samba- Solution

Author: Cristina Iordaiche,
"Grigore Moisil" High School, Timişoara

One way of solving the problem could be operating with a matrix of 10×10 dimensions each columns corresponding to a digit from 0 to 9 (as in the table below) and each row corresponding to digit's rank.

digit	0	1	2	3	4	5	6	7	8	9
$*10^0$										
$*10^1$										
$*10^2$										
$*10^3$										
$*10^4$										
$*10^5$										
$*10^6$										
$*10^7$										
$*10^8$										
$*10^9$										

We count the appearance of each digit from the IDs stored in the files, depending on its rank and store it into matrix.

Going through the column matrix can identify digits which are not a multiple of k times.

Using the matrix we built we will determine the natural number that respects the problem's conditions as being formed of digits previously identified.