

Part 2, Code

Problem 1

- a. Memory allocation not needed to mem variable as it is a string constant. When removing malloc, leak is 0.
- b. `char *mem = malloc(128) -> int *mem = malloc(sizeof(int)*96)`
must free mem after use: `free(mem);`
- c.
 - v) `./a.out X 1234567890` is giving an error with `-O3`

Line 12: Passing 'unsigned char *' to parameter of type 'char *'. Remove 'unsigned'

Line 17: Variable 'lastChar' could be uninitialized after for loop. Use `lastChar = -1` in line 13.

Line 59: "No newline at end of file". And it ends with a comment too!

Problem 2

- b. Time on its-015-16:
 - real 0m9.159s
 - user 0m7.313s
 - sys 0m0.072sMacBook Pro (Retina, 15-inch, Mid 2015), 2,2 GHz Intel Core i7
 - 10.76s user
 - 0.20s system
 - 99% cpu
 - 11.014 total
- c. Our program (name: Andelie) finished in 45.44 seconds.
- d. Time on Vilje
 - real 0m20.109s
 - user 0m19.765s
 - sys 0m0.248s
- e. Same as original. Pixles, single errors: 0 and Pixles, multiple errors: 0 on all.
- f. Size: 2, Count: 57506436
Size: 8, Count: 662042304
- g. **General:** All variable initialisation outside loops. Only updates the variable values.
performNewIdea(): Removed color argument, summing all the colors in one iteration.
Using redSum, greenSum, blueSum.
main(): Removed color loops in main
main(): Removed a lot of code, and generalised it inside **performNewIdea()**. We are doing the improvement alternation inside **performNewIdea()**.

Also cleaned up a lot of duplicate code to improve readability.