strutture dati succinte?
$\log N +$
$o(\log N)$
N
n
$n +$
$o(n)$
$N_n =$
?
?
?
bitvector
bitvector
B
n
$B[i] \in \{0, 1\}, \ \forall i 0 \leq i < n$
(1)
$B[i] \in \{\bot, \top\}, \ \forall i 0 \leq i < n$
(2)
random access Succinct Data Structure Library (*SDSL*)
?
??
i
..
i
$\mathcal{O}(n)$
bitvector
$o(n)$
bitvector
n
$\sigma =$
1
$\sigma =$
$\top$
m
K
block size
interleave

Variante	Spazio occupato
Plain bitvector	$64\left\lceil \frac{n}{64} + 1 \right\rceil$
Interleaved bitvector	$\approx n \left(1 + \frac{64}{K}\right)$
H_0*-compressed bitvector*	$\approx \left\lceil \log nm \right\rceil$
Sparse bitvector	$\approx m \left(2 + \log \frac{n}{m}\right)$

rango
B
n
i
bitvector
$_B(i) = \sum_{k=0}^{k<i} B[k], \ \forall i 0 \leq i < n$
(3)
$o(n)$
$\mathcal{O}(1)$
??
H_0
2
n
$\sigma =$
1
m
k
rank
sample

Variante	Bit aggiuntivi	Complessità temporale
Plain bitvector	$0.0625 \cdot n$	$\mathcal{O}(1)$
Interleaved bitvector	128	$\mathcal{O}(1)$
H_0*-compressed bitvector*	80	$\mathcal{O}(k)$
Sparse bitvector	64	$\mathcal{O}\left(\log \frac{n}{m}\right)$

$\sigma =$
1
B
n
i
i
B
$_B(i) = \min\{j < n \mid rank_B(j+1) = 1\}, \ \forall i 0 < i \leq rank_B(n)$
(4)
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