

Overview

Below is a series of numbered questions aimed at assessing your analytical thinking and any scripting / coding skills you may already have.

Try not to spend more than a few hours working on this and submit any pseudo-code / decision tree diagrams or scripts that you write during the exercise to show your workings and thought process.

Numbers

Please refer to numbers.txt which contains 1562 lines, each with a number between 1 and 1563. Each number appears at most once, and one is missing from the sequence.

Please answer the following questions, either by writing a script (any language) to determine the exact answer, or using pseudo-code / a decision tree to illustrate the approach / algorithm you would use to solve:

1. Which digit appears most in the file?
2. Which number is missing?

Colours

Please refer to colours.txt which lists three colours per line.

Using the same approach as for the numbers exercise, answer the following questions:

1. Which colour appears most in the file?
2. Which colour appears in the fewest number of lines?
3. How many lines contain GREEN but not BLUE?
4. How many lines have the same colour repeated three times?
5. How many lines have three different colours present?

Bonus Question

6. How many lines contain at least one colour pair in alphabetical order? For example, BLACK, YELLOW is an alphabetically ordered pair, whereas ORANGE, BROWN is not.