



## Code Golfing 005 - Colorized rummy

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version 0.1

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### Challenge

Write a program that takes a string of letters  $s \in \{r, y, b, k\}^*$  for red, yellow, blue and black. Each letter represents a card of the given color. E.g. the string `bykgygb` represents the cards shown in Figure 1.

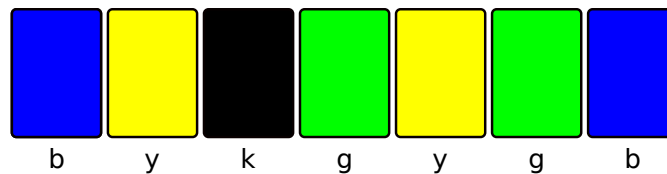


Figure 1. Inputstring `bykgygb`

The program should return 0 (ok) if the rules can be applied and 1 (error) otherwise.

### Rules

The rules are as follows:

- Build groups of at least 3 cards. Hence, the smallest possible groupsize is 3.
- Each color is allowed to appear at most once per group. Hence, the biggest possible groupsize is 4.
- Every card must be part of a valid group.

E.g. the string `bykgygb` yields the groups, shown in Figure 2. The program should return 0 (ok).

If an additional blue cards is in the set, as shown in Figure 3, the program should return 1 (error). The rules cannot be applied, such that every cards is part of a valid group.

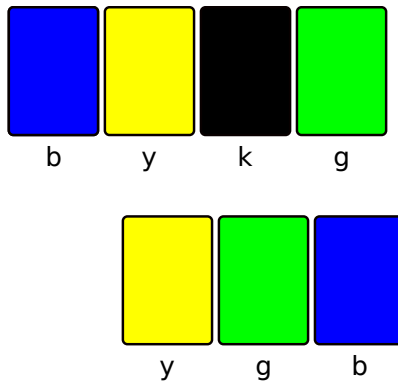


Figure 2. ok-case

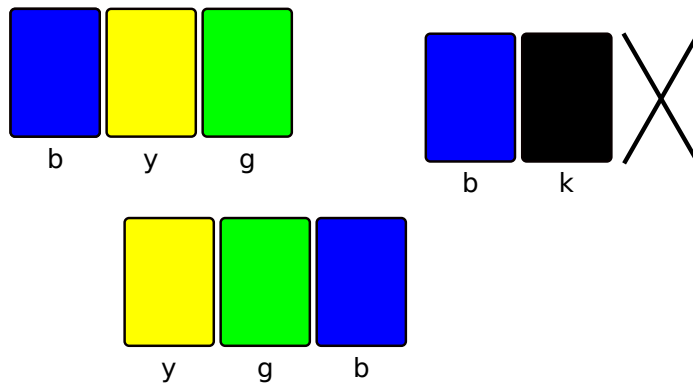


Figure 3. error-case

## Submission

Your program can be written in any<sup>1</sup> programming language. You can submit one source file. The smallest<sup>2</sup> source file, that solves the challenge correctly, wins. The source file is executed as follows:

```
<lang> <sourcefile> <inputstring>
```

For example:

```
python src.py bykgygb
```

You can submit sources that need compilation beforehand. In this case also the size of the source file counts, instead of the binary.

To make the event more interesting, it is appreciated if you explain in a few sentences how you solved the problem.

<sup>1</sup>Programming languages existing right now. Writing your own language, that solves exactly this problem is no valid solution.

<sup>2</sup>Smallest file in bytes.

## Facts

Submission due Sat. Nov 28<sup>th</sup> 2020 3pm

Email max@noppelmax.online

Event at Sat. Nov 28<sup>th</sup> 2020 4pm

Location online

## Performance-Award

The Performance-Award is awarded to the fastest (and correct) execution on a set of *big* input strings. The measurement runs on my Dell XPS13 9360 machine with Ubuntu 18.04. For the Performance-Award a different source file can be submitted.