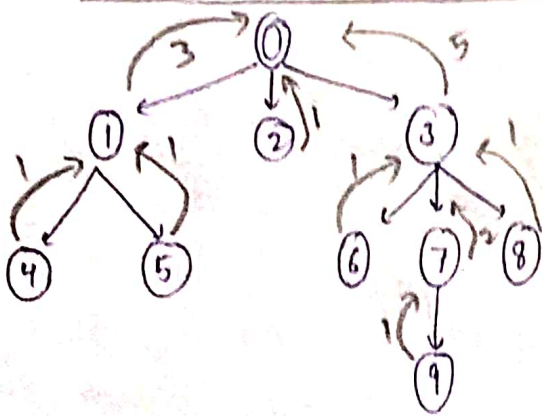


① Size of GENERIC TREE \Rightarrow Total no. of Nodes present.



Expectation: We will have an expectation that $\text{sizeOfTree}(10)$ will return as the size of the tree rooted at 10.

Faith: Humare pass $\text{sizeOfTree}(20)$, $\text{sizeOfTree}(30)$, $\text{sizeOfTree}(1)$ hai, aur yeh hum $\text{sizeOfTree}(0)$ dega

$$\therefore \boxed{\text{sizeOfTree}(\text{root}) = \text{sum of sizeOfTree}(\text{child}) + 1}$$

Code

```
public static int size(Node node) {
    int size = 0;
    for (Node child : node.children) {
        size += size(child);
    }
    return size + 1;
}
```

$$\therefore \underline{\text{sizeOfTree}(1) = 3} \text{ [child 1]}$$

$$\therefore \underline{\text{sizeOfTree}(2) = 1} \text{ [child 2]}$$

$$\therefore \underline{\text{sizeOfTree}(3) = 5} \text{ [child 3]}$$

$$\underline{\text{sizeOfTree}(0) = 9 + 1 = 10} \text{ [root]}$$

START	
5, No child	0 + 1
4, No child	0 + 1
1, XX	0 + 1 + 1 + 1
0, X 1	0 + 3
child 1	size

8, No child	0 + 1
9, No child	0 + 1
7, X	0 + 1 + 1
6, No child	0 + 1
3, XXX	0 + 1 + 1 + 1 + 1
0, XXX	0 + 5
child 2	size

child 3 size