

Exercises I/O

1 Hello, World!

- Write a Hello World program that prints some text.
- Write a program that asks for your name, reads it from stdin and greets that person.
- Write a program that counts the number of lines read from stdin
- Write a program that transforms text from stdin to upper case.

2 Scoreboard

Make a program that calculates the scores of some players in the following way. Input is given in a file, starting with a line stating which players were playing, each represented as an uppercase letter. The next line shows, the order in which players gained or lost points as a string, where an uppercase letter means the corresponding player gained a point and a lowercase letter means that player lost a point.

As an example two players A and B played a short game:

```
AB
AABaB
```

First A won two rounds, then B won, then A lost, and finally B won again. The final result is A has a score of 1 and B a score of 2.

You should write the result to a new file, in a reasonable way. For example each player on its own line:

```
A: 1
B: 2
```

But initially you should probably just print/show the object, as I prefer you thinking about how to solve the problem, rather than details of how to present it in a pretty way.

Hint: Start with a simple solution that works according to some (or a lot) assumptions, and later refactor your solution to be better.

Hint: You might find that `Data.Map.Strict` supplies a helpful data structures and helper functions.

MORE EXAMPLES

Input:

```
ABC
ABCABCbaa
```

Output:

```
A: 0
B: 1
C: 2
```

Input:

```
quickfox
QF0qUQFIIOoxXCckxxoQ
```

Output:

```
C: 0
F: 2
I: 2
K: -1
O: 0
Q: 2
U: 1
X: -2
```

2.1 Some improvements

After you made your first version, improve it, so it works from fewer assumptions. This may be fast if you made a great solution initially.

Things you may consider improving:

- If you assumed the players came in ordered like `['A'..]`, you could change it so it works for any order of players, such as `"BXM"`, or even `"bXm"`.
- Improve the printing of the result, so it shows as in the example.