

Theorem 1. *Let $\Phi = \{\alpha\} \cup \Phi^+$ be a data structure with a bi-variate statistics*

$$\Phi \rightarrow \mathbb{N} \times X ; p \mapsto s(p) = (n, k)$$

(X is set of labels) such that

$$s(\Phi^+) \subset \mathbb{N}^+ \times X$$

Set $\Phi_n = \{p \in \Phi | pr_1(s(p)) = n\}$ and $l(p) = pr_2(s(p))$ “label of p ”. We suppose that there exists a function “return to the father”

$$d : \Phi_{n+1} \rightarrow \Phi_n$$

such that $p \mapsto (d(p), l(p))$ is into. Then, for $p \in \Phi_n$, the code

$$(l(p), l(d(p)), l(d^2(p)), \dots, l(d^{n-1}(p)))$$

is into.