

How can you determine the height of a tree structure? What is the Big O Complexity of the algorithm? Will your answer change if you don't have to get an exact result? What is the tradeoff?

high level algo:

get candidate nodes

counter += 1

$O(n)$

assumption: Node $\frac{1}{2}$

left
right
payload

```
def height(root):  
    candidates = [root]  
    counter = 0  
    while len(candidates) > 0:  
        candidates = get_next_candidates(candidates)  
        counter += 1  
    return counter
```

```
def get_next_candidates(nodes):  
    next = []  
    for node in nodes:  
        if node.left is not None:  
            next.append(node.left)  
        if node.right is not None:  
            next.append(node.right)  
    return next
```