

UNIVERSIDADE FEDERAL DO CEARÁ

CK0215-T01-2019.1

LABORATÓRIO DE PROGRAMAÇÃO

AULA 04 - 27/02/2019

QUICKSORT E PARTICIONAMENTO

1. QUICKSORT(v, i, f):

a) ESCOLHA UM PIVÔ.

b) PARTICIONE $v[i..f]$ COM RELAÇÃO AO PIVÔ,
DEIXANDO-O NUMA POSIÇÃO "p".

$$\begin{aligned} &0,227 \\ &0 + 2 \cdot 10^{-2} \\ &0,2 + 3 \cdot 10^{-2} \\ &0,22 + 7 \cdot 10^{-3} \end{aligned}$$

c) ORDENE $v[i..p-1]$ E $v[p+1..f]$ RECURSIVAMENTE.

EXEMPLO (UM NÍVEL):

3 2 1 4 5 6 9 8 7

PARTIC.

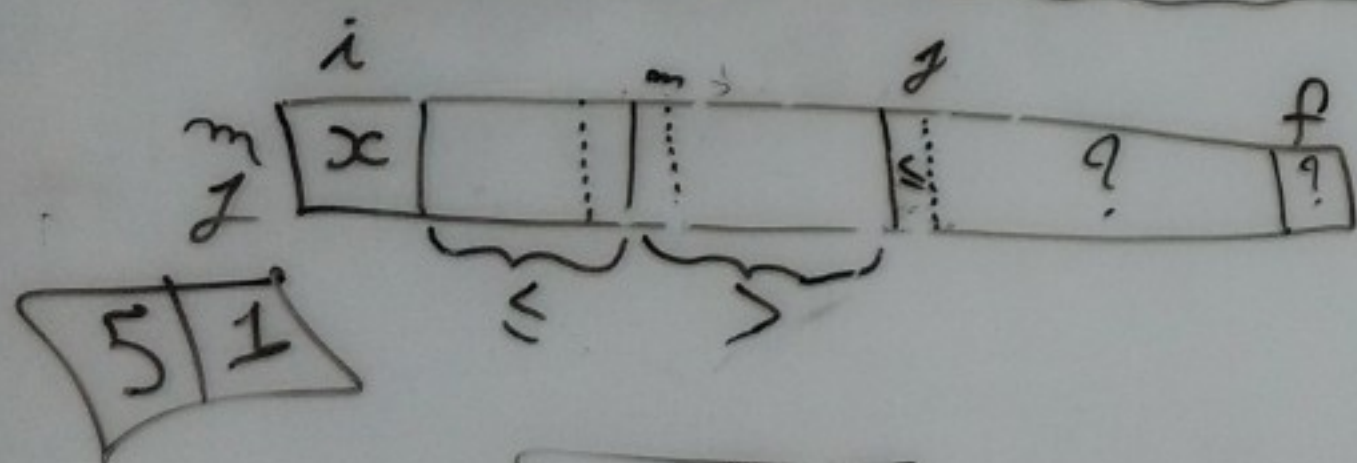
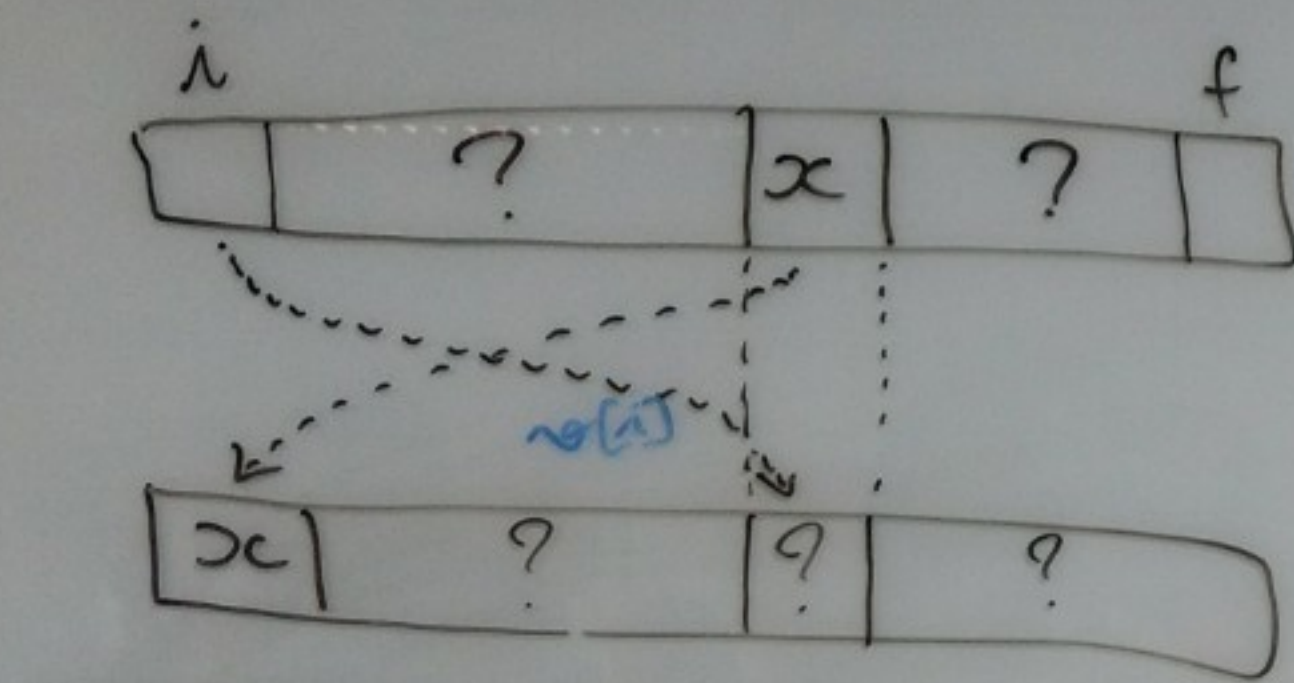
0 1 2 3 4 5 6 7 8
v: 4 1 3 2 5 8 9 7 6

