Esercizio 4° - 1° parte

SEARCH (A, j, k)

if j > k return false;

x = (j+k)/2

if A[x] == 0 return true;

if A[x] > 0 return SEARCH(A, j, x-1)

else return SEARCH (A, x+1, k)

$T(n) = T(n/2) + c$ $\quad a = 1 \quad c = 2 \quad k = 0$

$a = c^k \Rightarrow O(\log n)$

Esercizio 5° - 1° parte

SEARCH (A, j, k)

if j > k return false

if A[j] == 1 && A[j+1] == 0 return true

x = (j+k)/2

return SEARCH (A, j, x-1) || SEARCH (A, x, k-1)

$T(n) = 2T(n/2) + c$ $\quad a = 2 \quad c = 2 \quad k = 0$

$a > c^k \Rightarrow O(n)$

Esercizio 6° - 1° parte

SEARCH (A, j, k)

if j > k return false

if A[j] == 2 && A[j+1] == 0 && A[j+2] == 1 return true

x = (j+k)/2

return SEARCH (A, j, x-2) || SEARCH (A, x-1, k-2)