Exercise 2

the Algorithm works as follows:
lets denote our Counter as C and our stored name as N
further we denote the i-th Name with n_i
we say with $n_1 \rightarrow C = 1, N = n_1$
further we say:

$$n_i \rightarrow \begin{cases} \text{C=C+1} & \text{if } N = n_i \\ \text{C=C-1} & \text{if } N \neq n_i, C - 1 > 0 \\ \text{C=1, N=n}_i & \text{if } N \neq n_i, C - 1 = 0 \end{cases} \tag{1}$$

if there is a name that occurs the majority of the time, it is at the end stored in N