

$$i=1 \quad j=5$$

$$q=12$$

$$A[1]=11 \quad A[5]=12$$

$$i=2 \quad j=4$$

QUICKSORT(1, 4)

$$A = \{11, 33, 25, 45, 12, 13, 23, 24\}$$

$$i=1 \quad j=4$$

$$q=11 \quad j=3 \quad j=2$$

$$A[1]=33 \quad A[2]=11$$

$$i=2 \quad j=1$$

$$A = \{33, 11, 25, 45, 12, 13, 23, 24\}$$

$$i=3 \quad j=4$$

sbagliato

ESERCIZIO 2° - 2° parte

QUICKSORT(A)

if $|A| \leq 1$ then return(A)

else

SEGLI UN ELEMENTO q da A e DIVIDI l'array A in

A_1, A_2 ed A_3 dove $A_1 = \{x \in A : x < q\}$

$A_2 = \{x \in A : x = q\}$ ed $A_3 = \{x \in A : x > q\}$

return (QUICKSORT(A_1), A_2 , QUICKSORT(A_3))

$$A = \{24, 33, 25, 45, 11, 12, 23, 13\}$$

$$q=24$$

$$A_1 = \{11, 12, 13\}$$

$$A_2 = \{24\}$$

$$A_3 = \{33, 25, 45\}$$

QUICKSORT(A_1), A_2 , QUICKSORT(A_3)

$$q=11$$

$$A_1 = \{\emptyset\}$$

$$A_2 = \{11\}$$

$$A_3 = \{12, 23, 13\}$$

QUICKSORT(A_3) \rightarrow $q=12$ $A_1 = \{\emptyset\}$ $A_2 = \{12\}$ $A_3 = \{23, 13\}$
 QUICKSORT(A_3) \rightarrow $q=23$ $A_1 = \{12\}$ $A_2 = \{23\}$ $A_3 = \{13\}$