--- Day 2: Inventory Management System ---

You stop falling through time, catch your breath, and check the screen on
the device. "Destination reached. Current Year: 1518. Current Location:
North Pole Utility Closet 83N10." You made it! Now, to find those
anomalies.

Outside the utility closet, you hear footsteps and a voice. "...I'm not
sure either. But now that so many people have chimneys, maybe he could
sneak in that way?" Another voice responds, "Actually, we've been working
on a new kind of suit that would let him fit through tight spaces like
that. But, I heard that a few days ago, they lost the prototype fabric, the
design plans, everything! Nobody on the team can even seem to remember
important details of the project!"

"Wouldn't they have had enough fabric to fill several boxes in the
warehouse? They'd be stored together, so the box IDs should be similar. Too
bad it would take forever to search the warehouse for two similar box
IDs..." They walk too far away to hear any more.

Late at night, you sneak to the warehouse - who knows what kinds of
paradoxes you could cause if you were discovered - and use your fancy wrist
device to quickly scan every box and produce a list of the likely
candidates (your puzzle input).

To make sure you didn't miss any, you scan the likely candidate boxes
again, counting the number that have an ID containing exactly two of any
letter and then separately counting those with exactly three of any letter.
You can multiply those two counts together to get a rudimentary checksum
and compare it to what your device predicts.

For example, if you see the following box IDs:

  - abcdef contains no letters that appear exactly two or three times.
  - bababc contains two a and three b, so it counts for both.
  - abbcde contains two b, but no letter appears exactly three times.
  - abcccd contains three c, but no letter appears exactly two times.
  - aabcdd contains two a and two d, but it only counts once.
  - abcdee contains two e.
  - ababab contains three a and three b, but it only counts once.

Of these box IDs, four of them contain a letter which appears exactly
twice, and three of them contain a letter which appears exactly three
times. Multiplying these together produces a checksum of 4 * 3 = 12.

What is the checksum for your list of box IDs?

Your puzzle answer was 5928.

The first half of this puzzle is complete! It provides one gold star: *

--- Part Two ---

Confident that your list of box IDs is complete, you're ready to find the
boxes full of prototype fabric.

The boxes will have IDs which differ by exactly one character at the same
position in both strings. For example, given the following box IDs:

```
abcde
fghij
klmno
pqrst
fguij
axcye
wvxyz
```

The IDs `abcde` and `axcye` are close, but they differ by two characters (the
second and fourth). However, the IDs `fghij` and `fguij` differ by exactly one
character, the third (`h` and `u`). Those must be the correct boxes.

What letters are common between the two correct box IDs? (In the example
above, this is found by removing the differing character from either ID,
producing `fgij`.)

Answer: [_____] [Submit]

Although it hasn't changed, you can still get your puzzle input.

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