please select how familiar you are with each language:**

Java: Not Familiar Somewhat Familiar Very Familiar

Python: Not Familiar Somewhat Familiar Very Familiar

C++: Not Familiar Somewhat Familiar Very Familiar

**1. The first task will be to read in a randomly generated, unsorted list of 5,000 numbers and to sort it using 3 different methods: insertion sort, quick sort, and bubble sort.**

Please list the languages in order of which one you think will complete this task the fastest.

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Fastest)

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Slowest)

How much faster do you think the fastest is compared to the second fastest?

Less than 1.5x 1.5x - 2x 2x - 5x More than 5x

How much faster do you think the fastest is compared to the slowest?

Less than 1.5x 1.5x - 2x 2x - 5x More than 5x

Please list the languages in order of which one you think will have the shortest source code length.

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Shortest)

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Longest)

How much longer do you think the second longest is compared to the shortest?

Less than 10% 10% - 20% 20% - 30% 30% - 40%

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Less than 10% 10% - 20% 20% - 30% 30% - 40%

**2. The second task will be to parse through the Declaration of Independence and count the amount of words with 2 or less characters, 3 to 6 characters and 7+ characters and output the amounts.**

Please list the languages in order of which one you think will complete this task the fastest.

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Fastest)

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Slowest)

How much faster do you think the fastest is compared to the second fastest?

Less than 1.5x 1.5x - 2x 2x - 5x More than 5x

How much faster do you think the fastest is compared to the slowest?

Less than 1.5x 1.5x - 2x 2x - 5x More than 5x

Please list the languages in order of which one you think will have the shortest source code length.

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Shortest)

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Longest)

How much longer do you think the second longest is compared to the shortest?

Less than 10% 10% - 20% 20% - 30% 30% - 40%

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