i < j

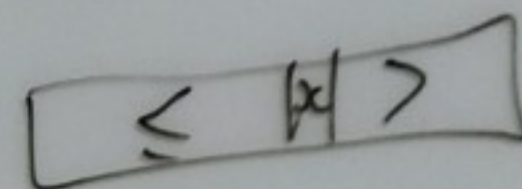
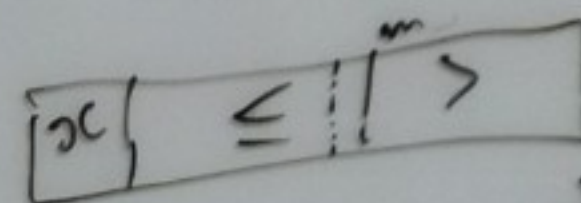
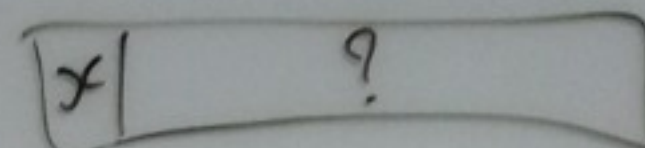
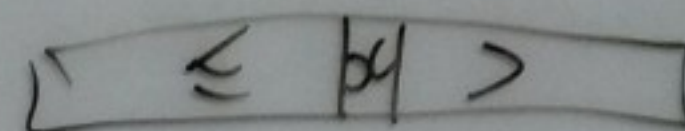
$v[i] \leq v[j]$

$$\begin{aligned} 237 &= 2 \cdot 10^2 + 3 \cdot 10^1 + 7 \\ &= (2 \cdot 10 + 3) \cdot 10 + 7 \end{aligned}$$

2. PARTICIONAMENTO DE LOMUTO:



- 1) $v[j] > x$
- 2) $v[j] \leq x$



$\text{COPY}(\text{INT } T, \text{INT } * v)$
 $\text{INT } * v = \text{NEW_INT}[2^k T]$
 $v \rightarrow v \cdot v$
 $\text{RETURN } v$