

Algorithm: Insert

Input: A binary search tree t and an integer val

Output: t with a node of value val

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1 Procedure Insert( $t, val$ )
2   if  $t = \mathbf{Nil}$  then
3     |  $t \leftarrow \mathbf{Tree}(val, \mathbf{Nil}, \mathbf{Nil})$ 
4   else if  $val < t_{value}$  then
5     |  $t_{left} \leftarrow \mathbf{Insert}(t_{left}, val)$ 
6   else if  $val > t_{value}$  then
7     |  $t_{right} \leftarrow \mathbf{Insert}(t_{right}, val)$ 
8   return  $t$ 
```