

```
int lookup(ITEM k)
    TREE t ← lookupNode(tree, k)
    if  $t \neq \text{nil}$  then
        | return  $t.\text{value}$ 
    else
        | return nil

// RICERCA DI UN NODO, iterativa
TREE lookupNode(TREE  $T$ , ITEM  $k$ )
    TREE  $u \leftarrow T$  // parto dalla radice
    while  $u \neq \text{nil}$  and  $u.\text{key} \neq k$  do
        |  $u \leftarrow \text{iif}(k < u.\text{key}, u.\text{left}, u.\text{right})$ 

// RICERCA DI UN NODO, ricorsiva
TREE lookupNode(TREE  $T$ , ITEM  $k$ )
    if  $T == \text{nil}$  or  $T.\text{key} == k$  then
        | return  $T$ 
    else
        | return lookupNode( $\text{iif}(k < u.\text{key}, u.\text{left}, u.\text{right})$ ,  $k$ )
```