Assignment 1

Write a C program to merge two given binary-based ppm files (P6). The names of the two given image files and the name of the combined image file are given as command line arguments. The combined image is obtained by putting the second image to the top-right corner of the first image. The sizes of the given image files are not fixed. If the width or the height of the first image is less than that of the second, your program should report error.

All these image files can be opened with image viewer tools that can work with ppm file format.

For simplicity, the following restrictions are added to the file format of the input:

- no comment line after the file type specification
- width (number of columns) and height (number of rows) formatted as ASCII decimal in the second line
- maximal value of color components given in the third line

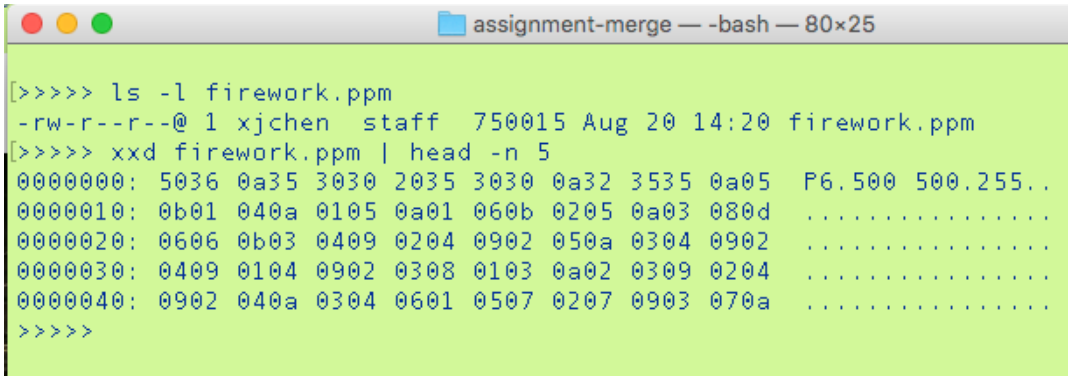
You need to prepare the image files. No sample files are provided.

This is a practice on using System Call I/O. You are not allowed to use standard I/O library functions or other graphics related libraries.

Marking Scheme:

- 0.5 logically clear, follow all the instructions and correctly use I/O system calls
- 0.5 successfully compile
- 0.5 pass some tests
- 0.5 pass all tests

Sample input (firework.ppm and 150.ppm):



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assignment-merge — -bash — 80×25
[>>>>> ls -l 150.ppm
-rw-r--r--@ 1 xjchen  staff  60015 Aug 20 14:02 150.ppm
[>>>>> xxd 150.ppm | head -n 5
0000000: 5036 0a32 3030 2031 3030 0a32 3535 0a97  P6.200 100.255..
0000010: 8e5c 958c 5b90 8857 938a 5a93 8b5a 968d  .\..[..W..Z..Z..
0000020: 5c94 8c5b 918a 5a8a 8556 8784 5692 8b5a  \..[..Z..V..V..Z
0000030: 9a92 5f9d 9561 988f 5e92 8a5a 958d 5c93  .._..a..^..Z..\.
0000040: 8c5a 958e 5c9c 9362 9891 5f95 8f5e 8e88  .Z..\..b.._..^..
>>>>> 
```

Corresponding output: