

Feltmin

Spec

In: $n \in \mathbb{N}$, $m \in \mathbb{N}$, $k \in \mathbb{N}$, $\text{data} \in \mathbb{N}[1..n, 1..m]$

Sa: $\text{ind} \in \mathbb{N}$

Out: $xIndex \in \mathbb{N}$, $yIndex \in \mathbb{N}$

Pre: -

Post:

$(\text{,ind},) = \text{CONDMIN}(i=1..n*m,$
 $\text{data}[(i-1) / m + 1, (i-1) \% m + 1],$
 $\text{data}[(i-1) / m + 1, (i-1) \% m + 1] \geq k)$

and

$xIndex = (\text{ind} - 1) \% m + 1$ and

$yIndex = (\text{ind} - 1) / m + 1$

E : 1

U: $n*m$

Minind: ind

f(i): $\text{data}[(i-1) / m + 1, (i-1) \% m + 1]$

T(i): $\text{data}[(i-1) / m + 1, (i-1) \% m + 1] \geq k$

i := 1			
j := 1			
exists := false			
i ≤ n			
j ≤ m			
not data[i][j] ≥ k	exists and data[i][j] ≥ k	not exists and data[i][j] ≥ k	
-	data[i][j] < min	-	exists := true
	min := data[i][j]		min := data[i][j]
	indexX := j		indexX := j
	indexY := i		indexY := i